

**EFFECT OF INNOVATION ON FINANCIAL PERFORMANCE OF DEPOSIT
TAKING SAVING AND CREDIT COOPERATIVE SOCIETIES IN LAIKIPIA
COUNTY, KENYA**

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**A Thesis Submitted to the School of Business and Economics in Partial Fulfillment
of the Requirements for the Conferment of the Degree of Masters in Business
Administration - Finance**

Kenya Methodist University

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DECLARATION AND RECOMMENDATION

Declaration

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

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Recommendations

We confirm that the candidate carried out the work reported in this thesis under our supervision.

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DEDICATION

I dedicate this thesis to my husband Abdullahi Abdi and my father Abdi Jillo for being
my pillar of strength.

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ABSTRACT

Saccos are beneficial since they inject capital to the economy through various individuals, corporates and other institutions finances to pay back later at an agreed interest. Nevertheless, Saccos have been operating under declining profitability in Kenya. Therefore, the purpose of the study was to investigate the effect of innovation on financial performance of deposit taking saccos in Laikipia County, Kenya. Further, the specific objectives were to examine the effect of product innovation, process innovation, institutional innovation and policy innovation on financial performance. Additionally, the study was guided by three theories which are Credit creation theory, The Unified Theory of Acceptance and Use of Technology [UTAUT], and Resource-based view theory. Further on, the study used descriptive research design to collect data from nine deposit taking Saccos in Laikipia County. Specifically, the target population were 118 respondents who included 22 departmental managers and 96 support staff selected using census method. Notably, the study collected both primary and secondary data whereby primary data was collected in form of questionnaires from departmental managers and support staff. Secondary data was collected from financial reports such as income statement, whereby various financial ratios such as return on assets, return on equity, gross profit, net profit, liquidity ratio were noted. Further, the study conducted a pilot study in Bingwa and Nufaika Saccos in Kirinyaga County whose 2 departmental managers and 10 support staff took part in the piloting. The study sampled the piloting managers and staff through obtaining 10% of from the sample size. The study also measured reliability using Cronbach Alpha Coefficient method while face, content and construct types of validity were measured. Further, SPSS software version 24 was used to analyze and generate various statistical reports whereby, in the analysis of the questionnaire, the study examined and generated descriptive statistics such as frequency, percentage and mean. Additionally, the study generated various linear regression statistics such as model summary and ANOVA of each independent variable. Thereafter the study generated inferential statistics to test the general model. The study found out that the desired number of clients was not yet achieved due to bombastic requirements and processes when opening accounts or accessing loan products; The Sacco's bid to incorporate ICT to assist in financial transaction such as having enough servers and skilled staff was still low hence increased system downtimes; There were poor management operations such that the process of coming up with new policies were either poorly done or done with less involvement of the junior staff; and the management took longer time when communicating to the staff on changes in policies on time. The study thus recommends that; The management of the Saccos should consult risk management professionals to further review on the requirements needed on each product and service the Sacco offers; The Sacco management should invest in secure servers to protect client's information from unauthorized access or use; The Sacco management should restructure the decision-making procedures and processes to see to it that at consultation stage, the opinion of junior staff involved in operations is incorporated; and the Sacco management should develop policies on the timeframes on when changes in policies should be communicated to staff.

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ABBREVIATIONS AND ACRONYMS

CBK	Central Bank of Kenya
CCSC	Canadian Centre for the Study of Co-operatives
CNBS	Chinese National Bureau of Statistics
DT	Deposit Taking
FDIC	Federal Deposit Insurance Corporation
FMOLS	Fully modified ordinary least squares
KBA	Kenya Bankers Association
KeMU	Kenya Methodist University
MD	Managing Director
MTED	Ministry of Industrialization, Trade and Enterprise Development
PFI	Profiting from Innovation
SASSRA	Sacco Societies Regulatory Authority
UTAUT	Unified Theory of Acceptance and Use of Technology
WCCUI	World Council of Credit Unions Inc

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

A Deposit Taking (DT) Sacco is a financial institution that is registered and regulated by Sacco Societies Regulatory Authority [SASSRA] into accepting deposit and offering loans to qualified borrowers (Sacco Societies Regulatory Authority [Sassra], 2022). Its functions are quite different from non-deposit taking Sacco whereby one buys share and save regularly to qualify for a loan but can only get a refund of savings when leaving it (Sassra, 2022). DT Saccos have more opportunities for gathering financial resources using different avenues and products. Therefore, it is always the purpose of any DT Sacco to maximize this function through use of available financial innovations at their disposal.

Globally, according to Federal Deposit Insurance Corporation [FDIC] (2019), when DT saccos/credit unions in America apply financial innovations in their operations, there has been creation of avenues to increase their asset base. Additionally, DT Saccos in Europe and China have increased the gross profits from the high number of transactions they receive within a certain timeframe (Deloitte, 2020). There have been reduced expenses since the DT Saccos keep on advancing and introducing new innovative products in Sweden (Hull, 2018).

Regionally, the South African government has also provided facilitating policies to DT Saccos that have portrayed potential in high tax returns thereby increasing their chances of making even more revenue (Price Water house Cooper, 2019). In Nigeria, there has been

provision of employment opportunities to the public so as to create awareness of the new financial products introduced in the Sacco. Clients in Ghana have also gotten alternative financial products and services that they can choose from hence diversifying their wealth (Yusheng & Masud, 2019).

Locally, DT Saccos have increased their clientele portfolio worth through engaging in financial innovation products and services. There have been increased loan disbursement since borrowers have access to different types of loans that have been re-engineered to suit their needs (Wanyonyi & Ngaba, 2021). Further, shareholders have been able to have increased dividends since the financial innovation products have increased the net income; salaried customers are able to acquire advances especially through customized overdraft (Karanja & Munene, 2019). There have been rebates gotten from fixed deposits which have in overall improved financial performance of the DT Saccos.

1.1.1 Financial Performance

Financial Performance is the ability of a Sacco to fully utilize the shareholder's resources it has control over to make profits by competitively offering various innovative products and services (Sassra, 2022). Financial performance was measured using return on assets, return on equity, gross profit, net profit, liquidity ratio (Kenya Bankers Association [KBA], 2019). Financial performance has been a debate that many Saccos have always tried to keep it high but from time to time, it has faced several challenges.

Globally, American credit unions/Saccos have been facing the issue of keeping up with the rapidly changing technology; low skills and inadequate training by its staff to adapt new technology; and lack of interest leading to low adoption of new financial products by

clients (Canadian Centre for the Study of Co-operatives [CCSC], 2021). In Europe, there have been lack of management support to innovative financial products and services ideas developed by the staff due to limited capital and high defaults of loans by clients hence increasing credit risk since they are unable to make payments on time due to system downtime by mobile money transfer service providers (Institute for Government, 2018). In China, there have been cyber insecurity causing massive loss of financial data and money from the Sacco; and increased competition from the banks offering even more advanced financial products and services (Macdowell, 2019)

Regionally, Saccos have experienced inconsistency of savings by clients since there are no attractive interest paid on their savings accounts and limit on how much one can withdrawal in a day; bank runs particularly when clients' suspect fraud caused by system failure; According to Shilimi (2021), there were few products, low digitalization and inadequate government support particularly when operating a Sacco in Zambia. Further, Melesse (2019) found out that performance was negatively affected by increased costs of local area network service, repair of computer hardware, and frequent downtimes. Additionally, Moki et al. (2019) complained that some of the implemented financial innovations were not user friendly for clients to use hence they avoided using them resulting to loss of purported income to the Sacco.

Locally, Kenyan Saccos have been experiencing issues related to low dividends payouts to shareholders due to massive losses from fines incurred for not fully adhering to government financial policies (Nafisa, 2019). There have been excess bureaucracy of the management hence discouraging staff from offering innovative ideas and high taxes by the government particularly on new financial products developed (Kalume & Makau, 2019). Additionally,

there are poor client-staff relations since transactions are processed slower than expected and also disconnect between what financial products and services clients want vis-à-vis what the staff are offering. For example, long timelines in approving and disbursing to client loans such that when the loan is approved the client has already outsourced from other financial institutions.

Notably, DT Saccos have made various investments in the financial innovation sector since (Hai et al., 2022) pointed that as long as a financial institution does not innovate products and service, it does not survive long in the market.

1.1.2 Innovation

Innovation is the process of generating new investment products and services. Another definition by Clifford Chance (2020) indicated that it is the development and implementation of processes and products that are reliable, less costly and serve the needs of the clients. There were three types of innovation which are product innovation, process innovation, and institutional innovation considered in this study (Kenya Bankers Association [KBA], 2019). Product innovation is the ability and process of a Sacco to either generate a new product or improve a an old one with the sense of customizing solutions to persistent client's needs hence attracting them to invest their resources (Kalume & Makau, 2019). Process innovation is the employment of novel or enhanced service delivery methods through which Sacco staff could easily sell their products and services (Mukanzi & Mwai, 2020). Institutional innovation is the process of generating new or improved systems which see to it the staff of the Sacco are encouraged to deliver sustainable financial services in their scope of work (Nafisa, 2019). Notably, Product, process and institutional innovation cannot work effectively without presence of reliable policy innovation within

the environment they operate in (Muguna et al., 2020). Policy innovations are regulations established by a Sacco's management over its operations and government directives, so as to minimize risk and support innovations associated with deposit and lending business (Muguna et al., 2020).

Further on, DT Saccos have made notable strides towards incorporating innovation in their operations. In developed nations such as America, the innovation developments made in credit unions/Saccos include increased transactions of branchless banking, ATM services, mobile banking services and insurance products (Lainà, 2018). There have also been 24-hour customer service, text messages services, privacy-enhancing computation, Generative artificial intelligence (AI) and autonomic systems in credit union in Europe (Macdowell, 2019). In China, credit unions are now allowed to transact financial derivatives such that they only hedge with interest rate swaps that run up to 3 months (Chen & Yuan, 2021; Hai, 2022). There have been innovation products such as bonds, stocks, mutual funds, and debt instruments in Japan. There have also been financial services such as tax or audit consultation services and management of wealth in Australia.

In developing nations such as Nigeria and Lesotho, there have been increased awareness of diaspora banking/remittance technology (Mmari & Thinyane, 2019). This is where a client who is working abroad is assisted by the Sacco to have a relationship manager who helps them make safe investments. There have also been services put in place to pay utility bills, transfer of funds, ultimate cheque clearance within 1-3 days in Ethiopia (Melesse, 2019). Local Saccos in Botswana have also scaled up to lend to people organized in groups, table banking whereby there are repayment incentives schemes such that members of the group monitor your payment plan (Mosweu et al., 2016). There have been incentives for

the borrower to repay through rebates, and progressive lending which is a great gain to the Kenyan Saccos.

1.1.3 Deposit Taking Saccos in Kenya

Kenyan DT Saccos have slowly overtaken the traditional commercial banks in terms of sustainability and inclusivity of every individual. To ensure this last, Saccos have invested a lot in financial innovation processes and products. Additionally, they are also investing in qualified personnel who have technical skills of developing products and services that best suit the needs of the clients (Nafisa, 2019). However, innovation among Kenyan Saccos has experienced challenges related to frequent change of customer needs and preferences hence it become costly to keep developing new services and products on request. There have also been regulation concerns whereby Saccos have to keep up with the government demands (Baluma et al., 2017). Further, there have been high number of dormant and overdrawn accounts due to poor monitoring process by the Sacco. Additionally, clients are not frequently reminded through emails, text messages or phone calls to keep their Sacco accounts active by making payments (Gaichuru et al., 2022).

1.2 Statement of the Problem

Deposit taking Saccos are financial institutions that are registered and regulated by Sacco Societies Regulatory Authority into accepting deposits and offering loans to qualified borrowers (SASRA, 2022). These institutions are beneficial since they inject capital to the economy through offering loans to various individuals, corporates and other institutions to pay back later at an agreed interest. Additionally, they provide avenues where sound financial advice on investments could be sought at a fee. Therefore, since their contribution

is critical to the economy, their financial performance should be closely monitored from the perspective of a going concern.

However, Saccos have been operating under declining profitability in Kenya (SASRA, 2022). For example, in the financial year 2020/2021, the deposits of Saccos grew by Kshs 18 billion from Kshs 105 billion to Kshs 123 billion in 2020 and 2021 respectively. Nevertheless, at the same time, the profitability declined by 33% from 49% to 16% signifying a worrying trend. The declining profitability has partly been attributed to average utilization of innovations such as products, processes, institutional and policy innovation by the Saccos. As a result, there has been a disconnect between what clients want as compared to what the Saccos have been offering. Persistence of this disconnect has forced clients to shift towards the commercial banks who have been giving fierce competition by offering similar products and services coupled with advanced stages of innovations.

Past literature such as Cakadende and Mulyungi (2020), Chepkorir et al. (2022) revealed that product, process, institutional and policy innovations led to improved financial performance. Nevertheless, other studies such as Chhaidar et al. (2022) argued that innovation had ultimately led to a decline in profitability of small financial institutions such as Saccos due to frequent downtimes and cyber-attacks. Other studies such as Egesa and Odero (2019) posited that the success of applied innovation is highly dependent on transformative nature of leadership and policy innovation. All these studies seemed to argue based on different factors and in different regions where their Saccos were based, hence creating a need to examine the effect of innovation on financial performance of deposit taking saccos in Laikipia County, Kenya.

1.3 General Objective

The general objective of the study was to investigate the effect of innovation on financial performance of deposit taking Saccos in Laikipia County, Kenya.

1.4 Specific Objectives

- i. To establish the effect of product innovation on financial performance of deposit taking Saccos in Laikipia County, Kenya.
- ii. To determine the effect of process innovation on financial performance of deposit taking Saccos in Laikipia County, Kenya.
- iii. To determine the effect of institutional innovation on financial performance of deposit taking Saccos in Laikipia County, Kenya.
- iv. To explore the effect of institutional policy innovation on financial performance of deposit taking Saccos in Laikipia County, Kenya.

1.5 Research Hypothesis

H₀1: Product innovation did not have a statistically significant effect on financial performance of deposit taking Saccos in Laikipia County, Kenya.

H₀2: Process innovation did not have a statistically significant effect on financial performance of deposit taking Saccos in Laikipia County, Kenya.

H₀3: Institutional innovation did not have a statistically significant effect on financial performance of deposit taking Saccos in Laikipia County, Kenya.

H₀4: Institutional policy innovation did not have a statistically significant effect on financial performance of deposit taking Saccos in Laikipia County, Kenya.

1.6 Significance of the Study

The study would be relevant to the management teams since they would be exposed to predominant factors that have been discouraging Saccos from full adoption of innovations. Once these factors are known and recommendations suggested, it would be easier applying the recommendations in their respective Saccos for a turnaround in performance.

The Sacco clients would also benefit from this study since they would know various products and services that other Saccos globally and regionally have been offering. This would enable them request for such services from their respective Saccos to have value for their money and also increase personal wealth.

The Sacco staff would also get to know the new policy innovation that they are required through this study. Once they get to learn from various managers from different Saccos, they could also begin applying the same in their respective institutions to avoid any future fines once the government gets wind that they had not been adhering to them.

The Sacco competitors such as commercial banks would also find the study useful since they would know the various innovations that global, regional and local Saccos have been using. Once they filter the content, they would see to it that they could adopt some of the innovations to become even more competitive. For example, Equity bank has adopted such innovations whereby they customized various loan products to a point that they secured a top position as the most profitable bank.

The government regulators such as SASSRA would also get various benefits from the study through understanding the challenges that the Saccos have been undergoing in bid of

adhering to its policies. Once the regulators identify a policy that is unfair, they could review it to ensure that Saccos were not oppressed.

This study would also be relevant to future researcher since they would find useful content on various milestones various Saccos in Laikipia County have made. This would enable them conduct studies in other regions to confirm whether they have had similar developments and if not, they recommend various solutions to them.

This study would add new knowledge to the field of finance once the effect of innovation on financial performance of deposit taking saccos in Laikipia County, Kenya is known.

1.7 Scope of the Study

The study was conducted in deposit taking Saccos in Laikipia County, specifically in Major towns such as Nanyuki, Rumuruti and Nyahururu. The Saccos in Laikipia have been adversely affected by poor client-staff relations since transactions are processed slower than expected, frequent change of customer needs and preferences. The study examined the effect of product, process, institutional, and policy innovation on financial performance. The study gathered secondary data and issued questionnaires to departmental managers and support staff. It was carried out in a timeframe of 6 months.

1.8 Limitations of the Study

The staff feared being victims of prejudice by the management particularly when they gave negative feedback on various questions asked. The study data collection agents explained to the staff that the study would remain confidential by not asking for personal details such as names, phone numbers and email addresses.

1.9 Assumptions of the Study

The study assumed that the managing directors, departmental managers and technical staff would avail themselves to participate in the study. Notably, all the required authorizations at different stages of the study would be issued on time to facilitate moving to the next process. Further the study's data collection instruments such as questionnaires would be in a position of capturing the key details that would enable the study reveal the concerns of declining profitability in saccoes irrespective of adopting average financial innovation acumen in their operations.

1.10 Operational Definition of Terms

Deposit Taking Sacco

This is a financial institution that is registered and regulated by SASSRA and which accepts deposit and offer loans to qualified borrowers.

Financial Performance

This is the ability of a Sacco to fully utilize the shareholder's resources it has control over to make profits by competitively offering various innovative products and services.

Innovation

This is the process of generating new investment products and services that are reliable, less costly and serve the needs of the clients.

Institutional Innovation

This is the process of generating new or improved systems which see to it the staff of the Sacco are encouraged to deliver sustainable financial services in their scope of work.

Institutional Policy Innovation

Policy innovations are regulations established by a Sacco's management over its operations and government directives, so as to minimize risk and support innovations associated with deposit and lending business.

Process Innovation

This is the employment of novel or enhanced service delivery methods through which Sacco staff could easily sell their products and services.

Product Innovation

This is the ability and process of a Sacco to either generate a new product or improve a an old one with the sense of customizing solutions to persistent client's needs hence attracting them to invest their resources.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the evaluation of previous studies, theoretical and conceptual framework of the study. The evaluation of previous studies is organized based on all variables of the study including financial performance, product innovation, process innovation, institutional innovation and policy innovation. Theoretical and conceptual framework will conclude the chapter.

2.2 Theoretical Review

The study was guided by three theories which are Credit creation theory, The Unified Theory of Acceptance and Use of Technology [UTAUT], and Resource-based view theory. Product and institutional policy innovation variables were explained guided by Credit creation theory, Process innovation was explained using the UTAUT, and institutional innovation variable was explained using resource-based view theory.

2.2.1 Credit Creation Theory

Credit creation theory was established by Macleod (1856) as cited by Werner (2015) and it explained product innovation and institutional policy innovation variables. It states that financial institutions do not necessarily act as an intermediary of lending out the deposits made but rather generates new deposits (credit) on every lending activity. Further explained, is that when the Sacco issues new loan, they preserve some percentage of the loan to their coffers as new credit commonly referred to as 'processing fee'. The main

reason is that as the Sacco are not in the business of always lending their deposits to borrowers but rather some proportions. For example, when a client deposits Kshs 1,000 in the Sacco, it keeps Kshs 200 in its coffers and lends Kshs 800. However, the borrower will ultimately get the amount less 160(20%) but when repaying, they will repay Kshs 800.

Therefore, the credit creation theory guided product innovation variable in the sense that Saccos maximize on creating new credit through innovatively introducing a wide range of products. These products could be in the category of deposit accounts, savings account, shares, debit and credit cards, loans and overdraft. The Sacco will require its clientele to have different avenues of bringing deposits such as through shares, current and savings accounts for different categories of people. Once this money is gotten, the bank disseminates a proportion of it through advances, loans and credit cards. The amounts that the borrowers get, is mainly less due to processing fee hence the Sacco ends up creating new credit avenues in the process. In the long-run, the Sacco becomes profitable in its lending ventures since in every transaction, new credit is created to improve its performance.

Further the credit creation theory guided policy innovation in the sense that once the Sacco has created new credit, it develops a sense of responsibility towards following current and ever-changing policies such as regulatory, facilitating and restrictive policies for long-term profitability in the business venture. Therefore, the Saccos management and staff keep on updating themselves on any legal requirements established through government agencies such as SASSRA, to avoid fines which could significantly arise from not complying hence reducing their profitability, and good will. For example, once a Sacco realize that there is a new government requirement such as declaring its income for taxation, it will emphasize

on changing internal policies of issuing credit to only qualified clients to reduce bad debts on the taxed amount hence reducing its profitability. This theory has been used by studies such as Ndungu (2020) in explaining how banks create collateralized debt obligations as a way of improving their profitability.

Nevertheless, Laina (2018) pointed that financial institutions cannot basically lend more than their deposits to avoid risky business ventures. However, this study will not be affected with the critic since the main attention is pointed to how banks create innovative products such as different categories of deposit and loans to cater for the needs of the clients as a measure of improving their performance.

2.2.2 Unified Theory of Acceptance and Use of Technology (UTAUT)

Unified Theory of Acceptance and Use of Technology (UTAUT) was established by Venkatesh (2003) and it will explain process innovation variable. It states that for a system to be declared as working, the monitoring party needs to assess both the intention and utility pattern behavior of the users. In relation to a Sacco, that is to indicate that for a novel process/ structure to be acknowledged by its staff, the administration always ensures that they check on the interest and actual use of the system to boost effectiveness of the operations. In terms of improving the interest of the staff, the Sacco provides necessary training and budget for purchasing the software and hardware for the system. Additionally, UTAUT dictates that the monitoring of use of technology be engulfed with communication of expected performance metrics from users, effort expectation and social influence the user have after interacting with the new technological process.

The UTAUT guided process innovation in the sense that Saccos are always in stiff competition of expanding their clientele base, profitability and assets. In order to do so, they require advancing their technological scope to facilitate even smoother processes with less hitches. Therefore, from time to time, the technological systems change completely or the old ones are advanced. To be in a position of delivering the workload using the improved technology, the user' interests who are the staff should be motivated through training and equipping their workstation with advanced processors and software as a means of automating the bank to provide services such as ATM services. Additionally, once the staff had become conversant with the advanced technology, they will use their social influence to incorporate more users such as clientele in various functions. For example, through demonstrating mobile and internet banking to clients. Further, the mastery of technology and equipping of hardware and software, reduces lags in processes such as cheque clearance, account opening, loan processing and other facilitates within the Saccos. This theory has previously been used by other studies such as Yildiz (2018) to explain more on the various staff use technology in records management and social networks respectively.

UTAUT has been criticized by Hung et al. (2007) that in most cases, most institutions required the staff to provide a report on usage of the systems rather than being monitored. However, the critic will not limit the study since the Sacco ICT system has a clear monitoring and evaluation procedure to ensure that there are system checks rather than relying on the feedback from the staff in avoidance of manipulation of the findings.

2.2.3 Resource-Based View Theory

Resource-based view theory was established by Wernerfelt (1984) and it explained institutional innovation variable. It states that in any organization, there are resources at disposal which could be used to propel the organization towards attaining its vision, mission and goals thereby giving them a competitive niche in the market. The resources in question could either be tangible (physical resources such as assets) or intangible (employee wealth of experience).

Resource-based view theory guided institutional innovation in the sense that the management of Saccos have always a mandate of seeing to it that the staff practices are not only positive but also contribute towards sustainable development. That is, since the Sacco operates within a certain environment, their operations should always be anchored towards bringing more value towards the environment and as well as the people in it. Therefore, the Sacco ensures that it develops way of doing things that emphasize on humanity and corporate social responsibility.

By doing so, the Sacco is able to bring about institutional innovation that is not only interested in making profits but also bringing change to the community. For example, the reason why Equity bank overtook other financial institutions to be established in almost every town in and out of Kenya, is simply that they listen to even low-income earners and customize services to them. Therefore, the poor in the society associate themselves with the bank since it shows concern to their small needs. Resource-based view theory has been used by a study such as Hitt et al. (2015) who associated the theory with operations management of many organizations.

Resource-based view theory has been criticized by Priem and Butler (2001) that it does not provide clear picture of how resources improve the value of firms when sold. However, this criticism may not affect the study since institutional innovation could be assessed based on clientele of agency banking, group banking, and table banking among others.

2.3 Empirical Review

2.3.1 Financial Performance of Deposit Taking Saccos

DT Saccos' main concentration when it dispenses its products and services is to improve the financial performance. This is the financial health assessment of whether an institution is achieving its vision, mission and goals. There are several studies done in relation to how financial innovation brings about improved financial performance. A study by Hai et al. (2022) explored on the kind of effect that innovation had on financial performance on a financial firm such as a credit union in China. The study adopted a Profiting from Innovation [PFI] framework to assess what happens when a new product has been introduced in the firm. Additionally, the study used a ten-year database ending at 2009 from the Chinese National Bureau of Statistics [CNBS].

According to Hai et al. (2022), when a firm would wish to scale-up innovation, there is cost consequence but still a positive influence towards improving performance in the long run. This forms a 'U' curve whereby financial performance first decline then begin to improve especially when the clients accept the introduced product. Nevertheless, Hai et al. (2022) used secondary sources to build their study which is easily prone to biases and could mislead the study since the secondary data findings could be based on personal opinions rather than what is the reality.

Further, Chhaidar et al. (2022) investigated how adoption of fintech investments affected profitability of financial institutions such as banks microfinance and credit unions in Europe. The study adopted Fully modified ordinary least squares (FMOLS) model to gather data from twenty-three financial institutions for a period of ten years ending at 2019. According to Chhaidar et al. (2022), adoption of fintech investments had improved the profitability of the institutions cumulatively with larger financial institutions benefitting more due to economies of scale. However, Chhaidar et al. (2022) noted that profitability was negatively affected by losses incurred from cyber-attack which whipped out the coffers of the financial institutions. Notably Chhaidar et al. (2022) concentrated on only profitability based on financial institution's size and therefore did not look into other aspects such as prices of product and services.

Additionally, Shilimi (2021) examined the main causes for low performance among the Zambian Saccos which was inhibiting them from competing at international scale. The study was descriptive and adopted cross-sectional time horizon methodology. The study settled on 384 adults across Zambia. Notably Shilimi (2021) conducted a pre-test study on 38 respondents who did not comprise of the sampled population. The sampled population was issued with questionnaires to answer with 278 as the response rate. Among all the variables tested, Shilimi (2021) found out that Saccos failed to perform well since their clientele were not adequately equipped with financial literacy on the relevance of engagement with the Sacco and low income to actually warrant any deposit at the Sacco.

In relation to Sacco's operations, Shilimi (2021) discovered that there were few products, low digitalization and inadequate government support particularly when operating a Sacco

in Zambia. That notwithstanding, the eligibility of included respondents was that they had attained majority age of voting and were registered as voters. The study should have sampled respondents who were registered members of Sacco.

A study by Melesse (2019) explored how Ethiopian Saccos were gearing up towards incorporating financial sustainability as a measure of improving their performance. Data was collected from 46 Saccos which operated for a minimum of 3 years and with audited financial records. Notably Melesse (2019) adopted the use secondary data from the financial reports of 2016. The findings were that return on asset, operational efficiency, and debt equity ratios had a positive percentage signifying increase in performance.

Additionally, the Saccos were able to mobilize for more client base since they had adopted technology to improve efficiency. Further, Melesse (2019) found out that performance was negatively affected by increased costs of local area network service, repair of computer hardware, and frequent downtimes. Nevertheless, Melesse (2019) used secondary data for the year 2016 only to come up with the findings. The study should have used a longitudinal approach of two or more years so as to avoid falling in the trap of making biased conclusions. Probably the financial year was pleasant but preceding years were not pleasant hence making conclusions based on one year could be misleading.

Further on, Mukanzi and Mwai (2020) explored on how Western Kenya's deposit taking Saccos were benefiting in terms of performance from implementing service innovations. The study collected data from only one Sacco that had been licensed to take deposit in Western Kenya at the time of data collection. The respondents were 9 managers in charge of departments and 1 public relations officer. According to Mukanzi and Mwai (2020),

service innovations such as bulk text messages, mobile and internet banking had improved efficiency of communication with clients hence increased income as a result of negotiations in the Saccos. That notwithstanding, Mukanzi and Mwai (2020) failed to incorporate more deposit taking Saccos in Western region to have different views on how various service innovations such as mobile banking, internet banking had affected their performance. Additionally, the 10 respondents were few that the required threshold of respondents to make compelling meaning on the results.

Notably, Moki et al. (2019) investigated how the choice of adopting financial innovation such as mobile banking had influenced the financial performance of Nairobi's deposit taking Saccos. The study worked with a population of 40 Saccos closely guided by descriptive statistics. Therefore, Moki et al. (2019) analyzed and used secondary data of five years ending in 2017. It was established that when banks allowed use of mobile banking as a financial innovation, there was an increase in efficiency of collecting financial resources and improved record keeping. Nevertheless, Moki et al. (2019) complained that some of the implemented financial innovations were not user friendly for clients to use hence they avoided using them resulting to loss of purported income to the Sacco. Nevertheless, Moki et al. (2019) did not present descriptive findings on secondary data but only the inferential statistics.

2.3.2 Product Innovation and Financial Performance

This is the ability and process of a Sacco to either generate a new product or improve an old one with the sense of customizing solutions to persistent client's needs hence attracting them to invest their resources (Kalume & Makau, 2019). The types of product innovation

examined were deposit accounts, debit and credit cards, savings accounts, loans and overdrafts (Iheanachor et al., 2021). There were several studies done in relation to how product innovation brings about improved financial performance.

A study by Shaikh et al. (2022) reviewed the various developments made on mobile financial services and how they affected the performance of financial institutions in European nations. The study relied on literature review from 115 articles. The findings by Shaikh et al. (2022) revealed that mobile financial services had ultimately replaced the traditional services such as branch banking, ATM, and POS. Nevertheless, Shaikh et al. (2022) did not cover mobile banking services from downloadable applications. Therefore, there is need to explore how use of mobile financial services had influenced financial performance of non-European nations such as Kenya.

In China, a report by Chen and Yuan (2021) concentrated on how digital financial approach had resulted to financial inclusion among clients of financial institutions. The report stated that digitalization of financial institutions' operations would increase more likelihood of reaching out to more clients through service delivery, communication and complaints management. However, Chen and Yuan (2021) warned that digitalizing finances was susceptible to risks such as cybercrime, fraud and frequent change in technology.

Further, Iheanachor et al. (2021) documented on how new products were influenced by product development practices in Nigeria's financial institutions. The study targeted eight financial providers to assess how the development phases that a new product underwent through affected its performance. The study interviewed 16 managerial staff inform of focus groups and discovered that when there were weak development practices in Nigerian

institutions whereby the new products performed relatively low as compared to when there were strong practices. Additionally, the financial products in Nigeria were poorly implemented after they were developed which resulted to low adoption and performance. However, Iheanachor et al. (2021) did not explore on the contribution that internal policies had on new product development process.

Additionally, Cakadende and Mulyungi (2020) investigated on how product innovations led to financial performance of Umwalimu Sacco in Rwanda. The respondents were selected using census method to include 30 managers whose branches were distributed across the nation of Rwanda. They were issued with questionnaires to fill in whereas financial reports of the Sacco were also assessed. Notably, Cakadende and Mulyungi (2020) found out that the management had introduced 5 loan products, 3 savings products and mobile banking into the Sacco in 2013 to 2019.

As a result of new products, there were 882 more customers from 1576, savings increased by RWF 350,395,468.7 from RWF 8, 411,728, 960.9, loan disbursement increased by RWF 1,990,383,020.7 from RWF 114,506,229.3.; and net profit increased by RWF 107,087,730.7 from RWF 46,672,809. However, Cakadende and Mulyungi (2020) noted that the number of clients were not still conversant with mobile banking causing long queues in the banking hall. An observation made was that Cakadende and Mulyungi (2020) failed to assess other products such as debit and credit cards effect towards improving the performance of the Sacco.

In addition, Gaichuru et al. (2022) conducted a study on assessing how product and process innovation affected performance of Saccos in Meru. The study included hundred and sixty-

two respondents gotten from eighteen Saccos. The respondents were sampled using Nassiuma (2008) sampling formula to result to 66 sample size population. They were grouped into strata to quantify them based on the level of management their job description entailed. According to Gaichuru et al. (2022), the 54 respondents who returned the questionnaires indicated that there was a positive influence of process and product innovation on performance. However, the study noted that the Saccos had not yet fully accepted the idea of partnering with fintech corporates for digitalization services. Additionally, there were less policy measures put into place to guide on how product innovation idea is conceptualized till executed to improve performance of the Sacco. Regrettably, Gaichuru et al. (2022) did not pre-test the research instruments. Further on, the study could have interviewed the senior management rather than issuing once type of questionnaire.

Further on, Karanja and Munene (2019) assessed how variety of products increased Saccos credit accessibility in Imenti North, Meru. The main contention was due to the fact the Saccos had continuously experienced low performance for three consecutive years. The sampled population was 34 Saccos in Imenti North whose hundred and two managers were included as respondents. They were issued with questionnaires whereas pre-test was conducted as reliability measured using Cronbach Alpha method and ninety-two respondents returned the questionnaires in the main study. According to Karanja and Munene (2019), Saccos were battling out with insufficient capital, credit risk, poor governance and low credit access due to consistent system failures and downtime. Consequently, Karanja and Munene (2019) revealed that most Saccos had almost similar products with less differences with their competitors. This resulted to decline client

numbers since there was no unique reasons or benefit that convinced clients that they were competitive.

2.3.3 Process Innovation and Financial Performance

This is the implementation of new or improved service delivery methods through which Sacco staff could easily sell their products and services (Mukanzi & Mwai, 2020). The types of process innovation examined were bank automation, mobile banking, internet banking, cheque clearance, ATM services (Yusheng & Masud, 2019). There were several studies done in relation to how process innovation brings about improved financial performance.

A study by Flores-Chia and Mougenot (2022) investigated how Peru's Sacco were ensuring they had competitive edge through maintaining financial sustainability. The study used econometric analysis method on a panel data of 34 Saccos within 8 years timeframe. According to Flores-Chia and Mougenot (2022), Peru Saccos had ensured that they had consistently improved their asset base, smooth processes of transactions to attract clients, and high return on assets. Nevertheless, Flores-Chia and Mougenot (2022) used econometric analysis method which relies a lot on raw data and less consideration is given on causal mechanism of any deviations of statistics.

Further, a report by CCSC (2021) documented on what facilitated growth of credit unions in Canada and the resulted policy implication. The report pointed out that most credit unions had mastered the art of ensuring they became innovative in their processes such that every transactional need has more than one way of doing it using technology. This led to improved financial capital and asset base since income had improved. Nevertheless, there

was a concern for frequent training to the staff since most of the credit union hardly sponsored the training unless when necessary.

In addition, Akintoye et al. (2022) investigated the menace that cyber insecurity had caused on development of financial innovation of deposit taking financial institutions in Nigeria. Fifty-six (56) senior staff from the financial institutions were purposively selected. According to Akintoye et al. (2022), when financial institutions put adequate measures to counter attack cyber insecurity, there was reliability on the introduced financial innovation products and processes. Notably, Akintoye et al. (2022) complained that many financial institutions did not regularly monitor e-banking channels such as credit and debit cards, ATM and POS hence less reliant towards supporting more financial transactions. Nevertheless, Akintoye et al. (2022) did not include junior staff in their study to provide information on the repercussions of cyber security in daily operations/ processes.

Additionally in Ghana, Yusheng and Masud (2019) explored how service innovation led to satisfaction and loyalty from the customers in financial institutions. The study worked with a sample frame of four hundred and fifty respondents who were customers of the financial institutions. Therefore, Yusheng and Masud (2019) established that there was a constructive connection between service innovation, customer satisfaction and loyalty.

Further, Chepkorir et al. (2022) conducted a study on ascertaining how mobile banking process affected performance of Saccos in Kericho County. Correlational design was used to collect data from 108 managers in the Saccos. The managers were issued with questionnaires and analysis of Sacco reports was also done. Notably, Chepkorir et al. (2022) found out mobile banking improved performance of the Sacco. It is also important

to note that mobile banking transactions were at times affected by network hitches to a point that the clients had to seek for alternative sources. This meant that there was a gap in Saccos on system review to facilitate smooth transactions. That notwithstanding, Chepkorir et al. (2022) did not assess other processes innovation emanating from internet banking, cheque clearance, ATM services.

A review was done by Egesa and Odero (2019) on how innovation generally affected Saccos' performance in Kenya. The target population was a hundred and twenty-six managers and forty-two CEOs in 42 Saccos. They were selected using census method to participate in the study. Therefore, Egesa and Odero (2019) found out that when innovation was keenly applied it resulted to improved performance. However, when the leadership was not transformative, it discouraged any creativity among staff to delivery innovatively. Nevertheless, Egesa and Odero (2019) considered only strategic leadership-oriented innovation whereby more attention was paid in strategic decisions made and not the process innovation.

2.3.4 Institutional Innovation and Financial Performance

This is the process of generating new or improved systems which see to it the staff of the Sacco are encouraged to deliver sustainable financial services in their scope of work (Nafisa, 2019). The types of institutional innovation examined were management structure, agency banking, group banking, table banking and organizational culture (WCCUI, 2019). There were several studies done in relation to how institutional innovation brings about improved financial performance

A report was written by World Council of Credit Unions Inc [WCCUI] (2019) on the purpose of credit unions towards bridging the gap between the marginalized communities

and financial inclusion. According to the report, WCCUI has been on the forefront to strengthen financial institutions such as through setting up management information and monitoring systems; encourage digitalization of financial markets; and encourage agricultural finance particularly on women groups. Nevertheless, WCCUI (2019) posited that women leadership in institutional innovation was low since they were not accorded the opportunity to serve at different leading capacities due to their low academic qualifications.

Additionally, Mmari and Thinyane (2019) analyzed the various elements that dictated how Saccos in Lesotho would perform, specifically in Maseru district. Yamane (1967) was also used to lead to a sample of 369 respondents who were selected using simple random method in 23 Saccos. The results derived by Mmari and Thinyane (2019) posited that the ability of the Sacco management to allow the institution adopt various strategic innovation such as in adoption of change management, led to members supporting the performance of the Sacco through loan disbursement, increased savings and improved asset growth. However, Mmari and Thinyane (2019) discovered that the ration of fixed to total assets and share capital never changed irrespective of any institutional innovation employed. This was due to the unproductive nature of assets that the Saccos invested into. Notably, Mmari and Thinyane (2019) selected only members of the Sacco with less emphasis on the officers of the Sacco included as respondents. Probably the officers would have explained further through use of interviews on how purchasing decisions were arrived at in the Sacco.

Further, Wanyonyi and Ngaba (2021) explored how Saccos in Kakamega County's performance was affected by digital financial services. The study worked with a population of 162 respondents from the three Saccos operating in Kakamega. The study applied simple

random sampling method to obtain 30% which resulted to 49 respondents who were issued with the questionnaires. According to Wanyonyi and Ngaba (2021), the performance was relatively influenced by digital financial services that were instituted by the management. The Saccos were able to reach out to more clients since they had been able to successfully adopt digitalization of various institution innovations such as in agency, group and table banking mechanisms. The group members were able to remit weekly savings through mobile banking as opposed to previous method of always coming to the bank to make the payments in person which improved efficiency. Regrettably, Wanyonyi and Ngaba (2021) complained that some of the few issues that seem to drag financial innovation behind included delays in systems especially in confirming the amounts of money sent, very slow transaction processing and internal fraud.

Additionally, Maina et al. (2020) explored on how sustainability of Saccos was affected by innovation and the size of the Sacco in Kenya. The study issued 119 respondents from whom 113 responded to the emailed questionnaires. The findings by Maina et al. (2020) revealed that process and product influenced performance but not statistically significant. What was statistically significant was the size of the Sacco mainly attributed to both the management structure and organizational culture. Notably, Maina et al. (2020) did not pre-test the research instruments to measure their reliability.

In addition, Mung'ora and Kiiru (2019) explored how Saccos in Nyeri were using innovative strategies to their advantage to improve their performance. The study begins by accepting that there have been reforms within the banking industry that has resulted to shake up in management structures to gain a competitive edge on the market. The study collected data from respondents in 6 Saccos who were selected using census method to

answer the questionnaires. The findings derived by Mung'ora and Kiiru (2019) indicated that among other types of innovation, organizational innovation contributed positively towards improvement of performance in the sampled Saccos.

However, the study noted that one of menace affecting organization innovation was that the human resource faced difficulties in ensuring freedom and privacy of employee working details. That is, HR department had no control of senior management access to employee files thereby interfering with their personal information to pin them down. For example, when an employee declared that they had taken a personal loan, the manager could use the same information to make the employee feel obligated to deliver since the Sacco had 'helped' them a lot. Notably, Mung'ora and Kiiru (2019) assessed various organizational innovation such as financial intermediaries, legal framework, supervisory framework, and agency services. They did not include other innovation such as group and table banking.

2.3.5 Institutional Policy Innovation and Financial Performance

Institutional policy innovations are regulations established by a Sacco's management over its operations and government directives, so as to minimize risk and support innovations associated with deposit and lending business (Muguna et al., 2020). The study examined three types of policy innovation such as directing policies, facilitating policies, restrictive policies. There were several studies done in relation to how policy innovation has affected improved financial performance.

A study such as Kinyenze and Ondabu (2023) explored the underlying factors that lead to quality financial reporting of Saccos in Kenya. The study collected data from 126

respondents from 46 deposit taking Saccos. Notably, Kinyenze and Ondabu (2023) found out that quality internal audit was closely guided by regulatory government policy requirement whereby every financial institution was mandated to declare their income and expenditures in public domain. Therefore, there is need to assess how various regulatory policy requirements from the government affected innovation and performance of Saccos in Laikipia County.

Further, Mafuno (2021) explored on how SASSRA regulations affected Kenyan Saccos' performance. The study was descriptive in nature and included 175 Saccos registered by SASSRA through census method. The study analyzed financial reports of the Saccos for a period from 2016-2020. According to Mafuno (2021), when the Saccos adhered fully to SASSRA regulations, their performance was better in terms of ROA as compared to not adhering to the regulations.

Additionally, Mugo et al. (2017) explored how mobile technology influenced performance and how it was affected by policies of the government in Saccos that allowed deposit taking in Kenya. The study worked with a sample of 86 Saccos of which two managers were selected in each Sacco to act as respondents and fill in the questionnaire. The study recognized that policy innovation had a moderating influence on mobile technology and performance of Saccos. However, Mugo et al. (2017) did not assess other types of financial innovations.

In addition, Buluma et al. (2017) steered a study to ascertain how the monetary performance of Nyandarua's Saccos were influenced by SASSRA regulations. The respondents were six officials in each Sacco hence 30 participants. Additionally, it also gathered secondary data from county co-operative commissioner and SASSRA. According

to Buluma et al. (2017), the Nyandarua Saccos had fully complied with the SASSRA regulatory requirements though a further explanation on the nature of requirements was not disclosed.

2.4 Summary of Gaps

The general gaps identified under product innovation revealed that digital products were susceptible to risks such as cybercrime, fraud and frequent change in technology. Further, there were weak development practices in financial institutions whereby the new products performed relatively low as compared to when there were strong practices. In addition, number of clients were not still conversant with mobile banking causing long queues in the banking hall. A study such as Shaikh et al. (2022) did not cover mobile banking services from downloadable applications while other such as Cakadende and Mulyungi (2020) failed to assess other products such as the impact of debit and credit cards towards improving the performance of the Sacco. In relation to methodology, Gaichuru et al. (2022) did not pre-test the research instruments.

The general gaps identified under process innovation revealed that many financial institutions did not regularly monitor e-banking channels such as credit and debit cards, ATM and POS hence less reliant towards supporting more financial transactions. Further, mobile banking transactions were at times affected by network hitches to a point that the clients had to seek for alternative sources. A study such as Flores-Chia and Mougenot (2022) used econometric analysis method which relies a lot on raw data and less consideration is given on causal mechanism of any deviations of statistics. Further, Akintoye et al. (2022) did not include junior staff in their study to provide information on

the repercussions of cyber security in daily operations/ processes. Chepkorir et al. (2022) did not assess other processes innovation emanating from internet banking, cheque clearance, ATM services.

The general gaps identified under institutional innovation revealed that there were delays in systems especially in confirming the amounts of money sent, very slow transaction processing and internal fraud. A study such as Mung'ora and Kiiru (2019) established that the human resource department faced difficulties in ensuring freedom and privacy of employee working details. In relation to methodology, Mmari and Thinyane (2019) selected only members of the Sacco with less emphasis on the officers of the Sacco included as respondents. Probably the officers would have explained further through use of interviews on how purchasing decisions were arrived at in the Sacco.

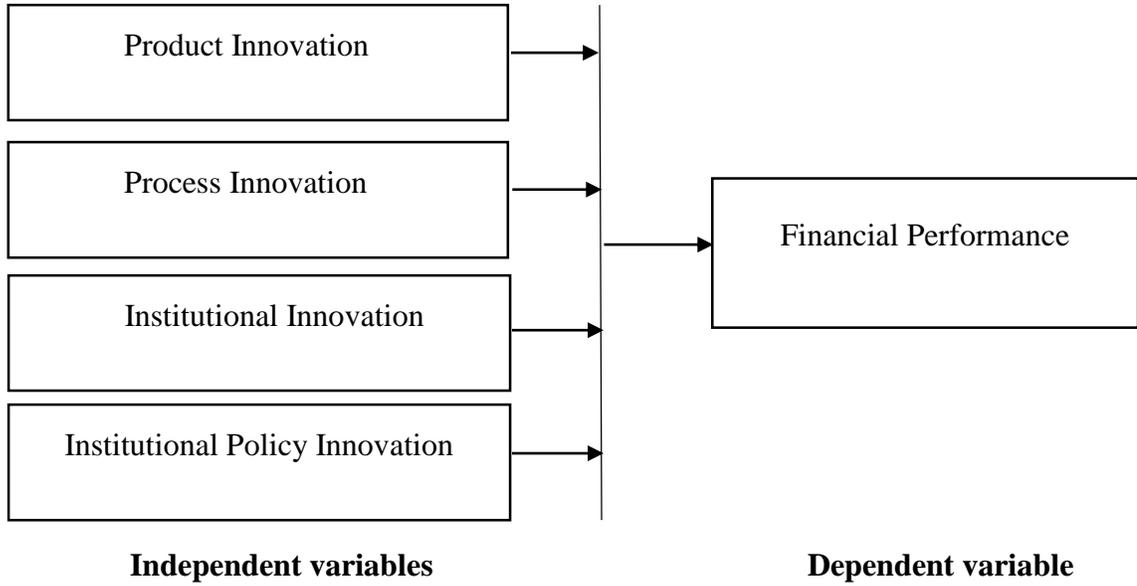
The general gaps identified under institutional policy innovation revealed that there were less policy measures put into place to guide on how product innovation idea is conceptualized till executed to improve performance of the Sacco. In relation to methodology, Gaichuru et al. (2022) did not pre-test the research instruments.

2.5 Conceptual Framework

This is defined as a pictorial presentation of the variables of the study to provide a clearer meaning on the relationship in existence. The study had the dependent and independent variables. The dependent variable was the financial performance and it is located on the right side of Figure 2.1. The independent variables included the product, process institutional and policy innovation are located on the left side.

Figure 2.1

Conceptual framework

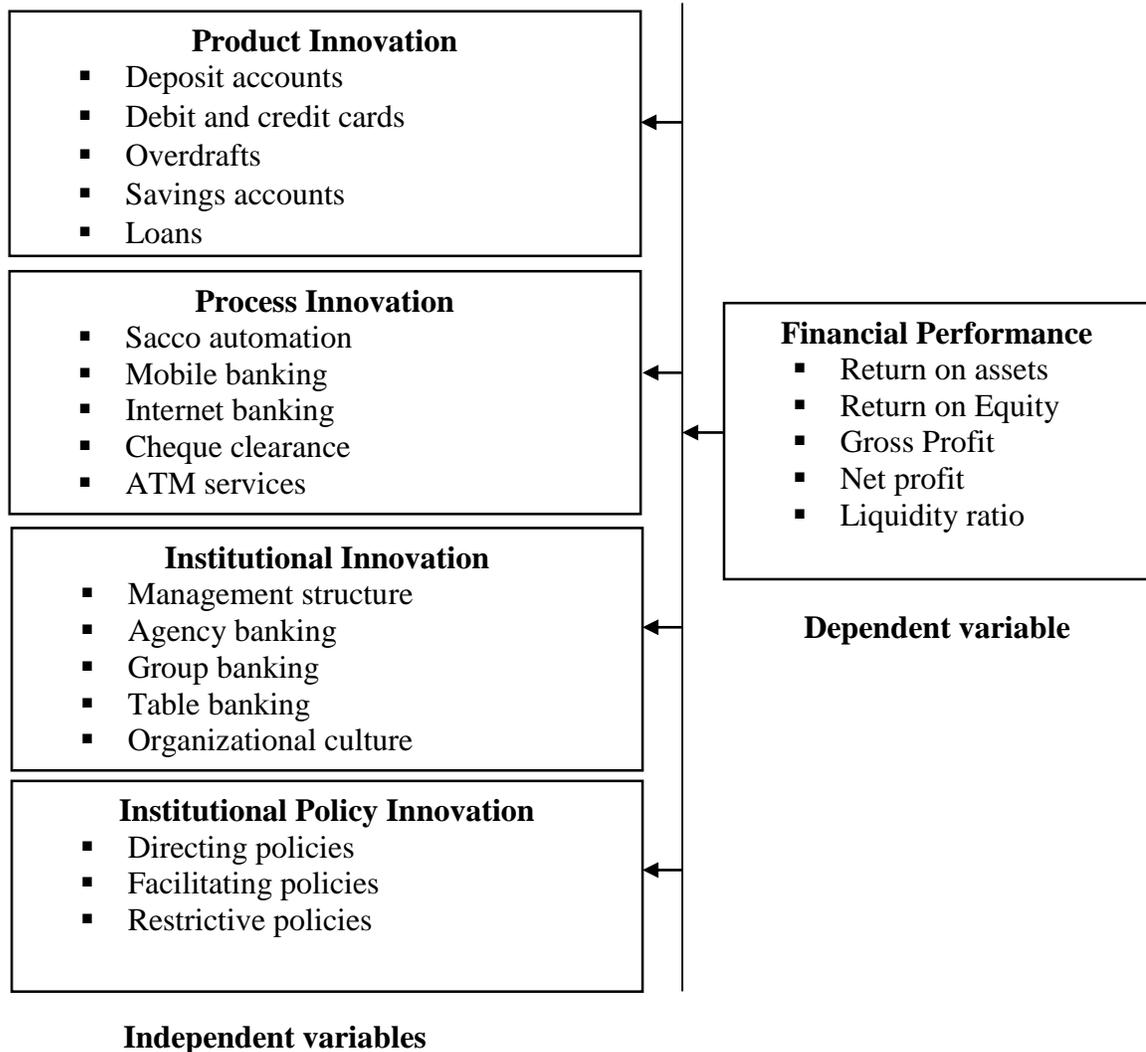


Source: Author, 2023

2.6 Operational Framework

Figure 2.2

Operationalized Framework



Source: Author, 2023

As per Figure 2.2, financial performance had indicators which include return on assets, return on equity, gross profit, net profit and liquidity ratio. Additionally, product innovation had indicators such as deposit accounts, debit and credit cards, savings accounts, loans and overdrafts. Further, process innovation had indicators such as bank automation, mobile

banking, internet banking, cheque clearance, ATM services. Institutional innovations had indicators such as management structure, agency banking, group banking, table banking, organizational culture. Institutional policy innovation had indicators such as directing policies, facilitating policies, restrictive policies.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter provides the processes used when collecting data and that were useful in achieving the objectives of the study. It examined the research design, target population and study area. Emphasis was also be placed on sampling techniques used, data collection instruments, pre-testing, procedures for data collection and how the data was analyzed. Ethical considerations undertaken concluded the chapter.

3.2 Research Design

This constitutes of the method utilized to join in diverse aspects of a research in an articulate and rational way hence efficiently finding solution to the study's problem (Sileyew, 2019). Descriptive research design which is a type of design that explores the situation of the population being studied without necessarily interfering with their activities was used (Siedlecki, 2020). The reason for its usage was because the study sought to elaborate the effect of financial innovation on financial performance of deposit taking saccos in Laikipia County, Kenya. In other words, the study had a goal of establishing the effects financial innovations such as product, process, institutional and policy innovation on financial performance of deposit taking saccos in Laikipia County, Kenya.

3.3 Location of the Study

According to Sileyew (2019), a location is a geographical site where the actual data collection takes place and in the case of the study, it was in Laikipia County, Kenya.

Laikipia County is found on the slopes of Mount Kenya. The region is well known in agricultural, tourism and other trade activities which generate substantive income to the region. The Sacco's in Laikipia County were having issues related to poor client-staff relations since transactions were processed slower than expected, frequent change of customer needs and preferences hence it become costly to keep developing new services and products on request. Implemented financial innovations were not user friendly for clients to use hence they avoided using them resulting to loss of purported income to the Sacco.

3.4 Target Population

This indicates the institutions of interest where the study would easily get access to respondents and secondary data for purposes of effective data collection process (Mishra, et al., 2019). Therefore, the target population of the study was nine deposit taking Saccos in Laikipia County (Central Bank of Kenya [CBK], 2022; Ministry of Industrialization, Trade and Enterprise Development [MTED], 2017; Sacco Societies Regulatory Authority [SASSRA], 2023). The nine Saccos enabled the study gather data from 118 total respondents who included 22 departmental managers and 96 support staff respectively. The departmental managers were included in the study since they were responsible in implementing various Sacco policies and strategies especially the ones related to financial innovation at finance departmental level. The support staff included finance officers, audit officers, human resource officers, quality assurance officers and administrative officers. The officers were relevant in the study since they were responsible in linking the clientele with the institution through creating awareness, and demonstrating any new innovation to them. The participants of the study are shown in Table 3.1.

Table 3.1*Target Population*

Deposit Taking Saccos In Laikipia County	Departmental Managers	Support staff
Unison Sacco	3	11
Siraji Sacco	2	13
NeccoFosa Sacco	3	9
Tower Teachers Sacco	3	10
Taifa Sacco	2	11
Nyala vision Sacco	3	10
Nanyuki Equator Sacco	1	10
Biashara Sacco	2	12
Solution Sacco	3	10
Total	22	96

Source: (MTED, 2017)

3.5 Sampling Technique

The sample size is a representative from the target population that is taken into consideration when collecting data (Mohajan, 2018). This study used census method to select all the 22 departmental managers and 96 support staff into the study. This was an appropriate method since the population under focus was not high and inclusion of very respondents provided diverse opinion on the subject matter (Mohajan, 2018). Additionally, it provided a larger percentage of respondents to participate in the study in relation to innovation.

3.6 Data Collection Instruments

These are methods that an investigator uses to gather raw facts from a population (Busetto et al., 2020). The study issued questionnaires to departmental managers and support staff. Secondary data was collected from financial reports such as income statement whereby various financial ratios such as ROA, ROE, GP, NP and LR were noted.

3.6.1 Questionnaires

The study administered closed-ended questionnaire to the respondents since they were majorly involved in the Saccos operations whereby they actualized the strategic decision made by the senior management (appendix II). They provided their responses based on the actual scenario in the work place in relation to financial innovation aspects such as product, processes, institutional and policy innovation. The closed ended questionnaire had Ordinal Likert Scale whereby 1-strongly disagree, 2-disagree, 3-neutral, 4, agree, 5- strongly agree. The questionnaire also had six sections whereby the first section had questions linking to the background information of the respondents. The second section had five questions linking to the influence of product innovation on financial performance. The third section had five questions linking to the influence of process innovation on financial performance. The fourth section had five questions linking to the influence of institutional innovation on financial performance. The fifth section had five questions linking to the influence of policy innovation on innovation and financial performance. The sixth section had five questions linking to the financial performance of Saccos.

3.6.2 Secondary Data

The study collected secondary data from the Sacco's financial reports as a measure of assessing the financial performance of the Saccos. This was because various financial ratios such as return on assets, return on equity, gross profit, net profit, liquidity ratio could be gotten directly from a financial report such as income statements. Therefore, the study used secondary data for Saccos in Laikipia County from 2020-2022 (appendix III).

3.7 Piloting of Research Instruments

A pilot study is a study conducted on different population from the key study to guarantee that the study's instruments to be used are dependable and understandable. According to Mohajan (2018), piloting gave a study a chance to rectify any ambiguous questions such that during the main study's data collection process, less time was wasted. The study conducted a pilot study in Bingwa and Nufaika Saccos in Kirinyaga County whose 2 departmental managers and 10 support staff took part in the piloting. This is because O'Neill (2022) suggested that a pilot study's population should comprise of 10% of the sampled population. This Sacco were selected since it had experienced challenges such as low performances especially due to consistent downtimes of systems, increased competition from rival financial institutions and inconsistency in savings by the clients. The inconsistencies were brought about since majority were not conversant with e-payment accounts such as pay bills of the Saccos (SASSRA, 2022).

3.7.1 Reliability

Reliability is the process undertaken by a study to examine whether the research instruments would produce similar results when used more than one time (Taber, 2018).

The study thus measured reliability using Cronbach Alpha Coefficient method whereby the pilot study responses were analyzed and weighed using the Cronbach Alpha values. According to Taber (2018), when the results of Cronbach Alpha Coefficients were above 0.7, the research instrument was reliable and when below, it showed unreliability. Therefore, since the study was scientific, Cronbach Alpha Coefficient was more suitable since past literature such as (Obong'o, 2021) and (Halake, 2021) among others, had used the same method.

3.7.2 Validity

According to Surusu et al. (2020) the ability of an instrument to examine and articulately attain the intended objectives is referred to as validity. The study measured three types of validity which were face, content and construct (Surusu et al., 2020). The study measured face validity by ascertaining the effect of each independent variable on performance. The study measured content validity by inquiring questions that were related to the variables of the study. That is, questions asked were highly guided by indicators of each of the variables. Criterion validity was measured when the results derived after analysis were compared with the results other previous authors had gotten on the same. If there was a difference, the study intended to provide an explanation on the same.

3.8 Data Collection Procedure

The investigator obtained all the necessary approval in the form of introduction letter from the Kenya Methodist University. Thereafter, the investigator applied for the NACOSTI research permit which was a legal requirement when conducting any data collection in Kenya. Once that was done the researcher recruited three research assistants who were

instrumental in the distribution of questionnaires and collecting secondary data. They were recruited based on data collection experience and as well as financial background. During the data collection day, the investigator in company of research assistants made a visit to all the nine Saccos to meet up with the manager. The investigator said who they were and stated the purpose of the meeting in relation to request to collect data from the sampled staff as per the study. Once the manager agreed, the investigator requested to be assisted in identifying various respondents.

Immediately the departmental managers and support staff were identified, the study's assistants said who they were and sought consent from them to participate in the study (appendix I). When the respondents consented, the research assistants distributed the questionnaires to departmental and support staff available to answer them. They waited for them to finish filling and collecting the complete questionnaires for analysis. Thereafter the research assistants thanked the respondents for taking part in the study. In case the respondent failed to fill in the questionnaires at the moment, the research assistants gave them a window of three days after which they came back and collected the questionnaires.

After collecting the answered questionnaires, the research assistants logged in into their computers and searched for the various Saccos using internet for the purposes of collection of secondary data. Once a particular Sacco was identified, the researcher proceeded to the reports section and downloaded the income statement reports from 2020 to 2022. They then proceeded to check on various item such as ROA, ROE, GP, NP and LR in each consecutive year. They noted down the various percentages for further analysis by the data analyst.

3.9 Data Analysis and Presentation

The study ensured that all collected data was adequately analyzed based on its nature. The various data analyzed were quantitative in nature. The study began by sorting and cleaning for complete questionnaires as received from the research assistants. Thereafter, the study used SPSS software version 24 to analyze and generate various statistical reports. In the analysis of the questionnaire, the study examined and generated descriptive statistics such as frequency, percentage and mean. Additionally, the study generated various linear regression statistics such as model summary and ANOVA of each independent variable. Further the study generated inferential statistics to test the general model. The study's regression model in question is as indicated below:

$$Y = C + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Where:

Y = Financial Performance

β_i = Coefficients to be estimated

C = Constant

X₁ = Product Innovation

X₂ = Process Innovation

X₃ = Institutional Innovation

X₄ = Policy innovation

E = error

Adding to that, the study presented the findings using tables and explanations. Further on, the study examined various diagnostic tests such as normality, linearity, multicollinearity and autocorrelation to indicate the suitability of the collected data from anomalous.

3.10 Ethical Considerations

The study began by getting all the requirements needed for data collection such as KeMU introduction letter and NACOSTI. Later on, the respondents were not be forced to participate in the data collection process hence had to consent before data was collected from them (appendix I). The study also maintained the confidentiality of the study's participants by not asking them questions that revealed their names, phone number, emails or address. The study ensured that there was no fabrication to data from other sources hence the results were subjected to plagiarism and as well as uploaded to public portals for dissemination of knowledge. The researcher and the assistants-maintained courtesy at all times irrespective of the attitude of the respondents. The researcher ensured that the collected data was maintained private and stored in a safe place under lock and key. Further, all the sources of information that the study obtained were identified through citing them and also referencing them according to APA 7th edition.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter provides the results derived after collected data was analyzed. The results include reliability, response rate, background information, and diagnostic findings. Thereafter, descriptive statistics on financial performance, product innovations, process innovation, institutional innovation and policy innovation are provided. Additionally, the inferential statistics such as Model Summary, ANOVA and regression coefficients are also indicated.

4.2 Reliability Results

The study steered a pilot study in Bingwa Sacco in Kirinyaga County whose 2 departmental managers and 10 support staff took part as indicated in Table 4.1.

Table 4.1

Reliability Results

Instrument	Cronbach's Alpha	N of Items
Product Innovation	.921	12
Process Innovation	.849	12
Institutional Innovation	.887	12
Policy Innovation	.915	12

According to Table 4.1, the product innovation variable had a Cronbach Alpha of 0.921; process innovation variable had a Cronbach Alpha of 0.849; Institutional innovation variable had a Cronbach Alpha of 0.887; and Policy innovation variable had a Cronbach

Alpha of 0.915. According to Taber (2018), when the results of Cronbach Alpha Coefficients were above 0.7, the research instrument was reliable. Notably, all the variables had a value above 0.7 which indicated reliability of the questionnaires.

4.3 Response Rate

The study administered questionnaires to 22 departmental managers and 96 support staff (finance officers, audit officers, human resource officers, quality assurance officers and administrative officers) as indicated in Table 4.2.

Table 4.2

Response Rate

Respondents	Sampled	Response	Percentage
Departmental Managers	22	20	
Support staff	96	92	
Total	118	112	95%

According to Table 4.2, 20 departmental managers and 92 support staff answered and returned the questionnaires hence a total of 112(95%) response rate. The study had this high response rate since the particular respondents were much conversant with the topic and specific objectives related to innovation. According to Wu et al. (2022), when the response rate was 80% and above, it meant that the study was successful and had excellent feedback.

4.4 Background Information

The study's questionnaire asked two questions that assessed the background of the participants. The two questions were related to their academic qualifications and work experience as indicated in Table 4.3.

Table 4.3

Demographic Information for Academic Qualifications

Academic Qualifications	Frequency	Percent	Cumulative Percent
Post graduate	12	11	11
Bachelor's Degree	67	59	70
Diploma	20	18	88
Professional Certificate	13	12	100
Total	112	100	

Number of years worked	Frequency	Percentage	Cumulative Percent
Above 10 years	37	33	33
6-10 years	56	50	83
2-5 years	12	11	94
Less than 1 year	7	6	100
Total	112	100	

According to Table 4.3, It was discovered that most participants who were 67(59%) had a bachelor's degree while few 12(11%) had a postgraduate education and 13(12%) professional certificates. Further, 56(50%) had worked between 6-10 years while only 7(6%) worked for less than 1 year. These results revealed that the Sacco management had ensured that basic job entry requirements be a university degree and had also put measures

to retain them over a long period of time. Therefore, this resulted to Saccos having a reliable pool of staff that were well conversant with various product, process, institutional innovation and policy innovations that improved performance. Thus, it became easy to implement new aspects such as accounts, loans and other services since the staff were highly skilled and experienced to improve awareness to the Sacco clients. A report by CCC (2021) also proclaimed that growth in the nation's credit unions was mainly attributed by the decisions made by various employees touching on policies. The weaker the decisions the harder it was hard to implement the policy and vice versa but it was attributed by the competence of the employees making the decisions.

4.5 Diagnostic Tests

The study examined various diagnostic tests such as normality, linearity, multicollinearity and autocorrelation.

4.5.1 Normality Test

The study tested normality so as to examine whether the samples from financial performance, product innovations, process innovation, institutional innovation and policy innovation came from specific distribution that has reasonable variations as indicated in Table 4.4.

Table 4.4*Normality Test*

		Product Innovation	Process Innovation	Institutional Innovation	Policy Innovation	Financial Performance
N		112	112	112	112	112
Normal Parameters ^{a,b}	Mean	22.3036	21.1802	17.3750	21.5495	21.0180
	Std. Deviation	4.66507	2.58386	4.33948	2.40733	2.60064
Most Extreme Differences	Absolute	.125	.094	.098	.151	.134
	Positive	.057	.089	.098	.082	.075
	Negative	-.125	-.094	-.080	-.151	-.134
Kolmogorov-Smirnov Z		1.325	.989	1.032	1.589	1.408
Asymp. Sig. (2-tailed)		.060	.283	.237	.073	.138

a. Test distribution is Normal.

b. Calculated from data.

According to Table 4.4, product innovation had a significance value of 0.060; process innovation had a significance value of 0.283; institutional innovation had a significance value of 0.237; policy innovation had a significance value of 0.073; and financial performance had a significance value of 0.138. Therefore, since all the variables' significance value was above 0.05, it revealed that the data was normally distributed. Therefore, the results meant that the collected data had no abnormality such that all responses inclined on either agreeing or disagreeing of the Ordinal Likert Scale used.

4.5.2 Linearity Test

The study also examined the linearity test of the data and the results revealed in Table 4.5.

Table 4.5*Linearity Test*

			Sum of	df	Mean	F	Sig.
			Squares		Square		
Financial Performance * Product Innovation		(Combined)	113.257	19	5.961	.860	.631
	Between	Linearity	23.771	1	23.771	3.430	.067
	Groups	Deviation from Linearity	89.486	18	4.971	.417	.785
	Within Groups		630.707	93	6.931		
	Total		743.964	112			
Process Innovation		(Combined)	102.036	11	9.276	1.431	.171
	Between	Linearity	35.138	1	35.138	5.419	.022
	Groups	Deviation from Linearity	66.898	10	6.690	.232	.423
	Within Groups		641.928	101	6.484		
	Total		743.964	112			
Institutional Innovation		(Combined)	109.357	18	6.075	.881	.602
	Between	Linearity	1.014	1	1.014	.147	.702
	Groups	Deviation from Linearity	108.343	17	6.373	.324	.549
	Within Groups		634.607	94	6.898		
	Total		743.964	112			
Policy Innovation		(Combined)	60.100	11	5.464	.784	.655
	Between	Linearity	1.907	1	.861	.124	.726
	Groups	Deviation from Linearity	59.239	10	5.924	.550	.582
	Within Groups		682.818	101	6.968		
	Total		743.964	112			

According to Table 4.5, product innovation had a significance value of 0.785; process innovation had a significance value of 0.423; institutional innovation had a significance value of 0.549; and policy innovation had a significance value of 0.582. Therefore, the results indicate that all values were above 0.05 hence the data was linear.

4.5.3 Multi-collinearity Test

The study also examined the presence of multicollinearity abnormalities using tolerance and Variance Inflation Factor (VIF) in the data as shown in Table 4.6.

Table 4.6

Multi-collinearity Test

Model	Collinearity Statistics	
	Tolerance	VIF
Product Innovation	.945	1.058
Process Innovation	.918	1.089
Institutional Innovation	.878	1.138
Policy Innovation	.916	1.092

According to Table 4.6, product innovation had a tolerance of 0.945 and VIF of 1.058; process innovation had a tolerance of 0.918 and VIF of 1.089; institutional innovation had tolerance of 0.878 and VIF of 1.138; and policy innovation had a tolerance of 0.916 and VIF of 1.092. Therefore, since the tolerance value was above 0.2 and VIF below 5, the study ascertained that the data set did not have multicollinearity problem.

4.5.4 Autocorrelation Test

The study tested how innovation correlated with the financial performance using Durbin Watson values as shown in Table 4.7.

Table 4.7

Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.855 ^a	.731	.694	2.51957	1.821

According to Table 4.7, the Durbin-Watson value was 1.821 which was between 0-2 signifying that innovation was positively correlated to financial performance. Specifically, product innovation, process innovation, institutional innovation and policy innovation were correlated to financial performance in a positive way.

4.6 Descriptive Statistics of Financial Performance

The dependent variable was financial performance which was measured using return on assets, return on equity, gross profit, net profit and liquidity ratio. Financial performance was examined using questionnaire and secondary data analysis.

4.6.1 Questionnaire Results Analysis of Financial Performance

In quantitative analysis, the study used Ordinal Likert Scale to measure performance as indicated in Table 4.8.

Table 4.8*Descriptive Statistics of Financial Performance*

Statements N=112	1	2	3	4	5	Mean
Product innovation has improved ROA	2(2%)	9(8%)	0(0%)	23(21%)	78(69%)	4.48
Process innovation has improved ROE	2(2%)	18(16%)	0(0%)	40(36%)	52(46%)	4.09
Institutional innovation has improved gross profit	28(25%)	78(70%)	0(0%)	6(5%)	0(0%)	2.52
Following policies has reduced expenses	2(2%)	4(3%)	0(0%)	12(11%)	94(84%)	4.71
Reliable management structure has enhanced appropriate decisions	8(7%)	7(6%)	2(2%)	33(30%)	62(55%)	4.21

According to Table 4.8, 78 (69%) strongly agreed and 23(21%) agreed on a mean of 4.48, that product innovation had improved return on asset. Adding to that, 94(84%) strongly agreed and 12(11%) agreed on a mean of 4.71, that following policies had reduced expenses incurred from fines. That notwithstanding, 28(25%) strongly disagreed and 78(70%) disagreed on a mean of 2.52, that institutional innovation has improved gross profit. The interpretation of the results is that Saccos had made realizable strides towards incorporating customized products and realizable policies which have enhanced the assets and reduced expenses respectively. Notably, there was still issues related to poor organization culture, bureaucracy, composition structure and viability on the functions of the management. These issues were inhibiting full innovation to take place which was also supported by Yusheng and Masud (2019) who complained that one of the problems that

was causing stagnation in banking sector of Ghana was the high bureaucracy involved in making decision. This was a problem since when the management delayed making quick decisions affecting the operations, they frustrated the efforts of service delivery which in turn affected satisfaction levels of the customers.

4.6.2 Qualitative Analysis Results

Further on, the study also analyzed information gotten from financial report such as income statements to measure return on assets, return on equity, gross profit, net profit and liquidity ratio as revealed in Table 4.9.

Table 4.9

Descriptive Statistics of Secondary Data

Financial Indicators	Mean
ROA	4.21
ROE	3.97
GP	4.18
NP	2.56
LR	2.38

According to Table 4.9, ROA had a mean of 4.21, while gross profit had a mean of 4.18. These were the highest while net profit and liquidity ratio had a mean of 2.56 and 2.38 respectively. Therefore, the results indicated that in as much as Saccos were making reliable sales, profitability was greatly affected by ever increasing expenses and low

incorporation of innovation such as institutional innovation. This results to net profit and overall liquidity ratio. The results actually concur with SASRA (2022) report that indicated that in the financial year 2020/2021, the deposits of Saccos grew by Kshs 18 billion from Kshs 105 billion to Kshs 123billion in 2020 and 2021 respectively. Nevertheless, at the same time, the profitability declined by 33% from 49% to 16% signifying a worrying trend.

4.7 Descriptive Statistics of Product Innovation

The first independent variable was product innovation which was measured using deposit accounts, debit and credit cards, savings accounts, loans and overdrafts. It was examined using questionnaires and the results indicated on Table 4.10.

Table 4.10*Descriptive Statistics of Product Innovation*

Statements N=112	1	2	3	4	5	Mean
Variety of deposit and savings accounts has attracted more clients	5(5%)	11(10%)	0(0%)	17(15%)	79(70%)	4.38
Access to different loans, has motivated increase in savings	6(5%)	22(20%)	0(0%)	30(27%)	54(48%)	3.93
There are less requirements needed to open an account	81(72%)	12(11%)	8(7%)	11(10%)	0(0%)	2.62
Every debit account has a debit card	25(22%)	23(21%)	6(5%)	27(24%)	31(28%)	3.14
There is frequent review of products to ascertain on whether more could be improved	5(5%)	10(9%)	0(0%)	24(21%)	73(65%)	4.34

According to Table 4.10, 79(70%) strongly agreed and 17(15%) agreed on a mean of 4.38, that there were variety of deposit and savings accounts that had attracted more clients. Further, 73(65%) strongly agreed and 24(21%) agreed on a mean of 4.34 that there was frequent review of products to ascertain on whether more could be improved. That notwithstanding, 81(72%) strongly disagreed and 12(11%) disagreed on a mean of 2.62, there were less requirements needed to open an account with the Sacco which had reduced turnaround time. The interpretation of the results was that the Saccos had frequently reviewed and improved their products and services which led to growth in clients.

Nevertheless, the desired number of clients was not yet achieved due to bombastic requirements and processes when opening accounts or accessing loan products. As a result, the potential clients chose to consider other sources of loans such as banks, digital lending mobile applications and shylocks. A risk review report by Federal Deposit Insurance Corporation (2019) also suggested that financial institutions are normally engulfed with opportunity costs such that if they gain business, they expose the organization funds to risk while if they avoid organization risk, they miss out to some businesses. The act of balancing such that they gain legit business operations while at the same time managing risk, is a venture that requires sober decisions to have self-sufficient products that have minimal risk.

4.8 Model Summary of Product Innovation

The study analyzed the percentage effect of product innovation on financial performance as shown in Table 4.11.

Table 4.11

Model Summary of Product Innovation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.800 ^a	.641	.623	2.57046	1.717

a. Predictors: (Constant), Product Innovation

b. Dependent Variable: Financial Performance

According to Table 4.11, R was 0.800 while R-square was 0.641 at a Durbin Watson of 1.717. This meant that product innovation predicted 64.1% on financial performance which was positively correlated at 1.717. The other 35.9% was explained by other factors.

Therefore, the interpretation of the results indicate that product innovation clearly had a high effect on the financial performance dictating more than half of factors that have key determinants.

4.9 ANOVA of Product Innovation

The study used ANOVA to test the null hypothesis and the results are shown in Table 4.12.

Table 4.12

ANOVA of Product Innovation

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.771	1	23.771	3.598	.001 ^b
	Residual	720.193	111	6.607		
	Total	743.964	112			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Product Innovation

Table 4.12 provides that the p-value was 0.001, at F-statistic of 3.598 hence below than 0.05. This meant that the study rejected null hypothesis. The results are also similar to Cakadende and Mulyungi (2020) who discovered that the financial performance of Umwalimu Sacco in Rwanda, was influenced by process and product innovations.

4.10 Descriptive Statistics of Process Innovation

The second independent variable was process innovation which was measured using bank automation, mobile banking, internet banking, cheque clearance, and ATM services. It was examined using questionnaires and the results indicated on Table 4.13.

Table 4.13*Descriptive Statistics of Process Innovation*

Statements N=112	1	2	3	4	5	Mean
The staff are adequately trained on new processes	8(7%)	27(24%)	0(0%)	38(34%)	39(35%)	3.65
There are system checks to facilitate less downtime	65(58%)	31(28%)	1(1%)	14(12%)	1(1%)	2.29
There are effective complaint management processes	0(0%)	4(4%)	0(0%)	16(14%)	92(82%)	4.75
There are mobile and internet banking services	8(7%)	7(6%)	0(0%)	33(30%)	64(57%)	4.23
Cheque clearance takes less time	6(5%)	15(13%)	0(0%)	17(15%)	74(67%)	4.23
The Sacco management has invested in good working computerized systems	74(67%)	21(19%)	0(0%)	17(14%)	0(0%)	2.23

According to Table 4.13, 92(82%) strongly agreed and 16(14%) agreed on a mean of 4.75, that there were effective complaint management processes which clients used in case of dissatisfaction. Further, 74(67%) strongly agreed and 17(15%) agreed on a mean of 4.23 that cheque clearance took less time since the system was able to process it faster. That notwithstanding, 74(67%) strongly disagreed and 21(19%) disagreed on a mean of 2.23, the Sacco management had invested a lot in equipping the Sacco with good working computerized systems. In addition, 65(58%) strongly disagreed and 31(28%) disagreed on a mean of 2.29, that the Sacco had established updated system checks to facilitate less downtime during financial transactions. The interpretation of the results was that the Sacco

management had made notable developments such as having efficiency in processes complaints management and cheque clearance due to increased incorporation of ICT in their operations.

However, in comparison to other financial institutions such as insurance, banks and microfinance institutions, the ICT incorporation such as having enough servers and skilled staff was still low hence increased system downtimes exposing the client funds to cyber theft. In comparison, Mukanzi and Mwai (2020) noted that Western Kenya’s Sacco were also engulfed with service-related issues particularly on poor services due to increased number of network downtime which affected negatively the transactions. Notably, Mukanzi and Mwai (2020) noted that there were reported cases of attempted hack into the Sacco system registered during the system downtimes.

4.11 Model Summary of Process Innovation

The study analyzed the percentage effect of process innovation on financial performance as shown in Table 4.14.

Table 4.14

Model Summary of Process Innovation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.864 ^a	.747	.738	2.55010	1.601

a. Predictors: (Constant), Process Innovation

b. Dependent Variable: Financial Performance

According to Table 4.14, R was 0.864 while R-square was 0.747 at a Durbin Watson of 1.601. This meant that process innovation predicted 74.7% on financial performance which

was positively correlated at 1.601. The other 25.3% was explained by other factors. This meant that independently, process innovation's effect was the highest hence had the greatest ability to either affect positively or negatively the financial performance.

4.12 ANOVA of Process Innovation

The study used ANOVA to test the null hypothesis and the results are shown in Table 4.15.

Table 4.15

ANOVA of Process Innovation

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	35.138	1	35.138	5.403	.022 ^b
	Residual	708.826	111	6.503		
	Total	743.964	112			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Process Innovation

Table 4.15 provides that the p-value was 0.022, at F-statistic of 5.403 hence below than 0.05. This meant that the study rejected null hypothesis. The same was advanced by Shaikh et al. (2022) who indicated that mobile financial services had the capacity to influence profitability of financial institutions.

4.13 Descriptive Statistics of Institutional Innovation

The third independent variable was institutional innovation which was measured using management structure, agency banking, group banking, table banking, and organizational culture. It was examined using questionnaires and the results indicated on Table 4.16.

Table 4.16*Descriptive Statistics of Institutional Innovation*

Statements N=112	1	2	3	4	5	Mean
There is a reliable management structure	27(24%)	53(47%)	10(9%)	22(20%)	0(0%)	2.19
There are group and table banking	9(8%)	36(32%)	0(0%)	40(36%)	27(24%)	3.36
The management encourages learning culture	6(5%)	36(32%)	1(1%)	46(41%)	23(21%)	3.39
There is agency banking established	27(24%)	14(13%)	12(11%)	12(11%)	47(41%)	3.34
There are policies established to ensure that institutional innovation continues	15(13%)	8(7%)	0(0%)	22(20%)	67(60%)	4.05

According to Table 4.16, 67(60%) strongly agreed and 22(20%) agreed on a mean of 4.05, that there were policies established to ensure that institutional innovation continues for a long period of time. Further, 23(21%) strongly agreed and 46(41%) agreed on a mean of 3.39 that the management encourages learning culture to keep up with changes in technology and entire banking industry. That notwithstanding, 27(24%) strongly disagreed

and 53(47%) disagreed on a mean of 2.19, that there was a reliable management structure which was keen in articulating policies and procedures effectively.

The interpretation of the results was that the Saccos had already established several working policies that enabled it to operate well and also encouragement of the employees by the management to keep advancing their studied. Nevertheless, it was also noted that there were poor management operations such that the process of coming up with new policies or policies was either poorly done or done with less involvement of the junior staff. This led to both policies implemented becoming faulty or delaying the normal operations of the Sacco, hence loss of business income. A study by Shilimi (2021) had similar outcome whereby the management in Zambian Saccos was found out to take long in coming up with policies which minimally included the staff opinion hence ending up with policies that added no value to the operations of the Saccos.

4.14 Model Summary of Institutional Innovation

The study analyzed the percentage effect of institutional innovation on financial performance as shown in Table 4.17.

Table 4.17

Model Summary of Institutional Innovation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.715 ^a	.511	.508	2.61076	1.639

a. Predictors: (Constant), Institutional Innovation

b. Dependent Variable: Financial Performance

According to Table 4.17, R was 0.715 while R-square was 0.511 at a Durbin Watson of 1.639. This meant that process innovation predicted 51.1% on financial performance which was positively correlated at 1.639. The other 48.9% was explained by other factors. Therefore, independently, institutional innovation had the lowest influence on financial performance in comparison to product, process and policy innovation aspect considered in this study. This revealed that there were underlying issues surrounding the implementation of institutional innovation in the Sacco.

4.15 ANOVA of Institutional Innovation

The study used ANOVA to test the null hypothesis and the results are shown in Table 4.18.

Table 4.18

ANOVA of Institutional Innovation

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	1.014	1	1.014	.149	.000 ^b
Residual	742.950	111	6.816		
Total	743.964	112			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Institutional Innovation

Table 4.18 provides that the p-value was 0.000, at F-statistic of 0.149 hence below than 0.05. This meant that the study rejected null hypothesis. Comparatively, Moki et al. (2019) found out that there was a positive influence of institutional related strategies implemented and performance of Saccos in Nairobi.

4.16 Descriptive Statistics of Institutional Policy Innovation

The fourth independent variable was institutional policy innovation which was measured using regulatory policies, facilitating policies, restrictive policies. It was examined using questionnaires and the results indicated on Table 4.19.

Table 4.19

Descriptive Statistics of Institutional Policy Innovation

Statements N=112	1	2	3	4	5	Mean
The Sacco follows all government polices	5(5%)	18(16%)	0(0%)	32(29%)	57(50%)	4.05
The Sacco keep tabs with changes in restrictive policies	1(1%)	11(10%)	1(1%)	23(21%)	76(67%)	4.45
The staff are encouraged to always inquire from the senior management	1(1%)	9(8%)	0(0%)	17(15%)	85(76%)	4.57
There are internal disciplinary actions taken on staff who fails to follow laid down policies	0(0%)	12(11%)	0(0%)	22(20%)	78(69%)	4.48
Policies are communicated early enough to the staff	80(71%)	10(9%)	0(0%)	21(19%)	1(1%)	2.68

According to Table 4.19, 85(76%) strongly agreed and 17(15%) agreed on a mean of 4.57, that the staff were encouraged to always inquire from the senior management on any ambiguity on policies. Further, 78(69%) strongly agreed and 22(20%) agreed on a mean of

4.48 that there were internal disciplinary actions taken by management in cases where the staff failed to follow laid down policies. That notwithstanding, 80(71%) strongly disagreed and 10(9%) disagreed on a mean of 2.68, that policies were communicated early enough to the staff. The interpretation of the results was that the Saccos had improved staff-management relationship whereby there were established structures that guided on consultations and also punishment system in cases where the staff failed to adhere to the policies.

However, there was still a challenge of management informing the staff on changes in policies on time. This led to derail of operations due to lack of supporting management for the staff to make quick decisions. This could include loan applications taking a high turn-around time before money is disbursed due to loan policy changes. Comparatively, Muguna et al. (2020) also provided complain on stagnation of Sacco operations due to indecision making emanating from lack of communication in policy changes of Saccos in Imenti North Sub-County.

4.17 Model Summary of Institutional Policy Innovation

The study analyzed the percentage effect of institutional policy innovation on financial performance as shown in Table 4.20.

Table 4.20

Model Summary of Institutional Policy Innovation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.792 ^a	.628	.595	2.51122	1.551

a. Predictors: (Constant), Institutional Policy Innovation

b. Dependent Variable: Financial Performance

According to Table 4.20, R was 0.792 while R-square was 0.628 at a Durbin Watson of 1.551. This meant that institutional policy innovation predicted 62.8% on financial performance which was positively correlated at 1.551. The other 37.2% was explained by other factors. The results revealed that innovations made on policies was a great influence to financial performance.

4.18 ANOVA of Institutional Policy Innovation

The study used ANOVA to test the null hypothesis and the results are shown in Table 4.21.

Table 4.21

ANOVA of Institutional Policy Innovation

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	74.459	3	24.820	3.936	.010 ^b
	Residual	668.459	109	6.306		
	Total	742.918	112			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Institutional Policy Innovation

Table 4.21 provides that the p-value was 0.010, at F-statistic of 3.936 hence below than 0.05. This meant that the study rejected null hypothesis. Further, Mugo et al. (2017) also found out that innovations on institutional policies had a clear influence on how performance of Kenya Saccos were to be enhanced.

4.19 Multiple Regression Analysis

The study conducted multiple regression analysis which is an inferential statistic. The analysis involved model summary, ANOVA and regression coefficients.

4.19.1 Model Summary of the Effect of Innovation on Financial Performance

The study analyzed the percentage effect of product, process institutional and policy innovations combined on financial performance as shown in Table 4.22.

Table 4.22

Model Summary of Effect of Innovation on Financial Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.855a	.731	.694	2.51957	1.821

a. Predictors: (Constant), Product Innovation, Process Innovation, Institutional Innovation, Policy Innovation

b. Dependent Variable: Financial Performance

According to Table 4.22, R was 0.855 while R-square was 0.731 at a Durbin Watson of 1.821. This meant that process innovation predicted 73.1% on financial performance which was positively correlated at 1.821. The other 26.9% was explained by other factors. This meant that innovation was a key aspect towards dictating whether the financial performance would increase or decrease.

4.19.2 ANOVA of Effect of Innovation on Financial Performance

The general objective of the study was to investigate the effect of innovation on financial performance of deposit taking saving and credit cooperative societies in Laikipia County, Kenya. The study used ANOVA to examine the influence and the results are shown in Table 4.23.

Table 4.23

ANOVA of Effect of Innovation on Financial Performance

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	76.355	4	19.089	3.007	.022 ^b
Residual	666.563	105	6.348		
Total	742.918	109			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Product Innovation, Process Innovation, Institutional Innovation, Policy Innovation

Table 4.23 provides that the p-value was 0.022, at F-statistic of 3.007 hence below than 0.05. This meant that the study indicated that financial performance was positively affected by innovation. Comparatively, Egesa and Odero (2019) also established that the financial performance of deposit-taking Saccos particularly in Kenya was positively affected by innovation.

4.19.3 Regression Coefficient of Effect of Innovation on Financial Performance

The study's regression model in question was $Y = C + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4$. This was where: Y was financial performance; β_i was coefficients to be estimated; C was Constant; X1 was product innovation; X2 was process innovation; X3 was institutional innovation; and X4 was policy innovation. The study conducted a regression coefficient analysis and its results are presented in Table 4.24.

Table 4.24*Regression Coefficient of Effect of Innovation on Financial Performance*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	17.204	3.530		4.873	.000
1 Product Innovation	.122	.053	.217	2.285	.024
Process Innovation	.276	.097	.273	2.832	.006
Institutional Innovation	.030	.060	.050	.507	.613
Policy Innovation	.057	.104	.053	.546	.586

According to Table 4.29, constant was 17.204; product innovation was 0.122; process innovation was 0.276; institutional innovation was 0.030; and policy innovation was 0.057. Therefore, the results revealed that financial performance was increased by $17.204C+0.122X1+0.276X2+0.030X3+0.057X4$. Separately, all independent variables were statistically significant but when combined only product and process innovations were statistically significant in the influence of innovation on financial performance. Therefore, there should be more concentration on how more product and process innovations could be enhanced in the Saccos for optimal performance. This could be in terms of increasing deposit accounts, debit and credit cards, savings accounts, loans and overdrafts. Further, there should be enhanced bank automation, mobile banking, internet banking, cheque clearance, and ATM services just as Hai et al. (2022) suggested.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The study was set to investigate how the performance related to finances of deposit saccoes in Laikipia County was affected by innovation. Specific objectives were to examine how product, process, institutional, and policy innovations affected financial performance. Descriptive research design was used to collect data from nine deposit taking Saccos in Laikipia County. Specifically, the respondents were 118 respondents who included 22 departmental managers and 96 support staff selected using census method. Notably, the study analyzed secondary data and issued questionnaires to departmental managers and support staff. A pilot study in Bingwa Sacco in Kirinyaga County was conducted whose managing director, 3 departmental managers and 13 technical staff took part.

5.2 Summary of Results

The study analyzed data on product, process, institutional and policy innovation. The summary is provided in section 5.2.1 to 5.2.4.

5.2.1 Product Innovation

The results indicated that 79(70%) strongly agreed and 17(15%) agreed on a mean of 4.38, that there were variety of deposit and savings accounts that had attracted more clients. Further, 73(65%) strongly agreed and 24(21%) agreed on a mean of 4.34 that there was frequent review of products to ascertain on whether more could be improved. That notwithstanding, 81(72%) strongly disagreed and 12(11%) disagreed on a mean of 2.62, there were less requirements needed to open an account with the Sacco which had reduced

turnaround time. Additionally, R was 0.800 while R-square was 0.641 at a Durbin Watson of 1.717. This meant that product innovation predicted 64.1% on financial performance which was positively correlated at 1.717. Further, the p-value was 0.001 which was below than 0.05 and therefore, the study rejected the null hypothesis.

5.2.2 Process Innovation

The results indicated that 92(82%) strongly agreed and 16(14%) agreed on a mean of 4.75, that there were effective complaint management processes which clients used in case of dissatisfaction. Further, 74(67%) strongly agreed and 17(15%) agreed on a mean of 4.23 that cheque clearance took less time since the system was able to process it faster. That notwithstanding, 74(67%) strongly disagreed and 21(19%) disagreed on a mean of 2.23, the Sacco management had invested a lot in equipping the Sacco with good working computerized systems. In addition, 65(58%) strongly disagreed and 31(28%) disagreed on a mean of 2.29, that the Sacco had established updated system checks to facilitate less downtime during financial transactions. Additionally, R was 0.864 while R-square was 0.747 at a Durbin Watson of 1.601. This meant that process innovation predicted 74.7% on financial performance which was positively correlated d at 1.601. Further, the p-value was 0.022 which was below than 0.05 and therefore, the study rejected null hypothesis.

5.2.3 Institutional Innovation

The results indicated that 67(60%) strongly agreed and 22(20%) agreed on a mean of 4.05, that there were policies established to ensure that institutional innovation continues for a long period of time. Further, 23(21%) strongly agreed and 46(41%) agreed on a mean of 3.39 that the management encourages learning culture to keep up with changes in

technology and entire banking industry. That notwithstanding, 27(24%) strongly disagreed and 53(47%) disagreed on a mean of 2.19, that there was a reliable management structure which was keen in articulating policies and procedures effectively. Additionally, R was 0.715 while R-square was 0.511 at a Durbin Watson of 1.639. This meant that process innovation predicted 51.1% on financial performance which was positively correlated at 1.639. Further, the p-value was 0.000 which was below than 0.05 and therefore, the study rejected null hypothesis.

5.2.4 Institutional Policy Innovation

The results indicated that 85(76%) strongly agreed and 17(15%) agreed on a mean of 4.57, that the staff were encouraged to always inquire from the senior management on any ambiguity on policies. Further, 78(69%) strongly agreed and 22(20%) agreed on a mean of 4.48 that there were internal disciplinary actions taken by management in cases where the staff failed to follow laid down policies. That notwithstanding, 80(71%) strongly disagreed and 10(9%) disagreed on a mean of 2.68, that policies were communicated early enough to the staff. Additionally, R was 0.792 while R-square was 0.628 at a Durbin Watson of 1.551. This meant that process innovation predicted 62.8% on financial performance which was positively correlated at 1.551. Further, the p-value was 0.010 which was below than 0.05 and therefore, the study rejected null hypothesis.

5.3 Conclusions of the Study

On product innovation, the desired number of clients was not yet achieved due to bombastic requirements and processes when opening accounts or accessing loan products. As a result, the potential clients chose to consider other sources of loans such as banks, digital lending mobile applications and shylocks. Therefore, this led to declined new customer numbers and excessively dormant accounts which eventually led to low profitability.

On process innovation, the Sacco's bid to incorporate ICT to assist in financial transaction such as having enough servers and skilled staff was still low hence increased system downtimes. Consistent downtime exposed the client deposits to cyber theft since the hackers noted this weakness and used to their advantage to commit crime.

On institutional innovation, there were poor management operations such that the process of coming up with new policies were either poorly done or done with less involvement of the junior staff. This led to policies implemented becoming faulty or delaying the normal operations of the Sacco, hence loss of business income.

On institutional policy innovations, the management took longer time when communicating to the staff on changes in policies on time. This led to derail of operations due to ambiguity in terms of management support hence the staff to were not sure whether the decision made were backed by the management or not. In cases of where the management did not back decision, the staff became legally liable for any loss the Sacco endured from a business venture hence the speed of decision making was negatively affected. This could include loan applications taking a high turn-around time before money is disbursed due to loan policy change

5.4 Recommendations of the Study

On product innovation, the management of the Saccos should consult and preferably hire risk management professionals to further review on the requirements needed on each product and service the Sacco offers. This would see to it that irrelevant requirements are eliminated hence creating assurance to new customers. Additionally, the Sacco staff should train its staff on customer service so as to develop friendly environment to customers such that they do not feel threatened when acquiring new products or services. This would also improve the tendency of the clients to issue the required information accurately.

On process innovation, the Sacco management should invest in secure servers to protect client's information from unauthorized access or use. This could also involve wither hiring new ICT personnel or sharpening the skills of the current ICT staff through training and development. They should also be allowed to attend symposiums to enable them advance their ethical hacking skills to promote stable firewalls in the system. Additionally, the Sacco staff should maintain a strict policy of ensuring that they do not issue passwords to anyone or leave their computers logged in in their absence even when there is a system failure to reduce cyber hacking. Further, the Sacco ICT management should expand their domains to ensure that there are minimal system failures to facilitate smooth flow of operations. This could be done through incorporating new software such as Robust Core Banking Platform

On institutional innovation, the Sacco management should restructure the decision-making procedures and processes to see to it that at consultation stage, the opinion of junior staff involved in operations is incorporated. Further, the management should also review their

decision-making processes particularly the ones touching on development of the institution. This would enable the Saccos to incorporate implementable policies and innovation that have a long-term positive effect on the financial performance of the Saccos.

On institutional policy innovations, the Sacco management should develop policies on the timeframes on when changes in policies should be communicated to staff. This should be documented and put in public domain for the staff to know as well for effective decision making on their daily assignments. Further, there should be a clear chain of command on who among the management teams is the staff supposed to ask the hard questions regarding processes and policies implemented. This would minimize back and forth on improvements suggested to facilitate smooth operations.

5.5 Suggestion for Future Studies

Future studies should expand their findings on other types of innovations such as in the field of marketing, audit and risk management innovations. Further, other managers apart from departmental ones should be included in the future studies to get to know some of the challenges they have been experiencing as they make various innovations. Additionally, there should be more assessment to other monetary establishments such as banks and microfinance in other counties apart from Laikipia.

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APPENDICIES

Appendix I: Introduction Letter

Dear Participant,

I am a student currently enrolled in the masters of business administration (finance option) program at Kenya Methodist University (KeMU) school of business and economics. I am in the process of writing my research thesis. I invite you to participate in a research study entitled as effect of innovation on financial performance of deposit taking saving and credit cooperative societies (saccos) in Laikipia County, Kenya. Your responses will remain confidential and anonymous. Data from this study will be kept under secure systems and reported as a collective effort. If you agree to participate in this study, please answer the questions on the questionnaire as best you can. However, your participation in this study is completely voluntary. Please return the questionnaire on completion.

Your faithfully,

Safia Abdi Jillo

Bus-3-0879-1/2017

Appendix II: Questionnaires

The following questions relate to the effect of innovation on financial performance of deposit taking saving and credit cooperative societies (saccos) in Laikipia County, Kenya. Kindly take time to read and tick in the spaces provided on the most suitable response. The questionnaire has six sections whereby each section has five different questions.

SECTION A: DEMOGRAPHIC INFORMATION

1. Academic Qualification

- Post Graduate ()
Bachelor's Degree ()
Diploma ()
Professional Certificate ()

3. How long have you worked in the Sacco

- Over 10 years ()
6-10 years ()
2-5 years ()
Less than 1 year ()

SECTION B: PRODUCT INNOVATION AND FINANCIAL PERFORMANCE

This part has questions regarding product innovations and financial performance. Kindly respond with the response that matches your opinion. Please tick as appropriate in the boxes. 1-strongly disagree, 2-disagree, 3-neutral, 4, agree, 5- strongly agree.

No	Statement	1	2	3	4	5
1.	Having variety of deposit and savings accounts has attracted more clients					
2.	When clients learn that they can get access to different loans, they are motivated to increase their savings					

3.	There are less requirements needed to open an account with the Sacco which had reduced turnaround time					
4.	Every debit account has a debit card to facilitate easier withdrawal in an ATM hence reducing long lines in the branch					
5.	There is frequent review of products to ascertain on whether more could be improved					

SECTION C: PROCESS INNOVATION AND FINANCIAL PERFORMANCE

This part has questions regarding process innovation and financial performance. Kindly respond with the response that matches your opinion. Please tick as appropriate in the boxes. 1-strongly disagree, 2-disagree, 3-neutral, 4, agree, 5- strongly agree.

No	Statement	1	2	3	4	5
1.	The staff are adequately trained on new processes for purposes of creating awareness to the clients					
2.	The Sacco has established updated system checks to facilitate less downtime during financial transactions					
3.	There are effective complaint management processes which clients can use in case of dissatisfaction					
4.	There are mobile and internet banking services in this Sacco					
5.	Cheque clearance takes less time since the system is able to process it faster					
6.	The Sacco management has invested a lot in equipping the Sacco with good working computerized systems					

SECTION D: INSTITUTIONAL INNOVATION AND FINANCIAL PERFORMANCE

This part has questions regarding institutional innovation and financial performance. Kindly respond with the response that matches your opinion. Please tick as appropriate in the boxes. 1-strongly disagree, 2-disagree, 3-neutral, 4, agree, 5- strongly agree.

No	Statement	1	2	3	4	5

1.	There is a reliable management structure which is keen in articulating policies and procedures effectively					
2.	The Sacco has accommodated group and table banking to not only offer competitive advantage but also reach out to every member of the society					
3.	The management encourages learning culture to keep up with changes in technology and entire banking industry					
4.	There is agency banking established to provide financial services continently to clients					
5.	There are policies established to ensure that institutional innovation continues for a long period of time					

SECTION E: INSTITUTIONAL POLICY INNOVATION AND FINANCIAL PERFORMANCE

This part has questions regarding the effect of policy innovation on financial performance. Kindly respond with the response that matches your opinion. Please tick as appropriate in the boxes. 1-strongly disagree, 2-disagree, 3-neutral, 4, agree, 5- strongly agree.

No	Statement	1	2	3	4	5
1.	The Sacco follows all government polices related to financial innovations					
2.	The Sacco has employed personnel to keep tabs with the slightest changes in restrictive policies					
3.	The staff are encouraged to always inquire from the senior management on any ambiguity on policies					
4.	There are internal disciplinary actions taken by management in cases where the staff fails to follow laid down policies					
5.	Policies are communicated early enough to the staff					

SECTION F: FINANCIAL PERFORMANCE

This part has questions regarding financial performance. Kindly respond with the response that matches your opinion. Please tick as appropriate in the boxes. 1-strongly disagree, 2-disagree, 3-neutral, 4, agree, 5- strongly agree.

No	Statement	1	2	3	4	5
1.	Product innovation has improved return on asset					
2.	Process innovation has improved return on equity					
3.	Institutional innovation has improved gross profit					
4.	Following policies has reduced expenses incurred from fines hence higher net income					
5.	Having reliable management structure has enhanced sound financial innovation decision hence having high liquidity ratios					

Appendix III: Secondary Data Collection Form

Secondary data for Saccos in Laikipia County from 2020-2022 will be collected as follows:

Sacco's Name.....

Measuring Unit			
	2020	2021	2022
Return on assets			
Return on Equity			
Gross Profit			
Net profit			
Liquidity ratio			

Appendix IV: Introduction Letter from KeMU



KENYA METHODIST UNIVERSITY

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DIRECTORATE OF POSTGRADUATE STUDIES

March 17, 2023

Commission Secretary
National Commission for Science, Technology and Innovations
P.O. Box 30623-00100
NAIROBI

Dear Sir/Madam,

RE: SAFIA ABDI JILLO (REG. NO. BUS-3-0879-1/2017)

This is to confirm that the above named is a bona fide student of Kenya Methodist University, in the Department of Business Administration, undertaking a Master's Degree in Business Administration. She is conducting research on: "Effect of Innovation on Financial Performance of Deposit Taking Saving and Credit Cooperative Societies in Laikipia Country, Kenya".

We confirm that her research proposal has been defended and approved by the University.

In this regard, we are requesting your office to issue a research license to enable her collect data.

Any assistance accorded to her will be appreciated.



Dr. John M. Muchiri (PhD)
Director, Postgraduate Studies

Cc: Dean SBUE

CoD, Business Administration
Postgraduate Coordinator
Supervisors

