INFLUENCE OF ADAPTIVE CAPABILITY ON GROWTH OF DEPOSIT-TAKING SAVINGS AND CREDIT COOPERATIVE SOCIETIES IN MERU COUNTY, KENYA

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DECLARATION AND RECOMMENDATION

Declaration

I declare this research thesis is my original work and has not been presented in any other university.

Sign:  ..... Date: ……

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Recommendations

This research thesis has been submitted for examination with our approval as university supervisors

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DEDICATION

I hereby dedicate this thesis to my parents, Mr &Mrs Ngutiku for their unselfishness in helping me attain achievements such as this. May God bless you as you live your lives to the fullest. I thank God for enabling this academic journey and sending angels for every need I had. To my supervisors, Prof Paul Gichohi and Dr. Paul Kirigia; am eternally grateful for your push, patience and sacrifice to not only see me graduate, but do so with ease and in time. God bless you. To Stephen, Tarvone, Nick, Pst Veronica and John, you are an amazing people and I thank you for helping where I faltered or lost my capabilities. My prayer warriors, Anthony and Dr. Purity, may God answer to your prayers and needs, causing your cup to overflow.

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ABSTRACT

The study focused on the growth of Deposit-Taking Savings and Credit Cooperative Organizations (DT-SACCOs) in Meru County, Kenya, amid a general national decline in their numbers. Despite the large customer base making deposits and savings, consistent growth has been elusive. The research examined the impact of market competition, technology adoption, management capability, and product innovation on DT-SACCO growth in Meru County, Kenya. It was guided by the dynamic capabilities' theory, resource-based view theory, and Schumpeter's theory of innovation. A mixed-method approach using both quantitative and qualitative data was employed. Data were gathered from 10 DT-SACCO headquarters in Meru County through a descriptive survey design. Respondents included 10 purposively sampled branch managers and 170 randomly sampled officers. Data collection methods included interviews, questionnaires, and secondary financial reports. Validity and reliability were assessed using various methods, including Cronbach's alpha. SPSS version 27 was used for both descriptive and inferential statistical analysis. Findings revealed at a 99% significance level and $\alpha < 0.001$, the market competition correlation coefficient value was r = r=0.609. This showed that market competition had a moderately high influence on growth. The technology adoption correlation coefficient value was r = 0.830 with $\alpha < 0.000$. This demonstrated a high influence of technology adoption on growth. The management capability correlation coefficient value is r = r=0.320 with $\alpha < 0.002$. This showed that management capability had the least influence on growth. The correlation result for product innovation is r = r=0.571 with $\alpha < 0.003$. This showed that product innovation had a moderate influence on growth. Furthermore, market competition strategies excluded staff, contributing to high turnover. Technology adoption, though advanced with internet and mobile banking, suffered from cybersecurity threats. Weak institutional frameworks hindered management effectiveness. Product innovation was inconsistent due to unpredictable market demands. The study recommends the need for the management to develop policies to emphasize on how staff can be included in making decisions to improve their commitment level to the organization and take advantage to market competition. If there are policies that encourage staff involvement in decision making, it will enhance cohesion and effective operations. The study recommends that in terms of technology adoption, there is need to give priority to cybersecurity and consistent training in technology, to reduce operational risk exposure. In terms of management capability, the results have categorically pointed out the need for explicit institutional policies that are crucial towards banking processes, management of risk, and staff mentorship programs. When such policies are implemented, the management should ensure that they are in line with SASRA's oversight. In terms of product innovation, the findings pointed out the need for established policies that guide on customer feedback mechanism, research and development, as measures to enable the DT-SACCOs effectively adapt to market shifts.

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ABBREVIATIONS AND ACRONYMS

CTCS	Cooperative Thrift and Credit Societies
CRA	Commission on Revenue Allocation
DT-SACCOs	Deposit-Taking Savings and Credit Cooperative Societies
IBM	Institute of Business
ICT	Information Communication and Technology
IMF	International Monetary Fund
ITA	International Trade Administration
KFSD	Kenya Financial Sector Deepening
NPLs	Non-Performing Loans [NPLs]
ROE	Return on Equity
SASRA	SACCO Societies Regulatory Authority
UNCDF	United Nations Capital Development Fund

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The study sought to evaluate the influence of adaptive capability on the growth of deposit-taking savings and credit cooperative societies in Meru County. This chapter provides the background of the study, statement of the problem, purpose of the study, specific objectives, research hypothesis, justification of the study, scope of the study, limitations of the study, scope of the study, assumptions of the study, and operational definition of terms.

Financial growth, by its basic definition, entailed the ability of an institution to expand its operations as a result of adequate use of debt, equity, and other hybrid financing methods that sought to reduce cost and enhance efficiency (World Bank, 2024). In the context of a Deposit Taking-Savings and Credit Cooperative Society [DT-SACCO], Nadzua et al. (2025) and Kenya Financial Sector Deepening (KFSD, 2022) defined growth as product and market development initiatives established through existing internal policy frameworks. Another definition by Waithaka and Odollo (2024) injected the service aspect into growth's definition to indicate that it is an ability of a DT-SACCO to consistently develop products and services that address changing customer needs.

Therefore, growth was taken to mean the ability of a DT-SACCO to consistently develop products and services that are governed by an internal institutional policy framework in promoting efficiency, reducing overall costs of operations, and addressing the dynamic needs of the customers. Growth of a DT-SACCO was measured through total assets,

number of members, customer deposits, and loan book portfolio. These measures were adopted by SASRA to ascertain the growth of both deposit and non-deposit SACCOs in the most recent report of 2023.

Total assets included the market value of all tangible and intangible resources that a financial institution owned without including liabilities and through which they were able to settle their obligations (OECD, 2024). The number of members included the total number of registered customers who had acquired a financial product or service in the DT-SACCO (Mohamed et al., 2022). Customer deposits included the funds kept in financial institutions' accounts for savings, speculations, or as collateral for extended credit (Kowait & Osiemo, 2024). The loan book portfolio included the total number of credit facilities and their value extended to various DT-SACCO borrowers (Changamu et al., 2023).

1.1.1 Growth of DT-SACCOs

Growth in DT-SACCOs showcased the financial milestone the institution undertook to ensure that individuals and corporations had gained not only financial independence but knowledge as well. This is through access to credit, financial training, and encouragement of savings to promote and stimulate economic development. According to Kathimuuri (2023), growth parameters of a DT-SACCO provided evidence of the total number of people who had been empowered in terms of gaining purchasing power to access the products and services from the economy. However, growth was not always assured, as witnessed in global, regional, and local financial institutions.

Globally, Diaspora's financial institutions in France faced increased competition from other financial institutions, which included commercial banks and digital lenders (United

Nations Capital Development Fund [UNCDF], 2021). Their competitors had been providing similar products and services in a more efficient method that resonated better with clients. Furthermore, a lack of innovative and rigid products that were rigid to customers' needs was a major concern for financial institutions in Sweden (Berg & Hassan, 2022). These institutions failed to customize their products based on individual customer needs, hence losing a huge number of clients on the notion that the financial institutions could not understand their financial problems.

According to IMF (2024b), the existence of a management team with less viable networks that would be used to enhance growth was a notable cause of failure in financial institutions in Japan. This is majorly because there was less novelty in their ideas to spur growth in the midst of a fiercely contested financial market. In China, high lending rates that were unfavorable to clients due to increased base lending from the central bank were noted by the Monetary Policy Analysis Group of the People's Bank of China (2024) as a problem. The higher the base lending, the higher the lending rates expected to be charged to different clients based on their previous borrowing history.

Regionally, DT-SACCOs in South Africa underwent digital insecurities that exposed the institutions to loss of funds through hacking and unauthorized access to the client's financial data (Rawal, 2022). Furthermore, in Zambia, the increased number of dormant accounts increased the operational costs of the DT-SACCOS in the management of the accounts (Shilimi, 2021). In the West Africa region, weak capital bases due to an alarming declining rate of new customers negatively affected the liquidity status of DT-SACCOs in a nation like Senegal (Mondato, 2022). In the same region, Nigerian SACCOs had experienced negative growth rates due to misappropriation of customers' funds by the

management. This was whereby they irregularly accessed clients' accounts to divert their funds into individual accounts for selfish gains. In addition, SACCOs in the East African region experienced limitations on their growth due to highly biased market structures that deprived them of expected revenues (Mbunda, 2024).

Locally, tough regulatory measures in Kenyan DT-SACCOs caused most of them to scale down their operations, such as in the marketing of their products and services (Wanjiru et al., 2024). This resulted in poor resource utilization, hence interfering with the general growth and development of the institutions. According to Barasa (2023), poor corporate governance concerns resulted in high employee turnover, causing top talent to be absorbed by other financial and non-financial institutions. Furthermore, increased non-performing loans [NPLs] and inadequate bad debt provision exposed the DT-SACCOs to liquidity risk. These issues could be resolved through the implementation of adaptive capabilities (Waithaka & Odollo, 2024).

1.1.2 Adaptive Capability

Adaptive capability is the ability of a financial institution to instigate change through its systems as a way of coping with sudden shifts in stress factors and capitalizing on possible opportunities therein (Mweu & Mung'ara, 2021). It is necessary for a financial institution such as a DT-SACCO to have viable strategies that are applicable towards handling market challenges that they face for consistent growth. These strategies are basically guided by the internal policy frameworks whose structure has been benchmarked for accurate market implementation processes. Therefore, this study will address various adaptive capabilities like market competition, technology adoption, management capability, and product

innovation (Messabia et al., 2023; Waithaka & Odollo, 2024). These capabilities encompass the entire institutional cycle of interactions; hence they are suitable for inclusivity in addressing growth concerns at DT-SACCOs.

Market competition is the process of developing unique policies and strategies in a DT-SACCO to enhance volume of sales, market share, and general profits (Kathimuuri, 2023; King'ori et al., 2023). This process is quite engaging since it promotes critical financial approaches that can be used to turn around low growth. The ability of the DT-SACCO to structure a unique method of increasing sales creates a demand niche that enhances its market share in the economy. According to King'ori et al. (2023), SACCOs operate in a market that is already occupied by other financial institutions that seek to also sell and generate revenue from the same targeted customers. This therefore means that competition can only be overcome when DT-SACCOs are keen to consistently develop new ways of reaching out to different categories of clients.

Technology adoption is the incorporation of information communication and technology [ICT] to boost operational processes in a SACCO (Aila et al., 2021). This method ensures that all necessary procedures that could be done through digitalization are easily attained with less utilization of resources. According to Tashtamirov (2023), customer demands are versatile to a shift in technological development implemented in a financial institution. It is their expectation that DT-SACCOs are able to provide comfort, efficiency, and effectiveness in the dissemination of their services, similar to their experience with other financial or non-financial institutions. Discrepancies from non-digitized services are considered a negative trait by clients since they are more accustomed to digitization (Aila

et al., 2021). Therefore, noting such high expectations, DT-SACCOs have the advantage of providing adequate ICT tools to support the execution of banking processes.

Management capability includes the skills and knowledge possessed by the decision makers and their utilization rate of organizational resources and processes to enhance growth (Adna, 2020). Notably, the management is responsible for making decisions that directly affect the operations of the entire institution. This means that their experience and general knowledge play a hand in their reasoning capabilities. According to Ruan and Jiang (2024), once a financial strategy is crafted, it requires adequate resource provision and efficient processes to be implemented. Therefore, management capability not only leads to new financial strategies but also their execution till the set objective is attained.

Product innovation is the process of creating new DT-SACCO products and also improving the current ones to realize the growth objective (Nadzua et al., 2025). This process is a basic requirement for a financial institution to survive in a highly competitive market. Product innovation differentiates a DT-SACCO's offering vis-a-vis where they are currently. According to Muathe (2020), planning for what products and services their target clients will need is considered an innovation from the perspective of a financial institution. Therefore, adaptive capabilities like market competition, technology adoption, management capability, and product innovation provide DT-SACCOs a chance for increased growth, but only when provided in specific timelines and manners (Rawal, 2022). Several studies have pointed to the inclusivity of such adaptive capabilities in the financial institutions.

In developed nations, DT-SACCOs in Canada have been incorporating artificial intelligence [AI] technology to engage and assess the different needs of the customers (International Trade Administration [ITA], 2024). The AI has become more prominent since it articulately matches different products and services to clients on digital platforms. Furthermore, recruitment of well-founded managers with a wealth of experience and a huge network base is being encouraged in financial institutions in the United Kingdom (World Bank, 2024). This trend has also been noted in Spain, where qualified managers are provided with necessary financial resources like the most recent software that analyzes huge amounts of information to enable them to make quick decisions.

In developing nations, DT-SACCOs have been adopting customizable products and services that are purely digitalized and based on a client's financial need in Tanzania (Mbunda, 2024). Additionally, there has been the incorporation of digital marketing campaigns established to encourage the younger generation to subscribe to SACCOs' products and services. According to Ntoiti (2024), this method has been efficiently working, particularly in a nation like Kenya, where a huge population is mainly comprised of the youth.

1.1.3 Deposit Taking-Savings and Credit Cooperative Society [DT-SACCO]

A Deposit Taking-Savings and Credit Cooperative Society [DT-SACCO] is a financial institution regulated by SASRA to accept deposits and withdrawals from customers (SASRA, 2023). There were 178 licensed deposit-taking SACCOs at the time of data collection operating in Kenyan counties (SASRA, 2025; The Kenya Gazette, 2025). Their overall net worth in terms of customer deposits was Kshs 682.19 billion, which was

considered liquid. The DT-SACCOs were regulated by SASRA, whose mandate was ensuring that they operated within the set financial policies that sought to protect the customer's deposit and reduce foreseeable risk to the bare minimum.

Meru County is one of the counties in Kenya found in the former Eastern Province within the geographical coordinates of 0°3′N 37°38′E. There are counties such as Isiolo, Tharaka Nithi, Nyeri, and Laikipia that surround Meru in the north, south, southwest, and west, respectively. The region had an operative GDP of $3.48B, which was the fifth-largest economy contributor in Kenya. According to a Gazette notice no. 657 of the Kenya Gazette (2025), there were 10 licensed DT-SACCOs that are currently operational in Meru County (Appendix VIII). Their existence spurred the economy of Meru County to develop due to the injection of finances into various sectors through agricultural, business, and development loans.

According to Raiji and Lumwagi (2022), there was an increment in political interference, especially in the leadership structures of Meru County's DT-SACCO. This was noted to cause excessive bureaucracies and inefficiencies among the management, hampering the provision of resources meant for expansion purposes to cover more areas in Meru County. These concerns motivated the study to address the influence of adaptive capability on the growth of deposit-taking savings and credit cooperative societies in Meru County.

1.2 Statement of the Problem

Attainment of growth in a DT-SACCO should be consistently witnessed due to the huge number of customers who make deposits and save their financial resources through these financial institutions. Therefore, the management should seek to strengthen the working

policies to increase sales, reduce risky products, and incorporate the latest technology to support efficient processes (Muathe, 2020).

That notwithstanding, the number of DT SACCOs in Kenya declined from a total of 359 in 2022 to 357 in 2023 (SACCO Societies Regulatory Authority [SASRA], 2023). This is a partial indication that DT-SACCOs have been struggling with growth, whereby in 2023, there was an increment of 1.45 million (18.6%) dormant accounts, whereas the number of new customers has been declining over the years. For example, the latest SASRA report for 2023, published in September 2024, noted that there were 194,923 new customers in 2023 as compared to 382,315 in 2022 and 442,285 in 2021.

The same declining trajectory was also witnessed in declined gross loans by 0.96%, from 12.24% to 11.28% in 2022 and 2023, respectively (SASRA, 2023). Furthermore, despite an increment of 9.17% of total assets in 2023, it was 1.14% lower compared to the 10.31% growth experienced in 2022. Therefore, Waithaka and Odollo (2024) noted that the failure of DT-SACCOS to innovatively restructure their products and digitalize their services perpetually exposed them to tough market competition from other financial institutions. Failure to resolve the downward trajectory of DT-SACCOs would result in low public confidence in the ability of these institutions to manage their investments, hence declining deposits.

Previous global studies, such as Messabia et al. (2023) and Ruan and Jiang (2024), concentrated on management strategies and minimization of credit risk through digital inclusivity in areas such as Haiti and China, respectively. However, Messabia et al. (2023) did not address market competition, whereas Ruan and Jiang (2024) addressed their study

from a commercial bank's perspective. Regionally, Kowait and Osiemo (2024) and Paschal et al. (2024) concentrated on socio-economic benefits and debt management literacy and not adaptive capability on growth in Rwanda and Tanzania's Saccos, respectively.

Local studies such as Ntoiti (2024), Waithaka and Odollo (2024), Wanjiru et al. (2024), and Said (2023) considered different approaches such as dynamic capability, market expansion, asset quality, and product positioning strategies in addressing growth prospects of DT-SACCOs, respectively. Nevertheless, a study such as Ntoiti (2024) considered marketing, technology, and management capabilities but failed to articulate product innovation. Waithaka & Odollo (2024) considered diversification, acquisition, and market leadership but concentrated on DT-SACCOs in Nairobi and not in Meru County.

Wanjiru et al. (2024) used information asymmetry theory as the anchorage theory, which is highly criticized for its monopolistic weakness on information to involved stakeholders. Additionally, Said (2023) used qualitative measures on growth but not quantitative measures. All in all, there were few studies that had considered how adaptive capability influence the growth of DT-SACCOs within Meru County. Therefore, the current study addressed these gaps in its evaluation of how adaptive capability influenced the growth of deposit-taking savings and credit cooperative societies in Meru County. This was because there are few studies in Meru that addressed the influence of adaptive capability on the growth of deposit-taking savings and credit cooperative societies.

1.3 Purpose of the Study

The purpose of this study was to evaluate the influence of adaptive capability on growth of deposit-taking savings and credit cooperative societies in Meru County, Kenya.

1.4 Specific Objectives

i. To assess the influence of market competition on the growth of deposit-taking Savings and Credit Cooperative Societies in Meru County, Kenya.

ii. To evaluate the influence of technology adoption on the growth of deposit-taking Savings and Credit Cooperative Societies in Meru County, Kenya.

iii. To examine the influence of management capability on the growth of deposit-taking Savings and Credit Cooperative Societies in Meru County, Kenya.

iv. To determine the influence of product innovation on growth of deposit-taking Savings and Credit Cooperative Societies in Meru County, Kenya.

1.5 Research Hypothesis

i. $H_0$1: Market competition has no significant influence on the growth of deposit-taking Savings and Credit Cooperative Societies in Meru County, Kenya.

ii. $H_0$2: Technology adoption has no significant influence on the growth of deposit-taking Savings and Credit Cooperative Societies in Meru County, Kenya.

iii. $H_0$3: Management capability has no significant influence on the growth of deposit-taking Savings and Credit Cooperative Societies in Meru County, Kenya.

iv. $H_0$4: Product innovation has no significant influence on the growth of deposit-taking Savings and Credit Cooperative Societies in Meru County, Kenya.

1.6 Justification of the Study

The adaptive capability of DT-SACCOs is crucial to their growth, as their industry is characterized by volatile dynamics in the aspect of technological advancement, increasing competition from other financial institutions, and changing customer expectations. Different authors considered investigating the growth parameters of the SACCOs, but

critical aspects like products related to investments were not addressed by a study like Liu et al. (2024), nor was consideration of the input of the management towards the performance included by Gupta and Nath (2024). Other explorations, such as Nwafor and Umebali (2025), failed to examine the customer service quality, while Waithaka and Odollo (2024) had not addressed policies that guide their regulation, such as those from SASRA. This study sought to understand the influence of adaptive capabilities of DT Savings and Credit Cooperative Societies in Meru County and identify strategies that they can leverage to remain competitive, innovative, and responsive in the face of local and global pressures.

1.7 Scope of the Study

Geographically, the scope of the study was limited to the administrative boundaries of Meru County in Kenya. It focused on evaluating the influence of adaptive capability on the growth of DT-SACCOs. The study was also limited to Savings and Credit Cooperative Societies registered and licensed by the Sacco Societies Regulatory Authority (SASRA). It was structured within four key aspects of adaptive capability, which were market competition, technology adoption, management capability, and product innovation. The non-deposit SACCOs were excluded since their scope of operations, regulatory frameworks and business models were different from the deposit taking SACCOs. Therefore, including them in the study, would have increased the scope of the study in addressing adaptive mechanisms for both DT and non-DT SACCOs, hence affecting the quality of the results. The study was conducted for a period of 3 months.

Market competition, technology adoption, management capability, and product innovation, was studied to understand its influence on the growth of DT-SACCOs. Data involved both

primary sources, such as surveys and interviews with DT-SACCOs' management and employees, and secondary sources, such as Meru County's DT-SACCOs annual reports, financial statements, and SASRA publications. The study did not cover the growth of non-deposit-taking SACCOs. Additionally, other types of capabilities, like operational and strategic, were not addressed in this study.

1.8 Limitations of the Study

The introduction of the Cooperative Bill of 2024 was to ensure that the tenure of the SACCO's directors was capped at three years with a one-term renewal. There were also other tightened measures, such as the establishment of a loan verification committee to ensure loan issuance was regulated in SACCOs. The ripple effect on the operationalization of this bill limited the study in terms of access to information from the management due to a rapid restructuring process of different internal policies. This was in relation to the management systems and operationalization of product development strategies, factoring in the Cooperative bill of 2024. To address this limitation, the study sought authorization from the SACCOs' management supported with evidence in the form of an introduction letter and NACOSTI permit. This enabled the management to comprehend that the study was academic-based research, which was impartial to the management structure and leadership styles employed.

Additionally, there were other limitation which include the study focusing in DT-SACCOs in Meru County, Kenya. Therefore, this affected the generalizability of the results to other counties and even nations. Furthermore, the self-reported data from the management could have introduced a bias in their reporting hence negatively affecting the validity of the outcome. In mitigation, different sampling methods such as simple random methods for

the officers and purposive method for the branch managers, in ensuring that there is adequate representation. Furthermore, the study also ensured that there is collection of secondary data to minimize chance of response bias. The findings, conclusions and recommendations suggested are provided in a manner that can be applicable in other Kenyan regions as well.

1.9 Significance of the Study

Sacco employees being a part of the respondents may use the results in providing clear growth systems introduced in the DT-SACCO related to market competition, technology adoption, management capability, and product innovation. They may thus indicate how these capabilities have either motivated or demotivated them in their scope of work. The managers may benefit from a policy enhancement point of view. They may get details on how various capabilities have been used by different financial institutions in other counties and nations to derive desired growth outcomes. They may hence use similar financial approaches when instigating dynamic capabilities in DT-SACCOs in Meru.

Customers may also notice different growth trends in DT-SACCOs and possible concerns noted in the study. This may enable them to make informed decisions on how to either increase their personal deposit accounts, repay different loans advanced to them, and possible ways to also incorporate their colleagues, friends, and relatives. The results of the study may also question their inquiries on what DT-SACCOs are doing to ensure that they protect the huge deposit entrusted to them for sustainable growth. In connection to this, the general public may get details directly from the managers interviewed on the uncomfortable concern that the number of dormant accounts is becoming more than the number of new customers subscribing to various DT-SACCO products. This may enable

restoration of public confidence towards the financial well-being of the DT-SACCOs and thus reduce speculations of possible collapse of the financial institutions.

SASRA being a regulatory authority is anchored to comprehend precise issues that have been facing DT-SACCOS, especially within the context of Meru County and on policy frameworks. These policies include the ones guiding on market competition, technology adoption, management capability, and product innovation. Therefore, the findings as revealed through the study, would provide SASRA with specifically tested and evidenced insights into the impact that the regulatory measures have on adaptive capabilities. This is by pointing out specific parts where policies were noted to be weak.

A good example would be the results indicating poor adoption of technology among DT-SACCOs which would thus lead to SASR coming up with guidelines that may be suitable for digital transformation to enhance efficiency in the banking operations. Furthermore, through determination of the influence that adaptive capabilities had on SACCO growth, the study was able to link areas of weaknesses such as low number of trainings offered to the management. Therefore, these insights would be essential to policymakers to customize interventions that can support capacity building and improve DT-SACCO's innovations.

The policy implications that were noted from the study that included the need for a review and updated regulatory framework from SASRA, enhances support to adaptive capabilities. Therefore, being closely linked to the growth mechanism of DT-SACCO, it increases the practicality of the results in the financial environment. For instance, this could include developing policies that encourage incorporation of technology to DT-SACCO's operations, enhancing competition, improving competencies of the management and developing innovative financial products. Therefore, improving these areas will enhance

resilience of the DT-SACCCOs to become responsive to changing business demands from the markets, a critical step towards overall financial inclusivity and economic development in Meru County.

1.10 Assumptions of the Study

It was the assumption of the study that DT-SACCOs in Meru County had adopted the changes suggested through the Cooperative Bill of 2024. Furthermore, it was also assumed that internal policy structures guiding market competition, technology adoption, management capability, and product innovation were well developed and implemented in the market. Notably, there was an assumption that there existed separate responsibilities for the managers and the other employees directly attributable to enhancing growth of DT-SACCOs.

1.11 Operational Definition of Terms

Adaptive Capability- ability of a DT-SACCO to instigate change through its systems, as a way of coping with sudden shift in stress factors to capitalize on possible opportunities (Mweu & Mung'ara, 2021). In the context of this study, it will be defined as the method through which a DT-SACCO is able to take advantage of opportunities through well through systems to manage risk and increase revenue.

Growth of DT-SACCOs- The product and market development initiatives established through existing internal policy framework (KFSD, 2022). In The context of the study, it will be defined as the ability of a DT-SACCO to consistently develop products and services that are governed by internal institutional policy framework in promoting efficiency, reducing overall costs of operations.

Management Capability- The skills and knowledge possessed by the decision makers in a DT-SACCO and their utilization rate of organizational resources and processes to enhance growth (Adna, 2020). In the context of this study, it will be defined as critical knowledge and skills that managers have and which can enable them make robust decisions that increased revenue and market share.

Market Competition-The process of developing unique policies and strategies in a DT-SACCO to enhance volume of sales, market share and general profits (Kathimuuri, 2023). In the context of this study, it will be defined as the process of boosting revenue through implementing strategies that make decisions making more efficient and effective.

Market Share- ability of the DT-SACCO to be known as providers of certain products (ITA, 2024). In the context of this study, it will be defined as DT-SACCO's fame as developers of a known loan and savings account.

Product Innovation-Creation of new DT-SACCO'S products and also improving the current ones to realize the growth objective (Nadzua et al., 2025). In the context of this study, it will be defined as the savings and loan accounts developed to serve the needs of the customers better.

Technology Adoption- Incorporation of ICT to boost operational processes, as a growth enhancement strategy in a DT-SACCO (Aila et al., 2021). In the context of this study, it will be defined as the ability of a DT-SACCO to use a specific ICT infrastructure to enhance their operations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In this chapter, the literature and theoretical review are provided within the guidelines of market competition, technology adoption, management capability, and product innovation. Thereafter, three theories of the study are indicated, while the conceptual framework concludes the chapter.

2.2 Theoretical Review

The study was informed by three theories: dynamic capabilities theory, resource-based view theory, and Schumpeter's theory of innovation. Dynamic capabilities theory informed market competition and management capabilities variables. Resource-based view theory informed technology adoption. Schumpeter's Theory of Innovation guided product innovation.

2.2.1 Dynamic Capabilities Theory

Dynamic Capabilities Theory was developed by Teece et al. (1997) and informed market competition and management capabilities variables. It stated that organizations that can integrate, build, and reconfigure internal and external competencies to address rapidly changing environments achieve sustainable competitive advantage (Teece et al., 1997). Therefore, organizations were obligated to come up with dynamic capabilities that sought to adjust to swiftly shifting business environments, which included how they competed in the market and the technology employed to spur innovation.

In the context of DT-SACCOs, market competition required these institutions to continuously reconfigure their resources and capabilities to sustain growth. This was through promoting sustainable risk management measures that sought to reduce any eventualities that may lead to losses while dispensing various operations (Nadzua et al., 2025). Additionally, attaining a competitive approach encompassed differentiating various products from those of the rival financial institutions. This had to be as a result of redesigning, improving, and incorporating new products. Furthermore, Waithaka and Odollo (2024) noted that the management developed financial strategies that were used to expand their market by either incorporating new products or opening more branches to attract customers in new regions. What mattered was keen attention to cost leadership and incorporating all the staff through various assignments of various roles. This meant that the approach that was selected to guarantee market competitiveness had to ensure that it was cost-effective and allowed different proficiencies of the staff to excel (Mweu & Mung'ara, 2021).

Management capability aligned with the dynamic capabilities concept, as strong leadership helped firms sense opportunities and transform them into competitive advantages (Muathe, 2020). This theory provided a framework to understand how SACCOs developed capabilities to sense market changes (market competition), seize opportunities (technology adoption and product innovation), and transform their operations (management capability) to sustain growth in changing financial landscapes (Mbunda, 2024). Notably, the decision-making factor of the management was critical towards providing overall direction on how various organizational operations would be blended to ensure consistent growth and efficient operations.

The management in DT-SACCOs was considered as capable when the decisions made reflected professionalism and detailed consultations with the stakeholders like the staff, government, and members (Messabia et al., 2023). Apart from that, being able to engage with the staff on mentorship programs and corporate governance promoted a quality work culture that was focused on increased growth of the SACCO. The management skills and proficiencies could not be justified if their decisions did not lead to desired growth (Kihara & Bett, 2023). These decisions involved increasing efficiency in operations, teamwork, quality work culture, and mentorship of the staff to attain the desired growth parameters.

Dynamic capabilities theory was adopted by Shiferaw et al. (2024), who examined, through a review of literature, how business firms were practicing dynamic capabilities in their operations. Furthermore, Omar (2021) determined how small and medium enterprises [SMEs] in Nairobi gained competitive advantage influenced by dynamic capabilities. In the context of SACCOs, Ntoiti (2024) espoused how they gained competitive advantage as well through dynamic capabilities.

Dynamic capabilities theory had the limitation of requiring long-term investments, which proved risky, particularly when the business environment was not static but dynamic as well (Collis & Anand, 2021). However, this limitation did not affect DT-SACCOs in Meru County since the parliamentary Act that fostered their formation, stipulates both short and long-term financial commitments. Therefore, the framework provides suitable guidelines in making of decisions by the management, hence proving effective in resource allocation impartiality, despite market dynamics. Therefore, in the case where DT-SACCOs implement these adaptive capabilities while minimizing the risks, it showcases the practicality of the theory towards governance.

2.2.2 Resource-Based View Theory

Resource-based view theory was developed by Wernerfelt (1984) who relied upon Penrose (1959) contributions. The theory informed technology adoption by stating that an organization has tangible and non-tangible resources, and through their utilization, it enhanced their competitive advantage over others. The tangible resources included physical assets such as ICT infrastructure, money, vehicles, and buildings, among others. The intangible resources included financial software, employee skills, goodwill, organizational policies and strategies, among others (Barasa et al., 2023). These resources enabled an organization to deliver the services on time and in higher quality, promoting their ability to generate revenue and increase their market share and customer numbers.

Resource-based view theory informed the technology adoption in DT-SACCOs through their ability to have in place ICT infrastructure that involves users issuing various financial commands. These users may be the staff, management, or customers, among others (Kowait & Osiemo, 2024). Therefore, being able to interact with the technology in place in easing the process of deposit of funds, withdrawal of funds, application of loans, and making investments enabled customers to become more attracted to the DT-SACCOs (Gupta & Nath, 2024). Furthermore, if there were training programs that equipped new customers with user interaction with the technology present, they felt connected to the products and services being offered. According to Kihara and Bett (2023), the support of the management and communication systems present to resolve any queries, complaints, and conflicts promoted quality assurance measures within the setup of established technology.

Resource-based view theory had previously been adopted by studies such as Achieng (2021) in assessing how DT-SACCOs in Nairobi County were sustaining their competitive status due to innovative operations and products. Onyango (2021) also used resource-based view theory as one of the foundational theories in the assessment of how DT-SACCOs in Nairobi County remained competitive after utilizing innovative technologies. Furthermore, Wallace and Kilika (2021) also used the theory in their examination of how SACCOs in Meru County remained competitive in the midst of innovative strategies related to their products.

The theory attracted its fair share of criticism from Kraaijenbrink et al. (2010), who indicated that it concentrated only on organizational resources and did not consider external market factors that may affect the competitive nature of the organization as well. This weakness did not however affect the study since the current concentration of the study is on internal factors such as technology adoption and management in DT-SACCOs in Meru County. For example, external factors such as market competition were indirectly considered hence laying a foundation for the management of internal resources. Therefore, provided the regulatory framework and scope of DT-SACCOs operations, concentrating on internal capabilities was relevant hence finding the theory useful in application of how DT-SACCOs can experience growth in highly dynamic environment.

2.2.3 Schumpeter's Theory of Innovation

The theory of innovation was developed by Schumpeter (1934) and informed product innovation. Schumpeter emphasized innovation as a driver of economic growth, particularly through new products, services, and business processes. This was through disruption of the status quo by what was termed 'creative destruction' (Schumpeter, 1934).

Old ways of doing things, products, and technologies were discarded to allow newer and innovative methods that were cost-effective and more efficient in providing the required services. According to Mina et al. (2022), changing business demands required consistent changes in approaches used to remain innovative in the set market.

This theory is directly related to product innovation by highlighting how SACCOs could create new financial products and services to attract more members and sustain growth (Ndauka & Matotola, 2023). This was whereby the opinions of the customers were frequently noted on their demands and how they thought a product would suit their needs more efficiently. Therefore, realistic timelines were set for when new products were to be introduced to the market to minimize speculations and increase the chances of quality products. According to Murorimana et al. (2023), matching the customer needs through consistent customizing of the products reduced their chances of considering the competitors and hence retained them. Furthermore, the ability to maintain quality and innovative products by a SACCO provided an ambience to internally regulate the policies developed to support various classes of products and services.

In their application, Nalyanya et al. (2021) used Schumpeter's theory of innovation in their evaluation of how Ng'arisha SACCO was able to deliver its services through the incorporation of electronic funds transfer. Odero et al. (2022) also adopted Schumpeter's theory of innovation in assessing how DT-SACCOs were innovating through transformational leadership. Furthermore, Omwando and Moturi (2021) considered Schumpeter's theory of innovation as one of the theories when exploring how COVID-19 had affected the SACCOs in Nairobi County and how it affected their adoption process of e-banking. In Meru County, Wallace and Kilika (2021) examined how SACCOs remained

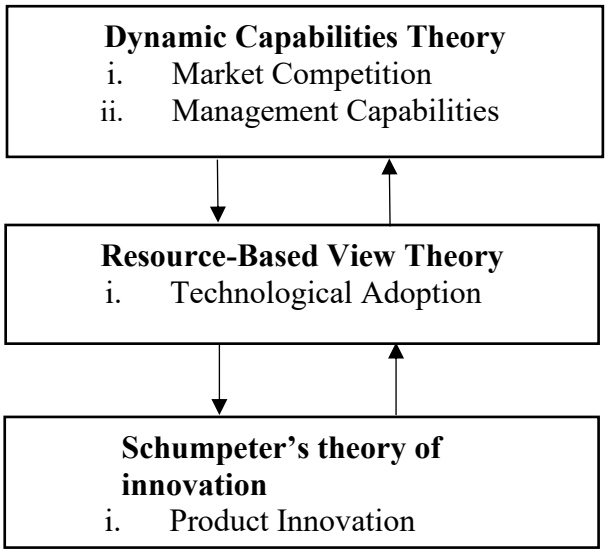
competitive in the midst of innovative strategies related to their products. The study was also supported by Schumpeter's theory of innovation.

Schumpeter's theory of innovation had its limitation in that it considered innovation to be the only driver of growth at an organization, which was not normally the case (Śledzik et al., 2023). However, the study was able to recognize different growth factors such as management capabilities, technology adoption, and market competition. Therefore, in terms of DT-SACCCOs of Meru County, growth was noted to emanate from a mixture of elements and not just because of innovation. Therefore, considering the broach approach, complex realities that have faced the SACCOs necessitated the relevance of Schumpeter's theory through integration of comprehensive framework.

Figure 2.1 indicates the theoretical framework.

Figure 2.1

Theoretical Framework



2.3 Growth of DT-SACCOs

Growth is defined as the ability of a DT-SACCO to consistently develop products and services that are governed by an internal institutional policy framework in promoting efficiency and reducing overall costs of operations. An ideal SACCO that has grown has consistent structures used to focus on the needs of the members, robust governance, and a stable expansion program that provides savings, loans, and investment prospects. Growth is not a sudden occurrence but rather a financial happening that has been established over a period of time. It necessitates the need for operations in different segments of the market and enhances the market value of the assets of a DT-SACCO. In the establishment of the growth of DT-SACCOs, there are global, regional, and local studies that have ventured into the topic.

Azhari (2024) explored how Indonesian cooperatives were able to increase their profits as a result of capital and turnovers. There was a review of the financial performance of all cooperatives ranging from 2001 to 2021 as provided by the Ministry of Cooperatives in Indonesia. The nature of the study was causal research and an analysis done through multiple regression. Various aspects that were examined included principal deposits, compulsory deposits, external capital, and turnover. It was determined that the revenue generated from issuing various products and services enhanced the profits of the cooperatives, but the case was not such when capital was considered. This was because some capital, such as the one from external sources, was not fully owned by the cooperatives. However, products such as loans and interest led to increased revenue growth of the cooperatives. Notably, Azhari (2024) could have used panel root test analysis to

determine if the data that was used was stationary or not for purposes of avoiding false regressions, thereby increasing the reliability of the results.

Arandara and Takahashi (2023) analyzed the productivity level of cooperative banks in Sri Lanka during the period of the COVID-19 pandemic. One hundred and three cooperatives located in rural regions provided financial data from 2016 to 2020. Their technical efficiency [TE] was noted to have declined from ninety-five to eighty-five percent, while the total factor productivity [TFP] declined by thirty-eight percent. According to Arandara and Takahashi (2023), the provision of relief to loans to increase competition may have led to a lower scale of operations, hence affecting TFP. Additionally, failure to change and use new technology and increased operational costs may have led to a decline in TE. Therefore, since Arandara and Takahashi (2023) relied fully on secondary data, there was a need to combine it with primary data, such as through questionnaires, to understand the various operational changes implemented post-covid duration.

Liu et al. (2024) evaluated how Inner Mongolia credit cooperatives contributed to the income growth of their members, hence obtaining financial sustainability. Seventy-four surveys were gathered from the cooperatives and analyzed through two-stage least squares with a combination of financial reports for 2020 and 2021. The finding of the study was that the scale at which cooperatives were offering credit affected their ability to increase the member's income through loans. This made the farmers seek more loans, hence paying more interest over time. In the long run, the loan portfolio increased as the livelihoods of its members were also increasing, hence alleviating poverty. Nevertheless, Liu et al. (2024) did not consider other cooperative products such as investment products, deposits, or savings as factors leading to financial sustainability and growth of the institutions.

Regionally, Milambo et al. (2023) evaluated the growth of SACCOs and their capital structures through the literature review in Zambia. Seventeen articles were considered from Google Scholar, Semantic, and BASE databases from 2011 to 2021. The studies reviewed noted that the growth of SACCOs was majorly ascertained by considering their capital structure. Additionally, capital structure was noted by many studies reviewed to include the structure of assets, profitability, and liquidity status of the SACCOs. Furthermore, other studies noted that growth was enhanced through the management of credit and growth of members. That notwithstanding, Milambo et al. (2023) used the findings from past studies, such as journals, to make conclusions, which may have introduced author biases. There is a need to collect data using primary and secondary data for an effective conclusion that is based on facts.

Nurudeen and Olumuyiwa (2021) espoused how Nigeria's cooperatives generated income from members in rural regions. Five hundred and eighty-nine participants from the villages in Nigeria were included through multi-stage sampling. Among the respondents, there were three hundred and ninety-seven members of various cooperatives, while one hundred and ninety-two of them were not members. Questionnaires were administered, and interviews and focus group discussions were conducted over a period of three months, from July to September in 2018.

The finding was that the income generated by cooperative society members through the support of cooperatives was higher by 10%, as compared to those that were not members. From the perspective of the cooperative societies, the higher the income of the members, the higher the SACCOs experienced growth since they frequently deposited and saved their finances in the institutions. Additionally, the decision to become a cooperative member

was caused by education, age, and land size. Nurudeen and Olumuyiwa (2021) did not justify who among the respondents answered the questionnaires, were interviewed, or participated in the focus group discussions.

Olajide (2024) examined how cooperative societies in Nigeria aligned their loan services and how that increased their income. There were twenty cooperative societies included through a simple random method, and 80 representatives of cooperative members were issued different data collection tools such as questionnaires. The cooperative leaders were also interviewed as key informants due to their level of experience. Different data related to the characteristics of the cooperatives, their operations, relations of these institutions with the government, costs of operations, revenue, and membership. The results were that despite the fact that there were seminars, trainings, and loan services, there were ineffective monitoring processes leading to increased defaults. However, the potential of loan issuance led to increased growth of the cooperative societies. Therefore, since Olajide (2024) based the study in Nigeria, there was a need to examine how the income in Kenyan SACCOs increased due to various products and services in general and not just loan products.

Locally, Ndung'u (2022) explored how Kenya's DT-SACCOs maintained their liquidity when they made investment decisions. Key attention was paid to the decisions related to lending, financial investments, research, recruitment of staff, and liquidity of SACCOs. A descriptive cross-sectional survey was the research design that was used, while the population under consideration was forty-nine managers in finance, forty-nine managers in credit, and forty-nine farmers. The cluster sampling method was used to narrow down seventy-eight participants from ninety-eight of the respondents. It was proclaimed that decisions related to lending, financial investments, research, and recruitment of staff

positively improved the liquidity status of the SACCOs. However, some SACCOs were noted to engage in deceitful activities, which affected the trust of the members in the SACCOs, leading to a decline in their deposits, savings, and conviction of their friends to join the SACCOs. Notably, Ndung'u (2022) did not include the opinion of the officers in their study but just relied on the managers and cooperative members. There was therefore the need to include officers to point out the methods they used to avoid engaging in illegal investments that could interfere with the trust of the cooperative members in Meru County.

Ngoda and Kising'u (2024) assessed the performance of Kenya's SACCOs after the implementation of corporate governance mechanisms. Different research designs, such as correlational and cross-sectional surveys, were used in the inclusion of thirty-three DT SACCOs and ninety-one non-DT SACCOs in Nairobi County. A primary data tool such as a questionnaire was administered to the representatives of the SACCOs. There was a pilot study conducted in twelve SACCOs in Nairobi County to ensure the reliability of the questionnaires. The proclamation done by Ngoda and Kising'u (2024) was that the size of the board and its independence positively influenced the performance of the SACCOs. However, the study by Ngoda and Kising'u (2024) collected data from SACCOs in the same location as where the main study was being collected. They could have selected either a different location or used commercial banks as pilot test respondents.

Kurgat et al. (2025) evaluated how agricultural cooperatives in Kericho County have been performing, influenced by the composition of the board. Eighty-four institutions were selected, whereby they were sampled through a simple random method. Secondary data from financial reports from 2017 to 2022 were included from forty-nine cooperatives that comprised the sample size. The results noted that the composition of the board negatively

influenced the return on investments of the cooperative societies. The findings contradicted Ngoda and Kising'u (2024), who revealed that the size of the board and its independence were positively correlated to SACCOs' performance in Nairobi County. Therefore, since Kurgat et al. (2025) in Kericho found out that board characteristics negatively affected the performance of SACCOs, which is a contradiction with Ngoda and Kising'u (2024), the current study would collect both primary and secondary data to ascertain what the outcome would be in DT-SACCOs of Meru County.

Bashir et al. (2022) elaborated on how Meru County's SACCOs performed when impacted by capital adequacy. Thirteen DT-SACCOs were included in the study whereby their employees were issued with questionnaires, and also financial information from reports was used to complement the data. It was determined that capital adequacy promoted financial performance of the DT-SACCOs. However, credit management controls were weak and hence did not guarantee a cash surplus, which led to liquidity risk. Notably, the study did not justify the job levels of the employees nor their numbers; hence, it was hard to authenticate whether they were all managers or staff. Furthermore, the study did not pretest the questionnaires to determine their reliability.

2.4 Market Competition and Growth of DT-SACCOs

Market competition is defined as the ability of a DT-SACCO to develop unique policies and strategies in a DT-SACCO to enhance volume of sales, market share, and general profits. It enables a DT-SACCO to instill strategies and policy frameworks that guide their operations. Therefore, an ideal competitive DT-SACCO should offer exceptional customer services, competitive loan rates, and consistent marketing strategies. These strategies provide a solid foundation for corporate governance, risk management, product

diversification, market expansion, and cost leadership (Nawal, 2023; Wahyuningtyas et al., 2021; Waithaka & Odollo, 2024). The five aspects will be the measures used by the current study as indicators of market competition from the DT-SACCOs. Corporate governance entails the management system in place to ensure that operations run smoothly (Mbokazi & Maharaj, 2024).

Risk management entails identifying and resolving a threat on time. Diversification of products includes the provision of different ranges and avenues of products that a customer can select from (Jamaluddin et al., 2023). Market expansion includes considering selling DT-SACCO's products to different geographical regions from where the headquarters is located (Gupta & Nath, 2024). Cost leadership entails the practice of closely reducing the operating expenses incurred in the process of competing in the market (Olujimi et al., 2021). In establishing the influence of market competition on the growth of DT-SACCOs, there are global, regional, and local studies that have ventured into the topic.

Globally, Gupta and Nath (2024) examined what was causing the cooperative societies in the Global North and South to succeed. The study was purely founded on the data set from the Cooperative Monitor of 2021, which revealed that among the cooperatives that made significant growth in terms of annual turnovers, one hundred and fifty-nine came from Europe, ninety-five from America, forty-six from Asia, and none from Africa. Therefore, through the synthesis of this literature, it was discovered that when a nation had supportive democratic values, there was an increased performance by their cooperatives.

This was witnessed between the Global North nations more than in the Southern nations. Notably, Gupta and Nath (2024) also found out that social inclusiveness was considered less significant towards the advancement prospects of the cooperative societies in both

global north and southern nations. However, the study did not evaluate how the management of cooperative societies factored towards ascertaining its success. Additionally, there could be some application of qualitative data collection, such as through interviewing the senior management to support the findings from the synthesis of the literature.

Jamaluddin et al. (2023) evaluated through a review of literature on the performance of cooperatives and their governance mechanisms in Indonesia. A PRISMA approach was adopted to ensure that a compilation of literature from 2009 to 2021 was included. It was noted through thirty studies analyzed that the characteristics of the board, compliance with the policy, management, leadership and strategies, and the staff were key corporate governance aspects that determined the performance of the cooperatives. In regard to the board characteristics, its composition in terms of gender diversity, wealth of experience, and market connections promoted efficiency in the acquisition of new businesses and processes. Furthermore, when there was compliance with the policy framework in place, fewer resources were wasted in trying to recover productivity errors within the cooperatives.

Additionally, Jamaluddin et al. (2023) discovered that when there was a mixture of autocratic and democratic leadership styles in the management, targets were able to be met effectively and communication maintained effortlessly. In addition, the experience level of the management and staff was considered a key factor towards establishing quality control measures to support increased performance of the cooperatives. Nevertheless, Jamaluddin et al. (2023) assessed the performance of cooperatives from the corporate governance perspective and not on risk management or product diversification considerations.

Wahyuningtyas et al. (2021) assessed how cooperatives were competing for society's economic developments in West Java. Questionnaires were used to collect quantitative data from three hundred and eighty-six leaders from various cooperatives. The results of the study pointed out that when there was digital positioning, government support, and digital skills among the staff, cooperatives became more competitive with less resistance. This was because the presence of digitalization encouraged quicker development of unique policies and strategies in the cooperatives, hence promoting market competitiveness. That notwithstanding, Wahyuningtyas et al. (2021) did not gather input from the employees who were the implementers of competitive strategies and the challenges they faced. Therefore, the current study included the staff of the SACCOs through the use of questionnaires, whereas the managers were interviewed.

Regionally, Nwafor and Umebali (2025) discussed how Nigeria's Cooperative Thrift and Credit Societies (CTCS) were promoting the living standards of their members. There were four hundred and eighty-six cooperative members that were included in the study through a survey research design.

The structured questionnaire was the main data collection tool that was adopted in the study. It was revealed that the disbursement of credits and mobilizing savings enhanced the income levels of the members. Nevertheless, training in finances had no effect on the ability of the members to increase their income. Therefore, in overall conclusion, the CTCS positively affected the member's living standards. It was recommended that there be frequent trainings on financial management among the members to enable them to understand the relevance of savings among the CTCS members. However, Nwafor and Umebali (2025) did not examine the contributory elements like quality of customer service,

regulatory policies, and market penetration strategies as part of the unique factors that spur market competition among cooperatives.

Mbokazi and Maharaj (2024) assessed how agricultural cooperatives in South Africa were promoting developments in the local economies. A case study approach was considered when including fifteen members of the cooperatives and interviewing them through face-to-face technique. This specific qualitative method was used so as to provide the study with adept information on the effectiveness of the cooperatives and also the issues affecting these institutions. The respondents were sampled through a purposive method to pinpoint specific qualifying factors that were possessed by the respondents.

From the results derived, cooperatives had established competitive measures of sustaining livelihoods through the provision of job opportunities. On the one hand, Mbokazi and Maharaj (2024) noted that limitations of resources, low training, and lack of clear regulations on management hampered the extent to which the cooperatives would enhance more efficiency. On the other hand, the decision to only include 15 members through interviews affected the quality of the data since there were too few to have opinions that could represent the overall population of the cooperatives.

Olujimi et al. (2021) evaluated how Nigerian cooperatives were willing to enhance the sponsorship of home ownership programs. Adopting a social survey design, the study used two questionnaires, which collected data from 683 homeowners and government officials, respectively. It was proclaimed that cooperatives were able to establish a niche in the home ownership programs through maximizing the personal savings of the individual and group members and also other revenue sources of the cooperative societies. These members were offered building loans to build houses and also mortgages to buy houses that are already

built. Therefore, since the study was conducted among Nigerian cooperatives, there was the need to ascertain various programs established to capture the real estate market by the DT-SACCOs in Kenya.

Matiku and Magali (2021) examined how Tanzania's SACCOs obtained profits as a result of implementing strategies founded on the perception of the clients. The specific strategies that were assessed related to product, delivery of services, pricing, promotion, and place of work. Notably, a design that involved the combination of descriptive and explanatory was used when incorporating one hundred and twelve customers. Their involvement was made through a systematic sampling method, and they were later engaged through the use of questionnaires to provide the feedback. It was thus established that, from the point of view of the clients, all the factors, such as product, delivery of services, pricing, and place of work, had a negative effect on the ability of the SACCO to make profits.

This was with the exception of promotion, which was noted to have a positive effect. However, since the factors assessed by Matiku and Magali (2021) were internal operations, it could have been beneficial if the managers and staff of the SACCOs were allowed to take part in the study as well. This is because they were better trained and informed on various products the SACCOs issued to clients, methods of delivering services, different pricing, and management of the workplace, so to speak.

Locally, Waithaka and Odollo (2024) assessed the competitiveness status of Nairobi's DT-SACCOs from the perspective of incorporating growth strategies. Market expansion, diversification, acquisition, and cost leadership were elements that were assessed. Two designs that were used were descriptive cross-sectional surveys to facilitate the study, including forty-one DT-SACCOs. The respondents were chief executive officers and

operations, strategy, finance, and human resource managers, comprising a total of two hundred and five participants that were selected by census technique. Structured questionnaires that were administered had been subjected to piloting to ascertain their reliability. The results noted that market expansion, diversification, acquisition, and cost leadership enabled the DT-SACCOs to remain competitive. That notwithstanding, Waithaka and Odollo (2024) did not assess the regulatory measures from SASRA that were present to support the establishment of such strategies within the DTSACCOs jurisdiction.

Nawal (2023) espoused how Kenya's DT-SACCOs were growing amid the inclusion of strategies related to product market. Correlational design was consulted when indulging one hundred and seventy-four DT-SACCOs. They were later sampled from seventy DT-SACCOs whose chief executive officers were issued with questionnaires to provide their views. Sixty-five of the participants agreed to take part in the study, and they revealed that when products were positioned accordingly, they promoted the growth of the DT-SACCOs. This was through consistent evaluation of products, focusing on brand imaging, considering various expectations of customers, quality of products, and involvement of the staff before innovation is implemented. Nevertheless, Nawal (2023) failed to include other strategies related to the decision-making process by the management in enhancing the growth of the DT-SACCOs.

Njoka (2021) evaluated how Tharaka Nithi's SACCOs were experiencing growth through the implementation of competitive strategies. Descriptive survey design was the foundational research design that enabled the study to include fifty-two management staff from ten SACCOs of the county. These managers had all over fifteen years of experience in their respective SACCOs. Therefore, since they all agreed to answer the questionnaires,

the study was considered successful. The respondents pointed out that market, product, and cost leadership were vital in increasing the number of members, amounts of disbursement of loans, and overall return on equity [ROE].

However, the study did not consider the opinion of the SACCO staff, nor was there any specification of whether the SACCOs were deposit-taking or not. Furthermore, the highly accumulated number of years the management was part of SACCO's senior management could be considered a weakness in their ability to allow fresh ideas from newly recruited managers. This was a major reason for the Co-operative Bill 2024, which limited the tenure of the senior management to allow diversity of ideas and avoid stagnation of SACCOs due to recycling old strategies (Parliament of Kenya, 2024**)**.

Nderitu (2023) explored how Meru's SACCOs established organizational agility due to digital marketing initiatives. Fifty-two participants from five SACCOs were included in the study. They qualified to fill in the questionnaires that assessed how social media, mobile, and website marketing systems enabled the SACCOs to attain agility. The findings were that all three marketing systems enabled the SACCOs to make tangible sales, hence promoting their consistent growth. Therefore, these digital strategies enabled the management to enhance their decision to accommodate wider transformations in the SACCOs' framework. That notwithstanding, other key strategies that support market competition, like corporate governance, risk management, and product diversification, were not addressed by Nderitu (2023), hence creating a gap for the current study to examine their influence towards instigating growth in DT-SACCOs.

2.5 Technology Adoption and Growth of DT-SACCOs

Technology adoption is the incorporation of ICT to boost operational processes as a growth enhancement strategy in a DT-SACCO. In dispensing various services at a DT-SACCO, adoption of technology is needed to increase efficiency in terms of customer numbers served. An ideal technologically adopted system at a DT-SACCO should be user-friendly, reliable, and less cost-effective (Mina et al., 2022). The indicators of technology adoption will include user involvement, incorporation of ICT infrastructure, communication systems in place, training programs, and management support (Cheruiyot & Jepkorir, 2024; Huang & Zhang, 2021; Nguyen et al., 2023). In relation to the involvement of users of technology, the ability of an interaction between a human and a technological device should be visibly present, whereby the user issues commands through a technological device or system.

Additionally, the infrastructure that includes servers, computers, and other key ICT tools provides a support system to deposit, withdraw, and make investment opportunities at a cooperative (Ndauka & Matotola, 2023). Further, available feedback mechanisms where questions are answered efficiently and equipment of key knowledge and skills needed to operate the technology are also part and parcel of adoption mechanisms. In assessing the influence of technology adoption on the growth of DT-SACCOs, there are global, regional, and local studies that have ventured into the topic.

Globally, Rustariyuni et al. (2022) examined the various factors that caused business cooperatives in Bali to use digital technological innovations during the covid-19 pandemic. The study noted that this was the most applicable solution to social distancing policy at the time. The study was qualitative descriptive research designed to include chairpersons of the boards and the management teams in the study. Triangulation was utilized to aid in the

data analysis process. The study established that adoption of digital innovation was made possible due to the commitment the management had and the support they offered to make it possible.

Additionally, the cost associated with the technology, cybersecurity, the derived benefits, availability of suitable ICT infrastructure, and ability of the digital setup to accomplish the intended expectations were other reasons for their incorporation into cooperatives. Therefore, since Rustariyuni et al. (2022) conducted their study during Covid-19, there is a need to examine their utilization of ICT innovation even post-Covid in Meru County. Additionally, little was discussed on the employee acceptance or resistance of the implemented digital technology, since they were not included in the study. The inclusion of the employees would have been suitable in addressing the implementation challenges and how they perceived its suitability to either accept or reject all or some of the technological infrastructure.

Nguyen et al. (2023) evaluated how Vietnam's cooperatives were performing when they used the internet in their operations. The performance was mainly on three approaches, which were economic, social, and innovative performance. Three thousand, five hundred and twelve institutions were included as of 2021 in Vietnam. The respondents were female presidents of the cooperatives, board members, staff of the cooperatives, and the member representative of the cooperative unions. The utilization of the internet through a well-established ICT infrastructure was noted to enhance return on assets, return on equity, productivity of labor, laborers' payment efficiencies, consistent contribution to unions of labor, and incorporation of innovative infrastructure. There was more equality in income earned by different workers and cooperative members since records were effectively stored

and their retrieval was easy. Nevertheless, Nguyen et al. (2023) concentrated on cooperatives with female top leadership and did not use a balanced approach to consider even the cooperatives with male presidents.

Huang and Zhang (2021) explored how Chinese cooperatives were able to develop their sales behavior through the perception they had of technology and support from the government. Two hundred and sixty farmer cooperatives constituted the unit of analysis of the study. A questionnaire survey was administered to chairpersons of the 260 cooperative unions. The responses came from two hundred and fifteen chairpersons of the board of management. They revealed that e-commerce sale behavior increased more due to positive technological perception as compared to government support. The study thus recommended the need for the cooperatives to improve on the awareness of technological use, hence positively affecting their perception. That notwithstanding, Huang and Zhang (2021) did not consider other factors such as management support to offer training to the members in enhancing their perception of the use of technology.

Regionally, Elee (2021) examined how Nigeria's cooperatives were delivering their services and how the use of technology impacted the process. A survey design was used, including 25 members from 19 cooperative societies in Ukpo, 45 members from 16 cooperative societies in Ifitedunu, 48 members from 20 cooperative societies in Umunanchi, 60 members from 23 cooperative societies in Umudioka, 55 members from 18 cooperative societies in Ukwulu, and 35 members from 20 cooperative societies in Nawgu.

They were sampled through the stratified sampling method to derive a total of 49 members who were issued closed-ended questionnaires. The results of the study noted that the use

of technology led to enhanced efficiency in the management, improved service delivery, more numbers of members, revenue, and investments. That notwithstanding, Elee (2021) did not include part of management or staff from the cooperative societies to provide more detailed information on the uses of the technology within the cooperative jurisdiction and in dispensing banking services.

Rwechungura (2024) explored Tanzania's SACCOs' ability to adopt fintech and the factors influencing their stability. A cross-sectional design and a quantitative approach were adopted in the study. One hundred and thirty-eight SACCO staff who were sampled through a simple random method from a population of 211 staff were issued a questionnaire. These respondents were either the chairpersons, secretaries, or managers in each of the SACCOs, to assess their knowledge, the cost of implementing technology, accessibility, the rating of technology, readiness of staff, and trust in technological infrastructure. One hundred and twelve staff responded back to note that all these elements positively influenced the ability of a SACCO to adopt fintech in its operations. Nevertheless, Rwechungura (2024) did not consider assessing how government policies affected the implementation of technological processes within a SACCO setup.

Ndauka and Matotola (2023) evaluated the technology already incorporated at Agricultural Marketing Cooperative Society (AMCOS) and how its subsequent performance affected Tanzania's grapevine farmers. Cross-sectional research design was instrumental towards conducting the survey on 167 cooperative members. They were issued questionnaires to give information on how technology benefitted their cooperatives. The outcome of the study was that technological advancement made the operations more accessible and available.

However, the study noted that despite the cooperatives having incorporated technology in their operations, farmers needed to have internet-enabled devices to be able to make deposits, withdrawals, and investments in vehicles of investment provided by the cooperatives. Therefore, lack of such technology access by cooperative members was found to have a negative influence on the performance of the cooperatives due to declined revenue and membership. That notwithstanding, Ndauka and Matotola (2023) should have expounded on the measures that the cooperatives were making to make these services more available to the members who were in rural areas.

Locally, Karimi et al. (2024) explored how DT-SACCOs in Kenya were experiencing growth and their proactiveness in adopting technological capabilities. The main theory of the study was the Entrepreneurial Orientation (EO) Theory. A cross-sectional design was adopted to include one hundred and seventy-five SACCOs through the census method. The results pointed out that proactive strategies like access to new markets, introduction of innovative products, and incorporation of ICT to enhance streamlined operations lead to growth in market share, profitability, and customer satisfaction. The recommended approaches were on the need to boost ICT infrastructure, train staff on technology, and develop marketing strategies that were differentiated. However, Karimi et al. (2024) used Entrepreneurial Orientation (EO) Theory, which is criticized for being mainly applicable to senior management and not lower-ranked staff. They could have used the technology acceptance theory in capturing the behaviors of interaction with technology of all staff. Further, the study did not specify the identities of the respondents or their job roles.

Cheruiyot and Jepkorir (2024) evaluated how the performance of Eldoret's DT-SACCOs was affected by the implementation of ICT in its operations. Descriptive research design

was mainly used to include 11 SACCOs. The respondents, who comprised sixty-six staff, were issued questionnaires, and their responses were analyzed through SPSS. The two technologies that were assessed were mobile and internet banking. They were established to have a positive influence on increased performance of the DT-SACCOs. Savings were noted to increase due to mobile banking, while transaction volume was enhanced due to internet banking. Regardless, Cheruiyot and Jepkorir (2024) did not assess other technological advancements such as automated teller machines (ATMs) and biometric identification.

Onyango (2021) assessed how DT-SACCOs were gaining competitive advantage in Nairobi County after utilizing innovative technologies. These technologies were access to ATMs, mobile banking, member access portals on the website, telebanking, and money transfer services. Forty-one managers in DT-SACCOs were included through descriptive research design, with 37 of them returning filled-in questionnaires. The questionnaires were closed-ended and self-administered for effectiveness in data collection from the population of the study. It was found out that technological innovation led to more customers, faster processing of loans, and more advanced training for members by staff on various banking products. Additionally, there were lower costs of operations, more loans were applied, and general profitability of the DT-SACCOs. Nevertheless, Onyango (2021) failed to assess the implications of both internal and external policies on the implementation of the innovative technologies. Furthermore, there was no discussion on potential threats to the usage of technology in the SACCOs' operations and in assuring the safety of the members' funds.

Njoroge and Nasieku (2023) expounded on how Meru County's DT-SACCOs were financially performing after the incorporation of mobile and internet banking. Through the use of secondary data from nineteen DT-SACCOs, the study noted that there was more usage of mobile and internet banking services. As a result, operational efficiency, customer outreach, and contentment levels of SACCO members were high. In the same line of thought, fraudulent activities increased, necessitating the need to create awareness for clients as well as developing fraud detection and prevention systems. However, it would have been more informative if Njoroge and Nasieku (2023) collected primary data to examine issues that the staff and members were experiencing when interacting with technology.

2.6 Management Capability and Growth of DT-SACCOs

Management capability is the skill and knowledge possessed by a decision maker in a DT-SACCO and the utilization rate of organizational resources and processes to enhance growth. The capability of the managers to accomplish the affairs of the DT-SACCOs is also a considerable factor towards supporting its growth prospects. An ideal management team that has founded its capabilities on organizational principles should be well informed, articulate in their decisions, and allow feedback from the organizational staff (Njeru, 2021). Further, management capabilities that will be measured in this study will include decision-making proficiencies, engagement of staff through mentorship, efficient operations, teamwork, and work culture (Kihara & Bett, 2023; Nderitu & Kiiru, 2022; Singh et al., 2021). In assessing the influence of market competition on the growth of DT-SACCOs, there are global, regional, and local studies that have ventured into the topic.

Globally, Messabia et al. (2023) examined how SACCOs in Haiti were managed and governed. The semi-directed interviews were done on 3 directors. Their personal traits, leadership styles, and structure of making decisions were assessed. The findings depicted that the ability of a cooperative society to excel was mainly caused by a mixture of both democratic and autocratic leadership styles by the directors. Furthermore, the enhanced commitment level and involvement of organizational employees to participate in decision-making enhanced the transparency of the cooperatives. Additionally, the study noted that when there was an effective governance system in a cooperative society, enhanced sustainability, viability, and efficacy were the outcomes. Therefore, the senior management's role in running a cooperative and their experience level were not only beneficial to the members but also to the entire community of Haiti. However, Messabia et al. (2023) only included 3 directors from 3 cooperative societies; hence, their findings may not be replicable in other cooperatives. There is therefore a need to include more senior management teams in DT-SACCOs in Meru County.

Mina et al. (2022) conducted a study in Nueva Ecija to examine the various management practices implemented in cooperatives to ensure sustainability of programs. The descriptive research design that was used made it possible for the three hundred and ninety-four participants to be included in the study. They include 43 directors, 30 chairpersons of committees, 17 members of the committees, 53 management team members, and 251 registered cooperative members. The simple random method was used to sample them out from the population. They were then engaged through questionnaires to reveal that various management capabilities included possessing good planning practices, proficiency in cooperative functions, and undertaking training roles. They were also essential in

monitoring and controlling financial reports. Regrettably, Mina et al. (2022) did not assess the various government regulations that enabled the management to perform their tasks efficiently.

Singh et al. (2021) assessed how three Malaysian cooperatives have been performing as a direct result of strategic management practices. Cross-case analysis and a case study strategy were adopted in the study. Additionally, the triangulation approach made it possible to analyze documents, conduct semi-structured interviews, and make observations on different management methods at play. Notably, the capabilities of the management to formulate, supervise the implementation process, evaluate, and control different strategies at the cooperatives were assessed. It was thus determined that these management methods had a positive influence on the ability of the cooperatives to increase their performance. That notwithstanding, Singh et al. (2021) did not provide details of who was interviewed, nor did they reveal any pre-test studies done to establish the reliability of the data collection tools.

Regionally, Ugwoezuonu (2024) evaluated how credit cooperatives in South Nigeria were performing due to engagement of members and governance practices. Questionnaires were the major instruments used to gather data from three hundred and twenty staff, sampled through a stratified sampling method. Additionally, there was also secondary data collection that involved document reviews. It was established that there were transparency and accountability measures portrayed by the management through their governance practices to improve the financial performance of credit cooperatives. Therefore, the study suggested that there was a need for the management to develop more capacity-building programs that would enhance practical insights in the development of policies and

regulations. Nevertheless, Ugwoezuonu (2024) did not elaborate on how the management was ensuring that their communication process was efficient to avoid incorrect interpretation of commands.

Kyabarongo et al. (2024) assessed how Uganda's SACOOS have been financially performing as a result of board members' engagement in risk management. One hundred and eighty-four participants, who mainly involved the workers and registered members of 6 SACCOs, were assessed through the adoption of the cross-sectional survey design. They were issued with questionnaires to arrive at a conclusion that the tough systems established by the management on risk assessments and monitoring processes of policies adherence by the staff enabled the SACCOs to improve their performance. Nevertheless, Kyabarongo et al. (2024) did not specify the type of risks that the management dealt with to ensure enhanced financial performance of the SACCOs.

Murorimana et al. (2023) conducted an assessment of how Rwanda's cooperatives have been performing and causal determinants. Seventeen staff were issued with questionnaires to provide critical information related to the study. Further on, there was also secondary data collection from organizational reports in the form of internal documents and financial reports. Based on the results that were presented, Murorimana et al. (2023) noted regulatory and supervisory frameworks from the management as part of causal determinants of enhanced financial performance. The study noted that when managers expressed their proficiencies in developing different frameworks, it became efficient to achieve goals, satisfy customers, and minimize operational costs due to the low number of work-related errors. Therefore, since the study by Murorimana et al. (2023) was done in Rwanda, there

is a need to expand it to the Kenyan context and assess how regulatory and supervisory frameworks from the management affect the growth of DT-SACCOs in Meru County.

Kiconco et al. (2023) determined how Rukiga SACCO in Uganda was performing as a result of internal control measures from the management. One hundred and thirty-five participants were included through a cross-sectional survey to provide both quantitative and qualitative data. The 7 branch managers and 7 management executives were interviewed, whereas 18 credit officers, 21 banking officers, 9 board members, 3 SUPCO members, and 70 delegates were issued with questionnaires. There was a 100% response rate from the respondents, and they were instrumental in establishing that the ability of the management to separate their respective roles from other staff was a crucial step toward enhancing separation of responsibilities. Additionally, the manager's ability to conduct independent background checks on pertinent issues, detecting in advance various risks and managing them, enabled the SACCO to advance its performance effectively. Nevertheless, the study conducted by Kiconco et al. (2023) was based on only one SACCO and hence not easily replicable in other similar institutions.

Locally, Nderitu and Kiiru (2022) explored how DT-SACCOS in Nairobi County have been performing after the implementation of practices related to strategic change management. Forty-two DT SACCOs were the unit of analysis whose one hundred and twenty-six staff became the respondents. They were sampled through a simple random method to take part in filling in the questionnaires. The results were that SACCO managers and staff felt recognized, involved, and supported whenever the board members suggested changes in operations. There was more teamwork from various management and staff members, especially due to changing developments. Additionally, the staff were able to

provide their feedback to the management on areas they felt their opinion was needed, and the same was addressed by the management. However, different methods used by the management to instigate changes in the DT SACCOs were not provided by Nderitu and Kiiru (2022).

Kihara and Bett (2023) assessed the performance of DT-SACCOs in Nairobi as directly influenced by corporate governance practices. The study used the census method to include all forty-seven DT-SACCOs, with the CEOs, officers, heads of finance, and heads of credit departments being the respondents. They answered structured questionnaires that were implemented through descriptive research design. The outcome related to the management capability indicated that the composition of the board based on their expertise, experience, and networks enabled the DT SACCOs to have increased performance. That notwithstanding, Kihara and Bett (2023) did not collect secondary data from financial reports to ascertain the financial performance status of the DT SACCOs. Therefore, the current study collected both primary and secondary data when assessing how management capabilities increase or decrease the growth of DT SACCOs.

Mugwe (2022), explored how Kiambu County's dairy cooperatives were affected by managerial skills. A sample size of three hundred and ninety-eight participants was sampled through a stratified random method. The outcome of the study is that different managerial skills, such as on-time management, recruitment of skilled staff, resource allocation, incorporation of ICT, strategy formulation, mobilization, and strategy implementation, increased the financial performance of the SACCOs. Therefore, since Mugwe (2022) assessed managerial skills in Kiambu cooperatives, there was a need to examine various management capabilities in DT-SACCOs in Meru County.

Njeru (2021) examined the performance of DT-SACCOs in Meru County when influenced by project governance measures from the management. Based on agency, stakeholder, and shareholder theories, the study sought to discover the various management advantages that brought about enhanced performance. The DT SACCOs in question were eleven in number and included through descriptive research design. The census method was considered to enable all 11 DT SACCOs to be included in the study. There were directors, CEOs, and finance and marketing managers who were fifty-five in total. According to Njeru (2021), management capabilities as showcased through internal controls, risk management, and project management improved the performance of the DT SACCOs.

2.7 Product Innovation and Growth of DT-SACCOs

Increased competitive markets and dynamic demands from the customers compel DT-SACCOs to consistently improve their products or develop new ones (Jordan Co-operative Cooperation, 2021). Therefore, an ideal, innovatively developed product should address the needs of the customers and be reliable and cost-effective. Additionally, product innovation will be measured through the number of new products released, quality of enhanced products, customer retention rate, customer acquisition cost, and product policies in place (Nassuna et al., 2024; Shkeily & Abdullah, 2021). In determining the influence of product innovation on the growth of DT-SACCOs, there are global, regional, and local studies that have ventured into the topic.

Globally, Zheng (2023) determined how cooperatives in Finland were performing, the challenges they encountered, and how they maintained sustainability in the market. Two hundred and forty-six cooperatives were included in the study. The issues that stood out in these institutions related to product innovation were noted to be tough regulations on the

new product development process and extreme taxation measures from the Finnish government; resistance from the members to the innovated products, causing some to leave; poor market assessment initiatives to know the need for suitable product development; and tough competition from other financial institutions offering similar products. However, the description of the types of products and their development processes was not provided by (Zheng, 2023).

A report from World Cooperative Monitor (2023) addressed the general economy of cooperatives globally. The report noted that most cooperatives that were among the top performers were agriculturally based, insurance, financial services, industry and utilities, education, and housing. All these cooperatives had devised methods of developing their products to ensure that they were always innovative, depending on changing timelines. According to WCM (2023), consistent research of market needs, incorporation of ICT infrastructure, recruitment of skilled management and officers, and development of product innovation policies provided a foundation for coming up with new products or improving old products. However, the product innovation was noted to be affected by swiftly changing customer needs, who seek to have customized products that suit their specific business and personal demands.

Jordan Co-operative Cooperation (2021) provided the strategy that would guide the cooperation from 2021 to 2025. In the process of development of the policy, there were document reviews done and online interviews with critical stakeholders who included cooperative members and management of different cooperatives. Additionally, the study also administered questionnaires to 400 selected cooperatives. It was established that most cooperatives in Jordan had developed various strategic designs to enhance their products.

They included aligning their products with the community needs and developing products that are sustainable and flexible and include all categories of people despite their economic backgrounds. It was also noted that cooperatives were making strides in creating awareness in the community about different products and capacity-building initiatives for their leaders by equipping them with monitoring and evaluation skills needed to check on the viability of implemented products. The cooperatives were also gathering market intelligence on the suitability of their products towards addressing economic needs of the population.

Nassuna et al. (2024) examined how four of Uganda's SACCOs were able to innovatively develop their products to leverage growth. An exploratory qualitative approach was used as a research design to facilitate the process of face-to-face interview method and review of SACCO documents. The chairperson, the champion, and the manager of products were interviewed from each of the SACCOs. The outcome of the study indicated that various practices, such as developing products based on the community's needs while closely involving both the management and the staff in providing their input on how to enhance the process.

In the long term, this led to increased subscription of services, memberships, deposits, savings, and overall efficiency in terms of dispensation of services. This was because every member of staff and management felt convinced to ensure that the products are properly explained to customers to improve their ability to subscribe. However, Nassuna et al. (2024) could have complemented the results with a questionnaire to include other respondents such as customer service officers, cash officers, and loan officers. The 12 respondents that took part in the study were too few for their study to be used for generalization of SACCOs.

Mbegu et al. (2022) assessed the various product innovations present in SACCOs located in Tanzania and their influence on financial performance. A population of one hundred and five SACCOs was considered, and thereafter representatives were sampled to eighty-three using a simple random method. Passivist philosophy and a logical approach were foundational methods relevant for the study. Structured questionnaires were used for the representatives of the SACCOs. A strong positive influence of production innovation on performance was discovered in this particular study. This was in terms of offering new products and improving the current products to improve efficiencies. However, Mbegu et al. (2022) did not specify the formula used to sample respondents in the study. This, therefore, could be that it was not scientifically supported.

Shkeily and Abdullah (2021) explored how Zanzibar's SACCOs were experiencing growth and resultant determinants. The method of disproportionate stratified sampling technique was used to sample 49 respondents and later issue them with questionnaires. It is notable that the results revealed that the provision of funds from various sources, like products, enabled the SACCOs to grow efficiently. This meant that the ability of the SACCOs to provide quality financial products that addressed the needs of customers, such as savings, loans, and investments, was considered a major source of revenue. According to Shkeily and Abdullah (2021), the effectiveness of restructuring and providing the demanded products by the customers was relevant towards increasing the revenue generated within the specified period of time. Regrettably, there was no information provided by Shkeily and Abdullah (2021) on how the SACCOs were restructuring and meeting the demands of customers on specific products.

Locally, Kuguru et al. (2022) evaluated how Kenya's coffee cooperatives were performing due to the presence of innovative products. Through the adoption of descriptive research design, five hundred and twenty-five cooperatives were included. A population of two hundred and twenty-seven participants was sampled by the stratified sampling method and later issued structured questionnaires as the primary data collection tool. It was derived that the innovative products that had been developed in the cooperatives enabled them to achieve increased performance. This is because product innovation involved the development of new products, the improvement of current products, technical specifications, the quality of products, and the creation of customer-friendly products. Nevertheless, product innovation in terms of policy restructuring was not assessed by (Kuguru et al., 2022).

Achieng (2021) assessed how DT-SACCOs in Nairobi County were sustaining their competitive status due to innovative operations and products. A cross-sectional descriptive survey was a type of research design used when including all 42 DT-SACCOs. Their representatives from each SACCO were selected through census and issued with questionnaires subsequently. They revealed that three major methods used to enhance their products were incremental, disruptive, and radical innovations to remain competitive. Achieng (2021) indicated that incremental innovation, such as digital marketing, was used to communicate the benefits of the products.

Additionally, mobile banking, as a disruptive innovation, was used to improve the efficiency of depositing and withdrawing funds from various banking products. Further on, the establishment of financial regionalization as a radical innovation enabled the SACCOs to categorize areas where the products were more received, hence increasing their

awareness effectively. Nevertheless, Achieng (2021) did not include the input of product development specialists from the DT-SACCOs to explain further how these innovations were done and the timelines taken to restructure or develop new financial products.

Gaichuru et al. (2022) determined how SACCOs in Meru County were performing as a result of the provision of innovative processes and products. A target population of one hundred and sixty-two participants was included from eighteen SACCOs. They were mainly from various departments like marketing, credit, finance, customer service, and management. Their sampling method was through stratification and a simple random method before being issued with the questionnaires. The findings that stood out in relation to product innovation were that the easier it was to have flexible products, the more convenient it was to increase customer numbers, hence increasing the revenue and overall financial performance. The flexibility came through digitizing the products, governing new products, and consistent assessment of the current product restructuring methods in tandem with the customer needs. Nevertheless, Gaichuru et al. (2022) did not address the methods used to resolve dissatisfaction from customers, especially when the financial product developed attracted high interest.

Wallace and Kilika (2021) examined how SACCOs in Meru County remained competitive in the midst of innovative strategies related to their products. The resource-based view strategy and Schumpeter's theory of innovation were the two theories that were proposed in this specific study. Additionally, the census method was used to include all forty-six CEOs and forty-six senior managers. They responded to the questionnaires and revealed that product innovation led to increased financial performance. This was in terms of new product development, refurbishment of loans, incorporation of new insurance products,

and loan top-up facilities. However, Wallace and Kilika (2021) did not examine innovations made on investment-related products, creating a gap for the current study.

2.8 Summary of Gaps

The reviewed studies on the growth of SACCOs have provided various gaps. Azhari (2024) could have used panel root test analysis to determine if the data that was used was stationary or not for purposes of avoiding false regressions, thereby increasing the reliability of the results. Additionally, since Arandara and Takahashi (2023) relied fully on secondary data, there was a need to combine it with primary data, such as through questionnaires, to understand the various operational changes implemented post-covid duration. Furthermore, Liu et al. (2024) did not consider other cooperative products such as investment products, deposits, or savings as factors leading to financial sustainability and growth of the institutions.

In addition, Milambo et al. (2023) used the findings from past studies, such as journals, to make conclusions, which may have introduced author biases. There was a need to collect data using primary and secondary data for an effective conclusion that is based on facts. Further, Nurudeen and Olumuyiwa (2021) did not justify who among the respondents answered the questionnaires, were interviewed, or participated in the focus group discussions. Additionally, Ngoda and Kising'u (2024) collected data from SACCOs in the same location as where the main study was being collected. They could have selected either a different location or used commercial banks as pilot test respondents.

In the process of reviewing studies related to market competition, several gaps have been identified. For example, a study such as Gupta and Nath (2024) did not evaluate how the

management of cooperative societies factored towards ascertaining its success. Furthermore, Jamaluddin et al. (2023) assessed the performance of cooperatives from the corporate governance perspective and not on risk management or product diversification considerations. In addition, Nwafor and Umebali (2025) did not examine the contributory elements like quality of customer service, regulatory policies, and market penetration strategies as part of the unique factors that spur market competition among cooperatives. Further on, Waithaka and Odollo (2024) did not assess the regulatory measures from SASRA that were present to support the establishment of such strategies within the DTSACCOs jurisdiction.

The studies reviewed on technology adoption had several gaps noticed based on conceptual, structural, or methodological points of view. Rustariyuni et al. (2022) did not discuss the employee acceptance or resistance of the implemented digital technology. Further, Nguyen et al. (2023) concentrated on cooperatives with female top leadership and did not use a balanced approach to consider even the cooperatives with male presidents. Additionally, Elee (2021) did not include part of management or staff from the cooperative societies to provide more detailed information on the uses of the technology within the cooperative jurisdiction and in dispensing banking services.

Furthermore, Karimi et al. (2024) used Entrepreneurial Orientation (EO) Theory, which is criticized for being mainly applicable to senior management and not lower-ranked staff. They could have used the technology acceptance theory in capturing the behaviors of interaction with technology of all staff. Further, the study did not specify the identities of the respondents or their job roles. In addition, Njoroge and Nasieku (2023) collected

primary data to examine issues that the staff and members were experiencing when interacting with technology.

On management capabilities, the studies that were explicitly reviewed were noted to contain several weaknesses. Furthermore, Messabia et al. (2023) only included 3 directors from 3 cooperative societies; hence, their findings may not be replicable in other cooperatives. There is therefore a need to include more senior management teams in DT-SACCOs in Meru County. Notably, Mina et al. (2022) did not assess the various government regulations that enabled the management to perform their tasks efficiently. Additionally, Singh et al. (2021) did not provide details of who was interviewed, nor did they reveal any pre-test studies done to establish the reliability of the data collection tools. Different methods used by the management to instigate changes in the DT SACCOs were not provided by Nderitu and Kiiru (2022). Kihara and Bett (2023) did not collect secondary data from financial reports to ascertain the financial performance status of the DT SACCOs.

The studies that were examined on product innovation were noted to contain a series of weaknesses. For example, the description of the types of products and their development processes was not provided by Zheng (2023). Further, Nassuna et al. (2024) could have complemented the results with a questionnaire to include other respondents such as customer service officers, cash officers, and loan officers. The 12 respondents that took part in the study were too few for their study to be used for generalization of SACCOs. In addition, Mbegu et al. (2022) did not specify the formula used to sample respondents in the study. This, therefore, could be that it was not scientifically supported. Furthermore, product innovation in terms of policy restructuring was not assessed by Kuguru et al.

(2022). Notably, Achieng (2021) did not include the input of product development specialists from the DT-SACCOs to explain further how these innovations were done and the timelines taken to restructure or develop new financial products.

2.9 Conceptual Framework

Growth of DT-SACCOs was the dependent variable, whereas market competition, technology adoption, management capabilities, and product innovation were the independent variables. Figure 2.2 indicates the conceptual framework.

Figure 2.2

Conceptual Framework

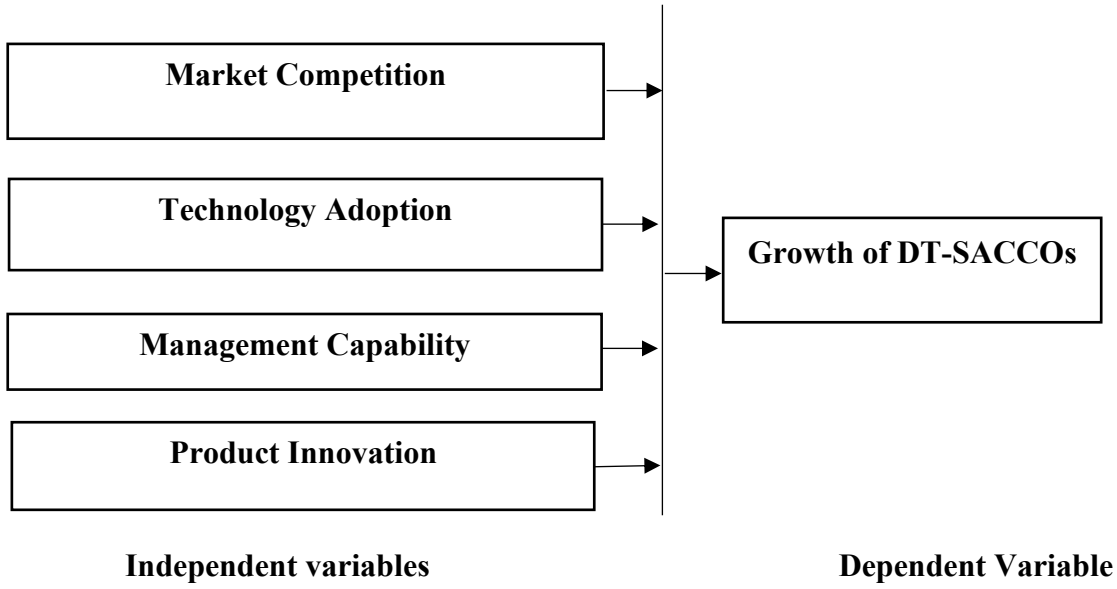
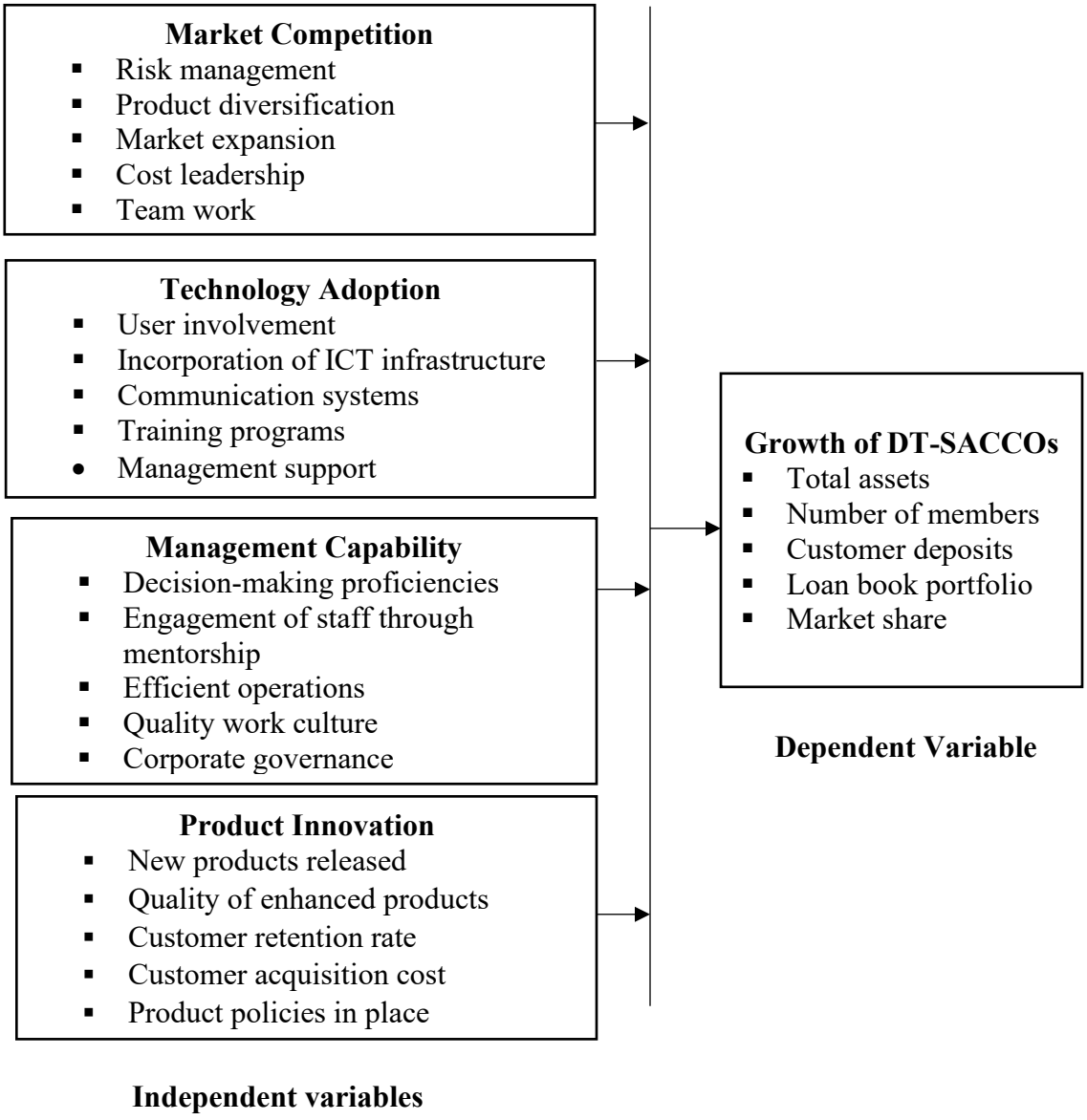


Figure 2.3

Operational Framework



Growth parameters had indicators such as total assets, number of members, customer deposits, loan book portfolio, and market share. The market competition parameter had indicators such as risk management, product diversification, market expansion, cost leadership, and teamwork. The technology adoption parameter had indicators such as user

involvement, incorporation of ICT infrastructure, communication systems in place, training programs, and management support. The management capability parameter had indicators such as decision-making proficiencies, engagement of staff through mentorship, efficient operations, quality work culture, and corporate governance. The product innovation parameter had indicators such as new products released, quality of enhanced products, customer retention rate, customer acquisition cost, and product policies in place.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter discloses the methodology that was applied to ensure that the data collection process, analysis, and reporting were effectively done. This was to ensure that the influence of adaptive capability on the growth of deposit-taking savings and credit cooperative societies in Meru County is ascertained. It covers the research approach, research design, location of the study, target population, sampling procedure, data collection instruments, pilot testing, validity, reliability, data collection procedure, operational definition of variables, methods of data analysis, and ethical considerations.

3.2 Research Approach

A mixed-method approach was used in the study to gather quantitative and qualitative data (Dawadi et al., 2021). The choice to use mixed methods was relevant since the use of quantitative methods such as questionnaires provides basic opinions regarding the study's construct. For example, the respondents were only required to agree or disagree. However, when the qualitative method was also included, it provided a chance for exclusive explanation of the constructs by a more experienced category of managers who further emphasized the opinions of the staff obtained through the questionnaires. Notably, this method was able to increase contextual understanding and also address the limitations of choosing one data collection method, such as only quantitative, through the inclusion of a second method, such as interviews (Aschbrenner et al., 2022). To be able to combine these two data sets, descriptive survey design was used.

3.3 Research Design

A research design is defined as the course of action that a study used in the data collection and analysis process (Taherdoost, 2022). Different research designs that exist include descriptive survey, correlational, cross-sectional, case study, and experimental research designs, among others. Descriptive survey research design was used in the current study to examine and describe the phenomenon surrounding the influence of adaptive capability on the growth of DT-SACCOs (Holmes et al., 2024). According to Holmes et al. (2024), this type of design addresses questions such as how, what, when, and where. Therefore, descriptive survey research design was critical in determining how market competition caused growth of DT-SACCOs; what technologies were adopted to spur growth of DT-SACCOs; where management capabilities were commonly applied to ensure growth of DT-SACCOs; and when innovation became useful in the banking products and resultant changes on growth of DT-SACCOs.

3.4 Location of the Study

The study was conducted in Meru County, which is one of the forty-seven counties of the great nation of Kenya (Commission on Revenue Allocation, 2022). It is comprised of nine sub-counties and is bordered in its north by Isiolo, in its south by Tharaka-Nithi, in its southwest by Nyeri, and in its west by Laikipia County. Contributing 7.6% to Kenya's agricultural production, Meru County had a staggering GDP value of $3.48 billion (KNBS, 2024). The region being agriculturally productive encompassed the production of horticultural products, tea, and coffee, and also the cultivation of khat for commercial purposes.

Meru County was explicitly selected due to its vibrant economy that had made it possible for the growth of DT-SACCOs to be possible. Being an agriculturally based region, most cooperative societies that were based on coffee, tea, and milk production had a reliable lifeline that attracted huge numbers of clients to deposit, save, and borrow finances that could be used to increase firm inputs, hence supporting local business expansion. Meru County had a population of 1,545,714 people, making it suitable for the DT-SACCOs to implement their growth strategies through adaptive capabilities (KNBS, 2019).

Furthermore, despite the existence of such numerous opportunities for business stability and expansion, SACCOs in Meru County have experienced a series of operational challenges, which include increased loan defaults, poor keeping of records, and increased internal politics (Chari & Nyariki, 2024). Furthermore, poor accountability, bureaucracy, and limited skills in decision-making by senior management have affected the performance of the SACCOs negatively (Kathimuuri, 2023). According to Karimi et al. (2024), SACCOs in some of Kenya's regions, such as in Meru, were noted to have outdated technological infrastructure needed to support deposit and withdrawal operations.

3.5 Target Population

The 10 headquarters of DT-SACCOs in Meru County comprised of the target population (The Kenya Gazette, 2025). The ten DT-SACCOs will be selected since they are directly involved in accepting deposits from customers, an indicator of active and growing financial institution. The respondents included 10 branch managers, 35 senior cash officers, 31 loan department supervisors, 46 cash officers/tellers, and 82 loan officers. The total was 204 DT-SACCO employees. The branch managers, being in charge of the DT-SACCOs, were included to provide information on the managerial policies established to ensure that the

DT-SACCOs were able to become competitive in the market, adopt recent banking technology, provide innovative products on time, and have suitable management capabilities that can be used to make sound financial decisions that spur growth in the institutions.

The senior cash officers and loan department supervisors were important in pointing out the various business strategies applied in the respective departments to counter market competition, innovate products, implement adoption of technology, and ensure management capabilities. The cash officers/tellers and loan officers, being the implementers of decisions made by the management, provided the opportunities present and challenges encountered in the market in keeping up with competition from other financial institutions such as SACCOs, commercial banks, and microfinance banks. Furthermore, being interactors of technology, they indicated how its use improved efficiency or not. They also gave various explanations of how decisions made by the management, such as the provision of innovative products and allowing feedback on their opinion, affected the daily operations. Table 3.1 indicates the target population.

Table 3.1

Target Population

	DT-SACCOs	Branch Managers	Senior Cash Officers	Loan Dept Supervisors	Cash Officers /Tellers	Loan Officers	Totals
1.	Capital Sacco	1	4	3	5	10	**23**
2.	Centenary Sacco	1	3	4	4	8	**20**
3.	Dhabiti Sacco	1	3	3	5	8	**20**
4.	Golden Pillar Sacco	1	3	4	5	10	**23**
5.	Jamii Sacco	1	4	4	5	7	**21**
6.	Nexus Sacco	1	3	4	4	9	**21**
7.	Nyambene Arimi Sacco	1	4	2	4	7	**18**
8.	Siraji Sacco	1	3	2	5	9	**20**
9.	Times U Sacco	1	4	2	5	7	**19**
10	Yetu Sacco	1	4	3	4	7	**19**
	Total	**10**	**35**	**31**	**46**	**82**	**204**

Source: Researcher (2025)

3.6 Sampling Procedure

The process of selecting representatives of the population was determined through two methods, which were simple random and purposive sampling methods (Ahmed, 2024). Simple random method was selected since the study had a goal of ensuring that every respondent got an equal and unbiased opportunity to be consulted. This method improved objectivity in the process of sampling to support validity and generalization of the results.

Therefore, as far as the study was concerned, the selection of various DT-SACCOs officers and supervisors was done without necessarily favoring some while leaving out others. This therefore, authenticated the selection process to have balanced range perspective of the target population. The limitation for using the simple random method was that it had the potential for sampling errors, but within a minimal marginal error of 5%, which was considered acceptable.

The second sampling method was purposive method which was intentionally used to sample branch managers. This was due to the fact that they were knowledgeable, had superior responsibilities and were involved directly in both operations and making of strategic decisions. The key insights provided by the managers was necessary since their expertise and decision-making authority was necessary to acquire key details that were credible, tested, and aligned with the objectives of the study. However, purposive sampling method was limited in that it could lead to the inclusion of a non-representative sample, skewing the results. This was thus not the case with the current study since the included participants were representing each DT-SACCO in Meru County therefore, in each DT-SACCO, there was a representation of a branch manager in each of them. The senior cash officer, loan department supervisors, cash officers/tellers, and loan officers were sampled through a simple random method, and their sample sizes were determined through Slovin's formula as indicated:

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

where n is sample size

N is Target population

e is margin error(precision level) where e is 0.05 at 95% confidence level

The margin of error was set at 5% to balance the need for statistical precision with the practical constraints of time and resources, ensuring a reliable yet manageable sample size.

1) Senior cash officers sample population

$$n = \frac{35}{1 + 35(0.05)^2}$$

= 32 cash officers

2) Loan department supervisors sample population

$$n = \frac{31}{1 + 31(0.05)^2}$$

= 29 loan department supervisors

3) Cash officers sample population

$$n = \frac{46}{1 + 46(0.05)^2}$$

= 41 cash officers

4) Loan officers sample population

$$n = \frac{82}{1 + 82(0.05)^2}$$

= 68 loan officers

The entire sample population included 10 branch managers, 32 senior cash officers, 29 loan department supervisors, 41 cash officers/tellers, and 68 loan officers. Table 3.2 indicates the sampled population.

Table 3.2

Sampled Population

	DT-SACCOs	Branch Managers	Senior Cash Officers	Loan Dept Supervisors	Cash Officers /Tellers	Loan Officers	Totals
1.	Capital Sacco	1	5	4	5	8	**23**
2.	Centenary Sacco	1	3	3	4	6	**17**
3.	Dhabiti Sacco	1	3	2	4	7	**17**
4.	Golden Pillar Sacco	1	3	3	3	6	**16**
5.	Jamii Sacco	1	4	4	4	7	**20**
6.	Nexus Sacco	1	3	3	3	7	**17**
7.	Nyambene Arimi Sacco	1	4	2	4	6	**17**
8.	Siraji Sacco	1	3	2	5	7	**18**
9.	Times U Sacco	1	2	3	5	7	**18**
10.	Yetu Sacco	1	2	3	4	7	**17**
	Total	**10**	**32**	**29**	**41**	**68**	**180**

3.7 Data Collection Instruments

Qualitative data was collected through the use of interview guides, while quantitative data was collected through questionnaires and secondary data. Interviews were done on the branch managers as shown in appendix III (Oranga & Matere, 2023; Taherdoost, 2022).

Closed-ended questionnaires were issued to cash officers/tellers and loan officers (Appendix IV).

3.7.1 Interview Guides

Interview guides were administered to the managers at the branch level and were segmented into six sections, such as demographic information, market competition, technology adoption, management capability, product innovation, and growth of DT-SACCOs (Appendix III). There was a total of four questions in each of the six sections derived from the gaps emanating from the reviewed studies. The questions were suitably related to the objectives of the study and required the respondents to explain rather than state various opinions.

3.7.2 Closed-ended Questionnaires

The closed-ended questionnaires had an ordinal Likert scale that revealed that 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree. There were six sections provided in the questionnaires, which included demographic, market competition, technology adoption, management capability, product innovation, and growth of DT-SACCOs (Appendix IV). These sections had six statements in each part, with the exception of the demographic section that inquired about the job positions, years of experience, and education level. The statements reflected the indicators as provided in the conceptual framework of the study.

3.7.3 Secondary Data

Secondary data from financial reports like DT-SACCO's documents, income statements, and balance sheets were also collected (Appendix V). The data was within a period of five years, from 2020 to 2024, to determine the actual growth experienced in parameters like total assets, number of members, customer deposits, loan book portfolio, and market share. The results derived from the secondary data were noted down on secondary data collection as provided in appendix V.

3.8 Pilot Study

A pilot study was conducted in Trans Nation DT-SACCO in Tharaka Nithi County. The respondents that took part in the pilot study were 1 branch manager, 1 senior cash officer, 1 loan department supervisor, 3 cash officers/tellers, and 4 loan officers. The branch manager, senior cash officer, and loan department supervisor were sampled through the purposive sampling method, while all the officers were sampled through the simple random method. The out-of-the-pre-test study shaped the final data collection tools in ascertaining their reliability by eliminating any ambiguous and unrelated questions that did not align with the market competition, technology adoption, management capability, and product innovation.

According to Sundram and Romli (2023), a pilot study provided a platform whereby the study was able to ensure that reliability and validity were guaranteed. This was because the use of new data collection instruments required validation to articulate accuracy in concept as per a certain field. Additionally, a pilot study provided a model to assess what the reception of the data collection tools by the respondent would look like (Kunselman, 2024).

This gave assurance or a chance for further improvement as per the respondent's reaction and the number of ambiguous questions that required clarification.

3.8.1 Validity

Four types of validity, which are content, criterion, construct, and face validities, were examined (Lim, 2024). According to Jeldres et al. (2023), content validity assessed the ability of the questions to reflect accuracy on the entrepreneurship concept. Therefore, the opinion from experts was used to determine the content validity and measured through the Content Validity Index [CVI]. That is, the number of questions considered valid was divided by the total number of questions in a data collection tool. Furthermore, the study also compared the results with past studies and justified any differences therein. It was considered a suitable method for assessing criterion validity since the outcome that provided the study had to relate to other results as well (Cheung et al., 2024).

Construct validity was examined by ensuring that sections such as market competition, technology adoption, management capability, product innovation, and growth of DT-SACCOs had asked questions related to the indicators as provided in the conceptual framework. Face validity was guaranteed through having different sections and questions as instructed by Lim (2024) that assessed the influence of market competition on the growth of DT-SACCOs, the influence of technology adoption on the growth of DT-SACCOs, the influence of management capability on the growth of DT-SACCOs, and the influence of product innovation on the growth of DT-SACCOs.

3.8.2 Reliability

Cronbach alpha coefficient was the method used to test the reliability of the questionnaires and interview guides (Halimoon et al., 2021). As per the guideline of Shatri et al. (2024), an index of more than 0.7 confirmed reliable instruments, while a Cronbach index of less than 0.7 indicated unreliability. Therefore, in assessing the trustworthiness of the questionnaires and interview guide to give similar findings any time they are used, Cronbach's alpha was applied. According to Halimoon et al. (2021), the internal consistency of various questions to provide reliable results indicated that they could be trusted even if they were used by future studies with a similar approach of evaluating the influence of adaptive capability on the growth of DT-SACCOs.

3.9 Data Collection Procedure

Specific authorizations, such as an introduction letter from a postgraduate and ethical clearance from SERC and NACOSTI, were obtained before the data collection exercise. Additionally, the study did not use any additional support from research assistants so as to actively participate in the data collection process and learn about the process. During the process of actual data collection, the researcher headed to various headquarters of DT-SACCOS to meet with the managers. The researcher introduced herself and also provided background information on the purpose and benefits of the study to various banking respondents. Thereafter, a formal request was made on the data collection process as provided in appendix I. The study began by conducting interviews, followed by the issuance of questionnaires, and lastly collected secondary data to ensure consistency in the data collection process. The process was conducted on each DDT-SACCO following the

order in which they appear in Table 3.2. The researcher ensured that data collection in one institution was exhausted before moving on to the next DT-SACCO.

3.9.1 Procedures for Conducting Interviews

When permission was granted, the branch managers were further requested for their consent to be interviewed as part of the respondents (appendix II). After agreeing to the request, they paved the way for the interview process. They were interviewed within a span of 30 minutes, and their feedback was noted down in a notebook, since there was no audio or audiovisual recording. After completing the interview process, the researcher thanked them and requested them to help identify other respondents. In a case where the managers were not presently available to take part in the interviews, the researcher booked an appointment at the most suitable time they were available.

3.9.2 Procedures for Administering Questionnaire

In issuing the questionnaires to the officers, the researcher similarly sought their consent through a formal consent letter as provided by the institutions (appendix II). Their agreement paved the way for immediate distribution of questionnaires to fill in. The researcher allowed them to fill it in within 20 minutes and thereafter collected all the questionnaires. The respondents that requested to be given time to fill in the questionnaires were given 3 days, after which the researcher came back and collected the questionnaires. They were similarly thanked, and the responses were stored in a safe room under lock and key, with only the researcher permitted to access the documents. The respondents that did completely fill in the questionnaires were requested to do so, and in case of an ambiguous question, the researcher elaborated on it accordingly.

3.9.3 Secondary Data Collection

After the process of collecting data through questionnaires and interviews ended, the researcher then proceeded to request the managers for various reports within a period of five years, from 2020 to 2024. The researcher then began filling out the secondary data collection form as provided in appendix V. Those reports that were available on the DT-SACCO's website, the researcher used an internet-connected laptop to access the website. The name of the DT-SACCO was typed into the Google search engine, and the accurate website was selected. On the website, the researcher will navigate through and access the reports portal. On the reports' portal, the researcher searched for specific reports such as balance sheets, income statements, and other necessary reports within the required range. These reports were downloaded, and the details related to total assets, number of members, customer deposits, loan book portfolio, and market share were filled in the secondary data collection form.

3.10 Operational Definition of Variables

The operationalization was directly tied to the conceptual framework by providing growth of DT-SACCOs as the dependent variable, whereas market competition, technology adoption, management capabilities, and product innovation were the independent variables. Table 3.3 indicates the operational definition of variables.

Table 3.3

Operational Definition of Variables

Types of Variables	Nature of Variables	Scales or Methods	Measuring Metric
Dependent Variable	**Growth of DT-SACCOs**	Ordinal Likert Scale, Interviews	• Total assets, • Number of members, • Customer deposits, • Loan book portfolio • Market share
Independent Variables	**Market Competition**	Ordinal Likert Scale, Interviews	• Risk management • Product diversification • Market expansion • Cost leadership • Team work
	Technology Adoption	Ordinal Likert Scale, Interviews	• User involvement incorporation of ICT infrastructure • Communication systems in place • Training programs, a • Management support
	Management Capability	Ordinal Likert Scale, Interviews	• Decision-making proficiencies • Engagement of staff through mentorship • Efficient operations • Quality work culture • Corporate governance
	Product Innovation	Ordinal Likert Scale, Interviews	• New products released • Quality of enhanced products • Customer retention rate • Customer acquisition cost • Product policies in place

3.11 Methods of Data Analysis

Quantitative and qualitative data was analyzed with various methods as derived from questionnaire and interview responses.

3.11.1 Quantitative Data Analysis

When analyzing quantitative data, completely filled-in questionnaires were sorted, and their information was coded in SPSS version 27. Descriptive statistics like frequencies, percentages, and means were analyzed. They provided a glimpse of how many respondents agreed or disagreed with various questionnaire statements. Thereafter, inferential statistics like Pearson correlations were used to test the hypothesis of the study. The choice for Pearson correlation was relevant in providing the significance of the relationship and testing the strength of market competition, technology adoption, management capability, and product innovation in determining the growth of DT-SACCOs.

Further, multiple regression, such as model summary, ANOVA, and regression weights, was used to predict the accuracy when determining the influence of market competition, technology adoption, management capability, and product innovation on the growth of deposit-taking Savings and Credit Cooperative Societies in Meru County. Notably, the model summary, ANOVA, and regression weights were used to determine the purpose of the study and model of the study, which was as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Where:

Y = Growth of DT-SACCOs

βi = Coefficients to be estimated

β_0= Constant

X_1= Market competition

X_2 = Technology adoption

X_3 = Management capability

X_4 = Product innovation

e= error

The results were presented through tables and figures.

3.11.1.2 Diagnostic Tests

Multicollinearity Test—the determination of how the data related to market competition, technology adoption, management capability, and product innovation interact with each other. The multicollinearity test assessed their strength in maintaining their specific nature. This was done by examining the variance inflation factor and tolerance level. According to Kyriazos and Poga (2023), when the VIF is less than 5 and the tolerance level is more than 0.2, market competition, technology adoption, management capability, and product innovation prove that they relate to each other and still maintain their specific characters. In determining multicollinearity, the analysis of the results was proved to be valid, hence a considerable factor in maintaining rigor of analysis.

Autocorrelation Test—This is a test that was used to determine how the data relating to adaptive capability and growth variables related to each other. The general rule of thumb was that the influence had to be determined by the data of adaptive capability on growth and not the data of growth influencing the data of adaptive capability. The method that was used was Durbin Watson, which indicates a positive correlation when the coefficient is

between 0 and 2, and when it is between 2 and 4, there is a negative correlation (Turner, 2021). Through autocorrelation, analyzed data was considered to be reliable.

Normality Test—**This** test was used to assess if the data collected from market competition, technology adoption, management capability, product innovation, and growth of DT-SACCO is from a normally distributed population. The Kolmogorov-Smirnov method was used, whereby the significance level that was above 0.05 was the baseline to determine if the data was normal (Zeimbekakis et al., 2024). Therefore, the data's rigor was determined to be transparent and free from manipulation.

Linearity Test—In the establishment of the relationship between adaptive capability metrics and growth, a linearity test was done. Its evidence was ascertained when the significance value was more than 0.05, and when the significance level was less than 0.05, the data in consideration was non-linear.

Heteroskedasticity Test—This test was used to rule out any outliers present in the data through the use of residuals. When the residuals were equally distributed, it indicated that there were no outliers, while when the residuals were clustered together, outliers were noted to be present. Therefore, the heteroskedasticity test showcased rigor by proving that the collection of data was systematic.

3.11.1.3 Secondary Data Analysis

The data from reports was analyzed through the horizontal method to ensure that the changes of a certain outcome in tandem with the base year were noted and their percentage increase or decrease was recorded as well. For example, if the value of total assets in year one was Kshs 500 million and in year two Kshs 600 million, the difference of Kshs 100

million was divided by the base year (Kshs 500 million), and the result was converted to percentages. This was an increase of 20%; hence, it is used for interpretation that total assets increased by 20% from year one to year two.

3.11.2 Qualitative Data Analysis

In the process of providing various opinions, the remarks of the respondents tend to reflect a discussion on known topics such as finances, decision-making, and others. Therefore, to be in a position to capture such topics, the thematic method was used when analyzing interview responses. This enabled the study to deduce a specific topic of discussion as per different comments of the respondents. These topics were then explained, and a few interviewees were quoted through assigned codes.

3.11.3 Integrating Quantitative and Qualitative Data

The data from questionnaires was analyzed, and thereafter the interview results were thematically analyzed in each objective. The explanation provided through the interview analysis was anchoring and supporting the questionnaire results. Thereafter, the analysis of documents/reports was done in support of the dependent results of both the questionnaires and interview data. This was to confirm or disagree with what the respondents provided as the true growth standing of the DT-SACCOs.

3.12 Ethical Considerations

Specific authorizations, such as an introduction letter from a postgraduate and ethical clearance from SERC and NACOSTI, were obtained before the data collection exercise. The privacy of the respondent's personal details was promoted by not asking them to provide their names or any marks, such as signatures, that would enable anyone to know

them. This was suitable for capturing their opinions without necessarily knowing who said what. Further, the study accorded credit to past authors' studies by citing any borrowed information and eventually referencing their studies as directed through the APA format. Additionally, respondents were furnished with full information regarding the purpose of the study, where the results were used, and if there would be any benefits in participating in the study. Their consent was required to be provided after they read through the consent letter. The study ensured that participants' data was safeguarded by storing it in a safe room that is under lock and key. Furthermore, some of the secondary data details may be biased to suit the self-interest of different SACCOs. Therefore, the study only included secondary data from reports that have been audited to avoid manipulated reports that did not reflect a true reflection of the status of the DT-SACCOs.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the findings on the influence of adaptive capability on the growth of deposit-taking savings and credit cooperative societies in Meru County. It covers response rate, reliability results, background information, diagnostic tests, descriptive statistics, and inferential statistics.

4.2 Response Rate

There were 10 managers and 170 officers were sampled in this study. Their responses when requested to take part in the study, is as provided in Table 4.1.

Table 4.1

Response Rate

Data Collection Tools	Respondents	Sampled	Response	Percentage
Interviews	Branch Managers	10	7	70%
Questionnaires	Senior cash officers	32	29	
	Loan debt officers	29	21	
	Cash Officers	41	35	
	Loan officers	68	54	
	Total	170	139	82%
Grand Total		180	146	81%

Table 4.1 reveals that 7(70%) branch managers agreed to be interviewed, whereas 139(82%) officers answered the questionnaires. Therefore, since the response rate was 70% and above, the study considered the study successful. This was in relation to convincing

the respondents to provide information that would address the influence that adaptive capability had on the growth of DT-SACCOs. Changing business demands have caused financial institutions to rethink strategies that can be applied in restructuring market competition, technology, management capabilities, and product innovations (Karimi et al., 2024). Therefore, the respondents taking part in the current study, which sought to underpin the possible threats that may limit such transformations, was considered vital in resolving such a menace in the SACCO sector.

4.3 Reliability Results

After a pilot study was conducted in Trans Nation DT-SACCO in Tharaka Nithi County, the study examined the reliability of the data instruments before they were administered in the main study. The results are provided in Table 4.2.

Table 4.2

Reliability Results

Instrument	Cronbach's Alpha
Market Competition	0.895
Technology Adoption	0.764
Management Capability	0.842
Product Innovation	0.935
Growth of DT-SACCOs	0.873
Average	0.862

The outcomes in Table 4.2 reveal that the Cronbach Alpha coefficient for market competition variable is 0.895; technology adoption is 0.764; management capability is 0.842; product innovation is 0.935; and growth of DT-SACCOs is 0.873. The outcome indicates that the instruments used to gather data were considered reliable for use. The overall average coefficient was 0.862, which was greater than 0.7. As per Shatri et al.

(2024), when the coefficient was greater than 0.7, it indicated reliability. Based on the results, it was ascertained that the questionnaires used were trusted to provide similar outcomes when used more than once and also attained reliable internal consistency. As per Shatri et al. (2024), when the coefficient was greater than 0.7, it indicated reliability.

The study also ascertained the content validity index of the quantitative data collection tools as follows. Four experts were included in the field of strategic management to reveal the number of statements in the questionnaires that had adequate content. The results are provided in Table 4.3.

Table 4.3

Content Validity Index (CVI)

Index Expert	Score	Valid
Expert 1	32/34	0.94
Expert 2	32/34	0.94
Expert 3	33/34	0.97
Expert 4	32/34	0.94
Total		3.79
Average		0.95

Table 4.3 indicates that the average content validity index was 0.95 as a result of the experts' opinions quantifying the contents of the questionnaires. The first, second, and third experts noted that 32 questions out of the 34 were adequate in terms of content. The third expert qualified 33 out of 34 questions. This therefore means that the questions were adequate in their precision and accuracy, as required in the strategic management field. According to Kiconco (2023), the average CVI was necessary to determine if the questions were in any way relevant to the field, as it is required of them.

4.4 Demographic Information

4.4.1 Demographic Information of Officers

The respondents were requested to provide demographic data for the study, which involved their role in the SACCO, work experience and the highest level of education. Table 4.4 provides the results.

Table 4.4

Demographic Information of Officers

Job position	Frequency	Percent	Cumulative Percent
Senior cash officers	29	21	21
Loan debt supervisors	21	15	36
Cash officers	35	25	61
Loan officers	54	39	100
Total	139	100	
Work experience			
Above 15 years	53	38	38
10-14 years	36	26	64
6-9 years	21	15	79
4-5 years	14	10	89
2-3 years	8	6	95
1 year and below	7	5	100
Total	139	100	
Level of Education			
Postgraduate Degree	23	17	17
Bachelor's Degree	51	37	54
Higher Diploma	41	29	83
Diploma	15	11	94
Certificate	9	6	100
Total	139	100	

The findings in Table 4.4 show that 29(21%) senior cash officers, 21(15%) loan debt supervisors, 35(25%) cash officers, and 54(39%) loan officers responded to the study. Additionally, the majority of the respondents, 53(38%), had a work experience of above

15 years; this was followed by 36(26%) who had worked in the same role for 10 to 14 years, and only 7(5%) had worked in the same role for one year and below. Further on the educational level, 51(37%) of the respondents had bachelor's degrees, 41(29%) had higher diplomas, 23(17%) had postgraduate degrees, and only 9(6%) had certificates as their highest level of education. The results mean that the officers in charge of various operations in cash and loan departments were adequately experienced with over 10 years of service. They were equally educated with the three topmost academic qualifications (postgraduate degree, bachelor's degree, and higher diploma).

Their extensive service period of time within the financial sector, particularly in SACCOs, had enabled them to undergo different experiences in different business cycles. This also means that they had been able to develop adaptive capabilities enabling them to propel their DT-SACCOs into high performance. Notably, Muathe (2020) revealed that competitive marketing structures that support innovative products have to closely interact with established ICT infrastructure and practical management skills. According to Kiriinya and Nyariki (2023), the capacity of the working staff to use technology when implementing entrepreneurship decisions enables them to contribute positively towards the growth of the organization. Therefore, in the context of the study, a high number of years served and educational qualifications enabled these officers to offer competitive services and suggestions within the financial sector to support the growth of their DT-SACCOs.

In concluding this section, the results have pointed out that the high experience and education qualification of the DT-SACCOs officers, enabled the adopt effectively with adaptive capabilities. Being able to undergo through business cycles, they were effectively exposed to national trends like e-SACCO regulations and international attention towards

fintech and AI, in the field of cooperative finance. Therefore, these results were able to address previous gaps by revealing that growth is not only caused by innovation but also internal competencies hence adequately articulated to dynamic capabilities theory

4.4.2 Demographic Information of Managers

The study also asked for the demographic information of the managers, particularly on the years of experience, level of education, and specific roles they had in promoting the growth of DT-SACCOs. Table 4.5 indicates the results.

Table 4.5

Demographic Information of Managers

Years of Experience	Frequency	Percentage	Cumulative Percent
Above 20 years	1	14	14
10-19 years	4	57	72
1-9 years	2	29	100
Total	7	100	
Level of Education			
Postgraduate Degree	2	29	29
Bachelor's Degree	4	57	86
Diploma	1	14	100
Total	7	100	

The outcome of the study as depicted in Table 4.5 is that most branch managers, 4(57%), had served for a period of 10-19 years, while 1(14%) served for more than 20 years. Additionally, 4(57%) had a bachelor's degree and 9(14%) had a diploma. The results mean that the management was equally experienced and educated to come up with competitive entrepreneurship decisions. They were thus well-versed with different business cycles' challenges, regulatory demands, and clients' preferences in terms of innovative products and services. Therefore, their suitability in leading the DT-SACCOs was noted to cause a

positive growth since they are deeply rooted in the financial systems. The longevity of managers attracts both support and criticism from past studies. According to Messabia et al. (2023), longer leadership service by a manager translates to stability of operations and increased collaboration between staff and the management. However, in contrast, Kyenze (2023) complained that a longer period of service by the managers in a specific location is a contributor to funds embezzlement and increased inefficiencies within the operations of the DT-SACCO.

The interview respondents were asked to describe specific roles they had in promoting the growth of DT-SACCOs. They responded in three themes, which are enabling financial literacy, promotion of service delivery, and establishing clear marketing strategies. On enabling financial literacy, the management noted that they had a role in ensuring that the staff were equally conversant with the operations and regulations. This enabled reduction of work-related errors and regulatory concerns of the DT-SACCOs. The managers were also tasked with ensuring that the customers understood the products and services of the institution to increase uptake.

Furthermore, the management was also responsible for ensuring that services were delivered as supposed to in average turnaround timelines. Lastly, the management was also responsible for ensuring that the market share of the DT-SACCO was enhanced through clear marketing strategies. Similarly, Barasa et al. (2023) also discovered that the performance of Bungoma's SACCO increased due to management's initiatives in marketing and financial literacy, while service delivery was considered as a method used by managers in Meru County (Kathimuuri, 2023).

In concluding this section, it was noted that the experience and education level of managers in DT-SACCOs had enabled them drive growth by strategizing, delivering the required services and through financial literacy within the branch level. Therefore, their leadership qualities aligned with national goals on digital financial inclusion and global trends in fintech and incorporation of AI. This is through providing guidance to staff and raising awareness to clients on how their DT-SACCOs were prepared to incorporate solutions supported through technology to resolve the market demands. The specific results were thus able to point out that through providing leadership, the DT-SACCOs were able to adapt and experience growth, a boosting element towards managerial capability in the SACCO sector.

4.5 Diagnostic Test

Diagnostic tests such as multicollinearity, autocorrelation, normality, linearity and heteroskedasticity tests were conducted in this study.

4.5.1 Multicollinearity Test

To determine how well each adaptive capability variable maintained its unique character, the study used a multicollinearity test. Table 4.6 provides the results.

Table 4.6

Multicollinearity Test

Model	Collinearity Statistics	
	Tolerance	VIF
Market Competition	.498	2.007
Technology adoption	.995	1.005
Management capability	.421	2.373
Product Innovation	.799	2.642

Table 4.6 shows that market penetration has a tolerance value of 0.498 and a VIF of 2.007; technology adoption has a tolerance value of 0.995 and a VIF of 1.005; management capability has a tolerance value of 0.421 and a VIF of 2.373; and product innovation has a tolerance value of 0.799 and a VIF of 2.642. The results show that all the variables had a tolerance value that was more than 0.2 and a VIF of below 5. This meant that technology adoption, management capability, and product innovation were related to each other and still maintained their specific characters.

4.5.2 Autocorrelation Test

Autocorrelation was employed to ascertain the relationship between the data pertaining to the growth of DT-SACCOS and adaptive capabilities. Durbin Watson was the method used, and the results generated are in Table 4.7.

Table 4.7

Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.860[a]	.740	.706	3.14865	1.534

a. Predictors: (Constant), Product Innovation, Management Capability, Technology Adoption, Market Competition

b. Dependent Variable: Growth of DT- SACCOS

The Durbin-Watson value revealed in Table 4.7 is 1.534, which is between 0 and 2, signifying a positive correlation. The interpretation of the result is that adaptive capability initiated a positive influence on the growth of DT-SACCOs.

4.5.3 Normality Test

This test was used to assess if the data collected from market competition, technology adoption, management capability, product innovation, and growth of DT-SACCO was from a normally distributed population. The results are provided in Table 4.8.

Table 4.8

Normality Test

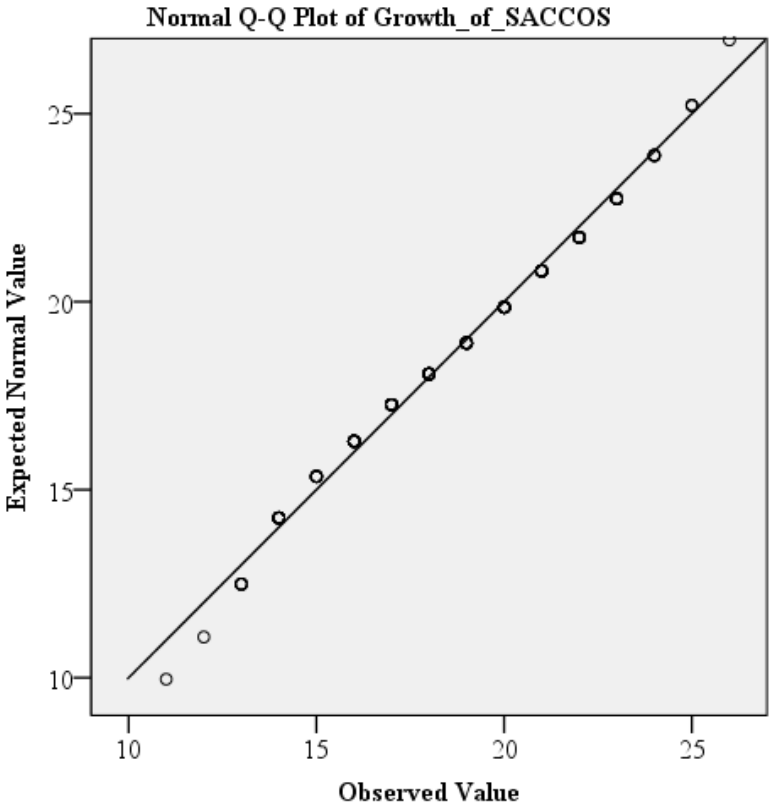
		Market Competition	Technology Adoption	Management Capability	Product Innovation	Growth of DT SACCOS
N		139	139	132	139	139
Normal Parameters[a, b]	Mean	17.7122	17.8993	21.6515	17.9209	18.4604
	Std. Deviation	3.27760	3.42475	3.25268	3.64565	3.25324
Most Extreme Differences	Absolute	.089	.065	.088	.090	.085
	Positive	.066	.064	.079	.055	.085
	Negative	-.089	-.065	-.088	-.090	-.078
Kolmogorov-Smirnov Z		1.049	.765	1.012	1.059	.998
Asymp. Sig. (2-tailed)		.222	.602	.257	.212	.273

a. Test distribution is Normal.
b. Calculated from data.

Table 4.8 indicates the p-value for market competition was 0.222; technology adoption was 0.602; management capability was 0.257; product innovation was 0.212; and growth of deposit-taking SACCOs was 0.273. Therefore, considering all of the variables had a significance level greater than 0.05, the findings indicated that the data used in this study were from a normal distribution. Figure 4.1 also indicates the normality curve distribution of data as a confirmation of the results.

Figure 4.1

Normality Curve



As Figure 4.1 reveals that most of the data aligns in a straight line as supposed to be, which is a confirmation that the data used was derived from a normal distribution.

4.5.4 Linearity Test

Linearity test was conducted to evaluate the influence of adaptive capability on growth of DT-SACCOs. Table 4.9 provides linearity test.

Table 4.9

Linearity Test

			Sum of Squares	df	Mean Square	F	Sig.
Growth of DT-SACCOS * Market Competition	Between Groups	(Combined)	115.046	15	7.670	.701	.379
		Linearity	17.394	1	17.394	1.590	.210
		Deviation from Linearity	97.652	14	6.975	.638	.129
	Within Groups		1345.486	124	10.939		
	Total		1460.532	139			
Technology Adoption	Between Groups	(Combined)	140.649	16	8.791	.813	.469
		Linearity	30.876	1	30.876	2.854	.094
		Deviation from Linearity	109.773	15	7.318	.676	.206
	Within Groups		1319.883	123	10.819		
	Total		1460.532	139			
Management Capability	Between Groups	(Combined)	207.457	16	12.966	1.307	.204
		Linearity	10.249	1	10.249	1.033	.311
		Deviation from Linearity	197.209	15	13.147	1.326	.178
	Within Groups		1140.452	123	9.917		
	Total		1460.532	139			
Product Innovation	Between Groups	(Combined)	188.336	17	11.079	1.054	.407
		Linearity	15.769	1	15.769	1.500	.223
		Deviation from Linearity	172.568	16	10.785	1.026	.435
	Within Groups		1272.196	122	10.514		
	Total		1460.532	139			

Table 4.9 shows that the p-value for market competition was 0.129; technology adoption was 0.206; management capability was 0.178; and product innovation was 0.435. As a result, all of the adaptive capability variables had a significance level that was above 0.05, indicating that there was a linear relationship between market competition, technology

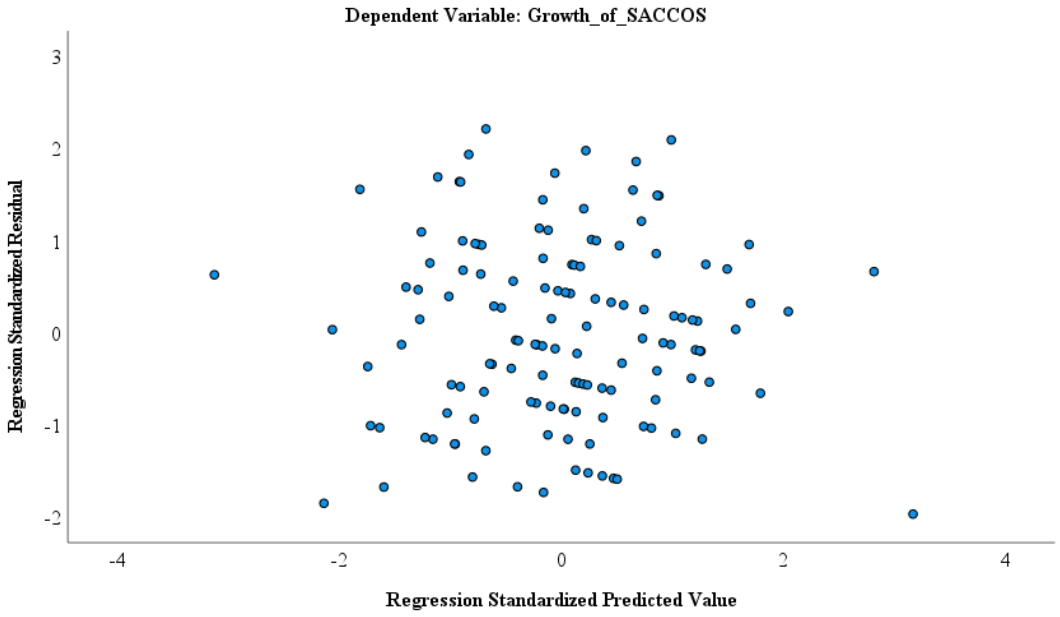
adoption, management capability, product innovation, and growth of deposit-taking SACCOs.

4.5.5 Heteroskedasticity Test

This test was used to rule out any outliers present in the data through use of residuals. The results are provided in Figure 4.2.

Figure 4.2

Scatter Plot as a Test for Heteroskedasticity



As Figure 4.2 points out, the most residuals were not clustered together indicating that the data in consideration was free from outliers.

4.6 Descriptive Statistics of Growth of DT-SACCOS

Growth of DT-SACCOs was the dependent variable measured through total assets, number of members, customer deposits, loan book portfolio, and market share. The ordinal Likert scale used indicated that 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5

= strongly agree, as noted in Table 4.10. The interview and secondary data are also provided thereafter.

Table 4.10

Growth of DT-SACCOs

Statements N=139	1	2	3	4	5	Mean	SD
Increase in total assets	3 (2%)	5 (4%)	11 (8%)	39 (28%)	81 (58%)	4.25	0.82
Technology has eased transaction process	8 (6%)	11 (8%)	53 (38%)	49 (35%)	18 (13%)	3.82	1.16
Customer deposits have increased	78 (56%)	42 (30%)	10 (7%)	5 (4%)	4 (3%)	2.45	1.74
Loan book portfolio has improved	85 (61%)	39 (28%)	8 (6%)	4 (3%)	3 (2%)	2.23	1.86
Market share strategies have improved performance	3 (2%)	6 (4%)	4 (3%)	36 (26%)	90 (65%)	4.41	0.70
There are qualified strategic management team	10 (7%)	9 (6%)	62 (45%)	46 (33%)	12 (9%)	3.53	1.32

Table 4.10 reveals that 90(65%) of the respondents strongly agreed and 36(26%) agreed, with a mean of 4.41 and an SD of 0.70, that market share strategies implemented through specific products had improved the performance of the bank. In addition, 81(58%) strongly

agreed and 39(28%) of the respondents agreed on a mean of 4.25 and an SD of 0.82 that the total assets had increased due to experienced capabilities of the management. However, 85(61%) of the respondents strongly disagreed and 39(28%) disagreed on a mean of 2.23 and an SD of 1.86 that the loan book portfolio had improved due to quality assessment measures. The interpretation is that the DT-SACCOs had management to not only develop but also implement viable market share strategies. This was majorly implemented by coming up with unique DT-SACCO products that directly addressed the specific needs of the clientele (Waithaka & Odollo, 2024).

Therefore, the ability of the clients to relate effectively with different products of a financial institution leads to increased uptake, hence affecting the performance positively. Through the interactions with the clients, the management capabilities have developed, enabling them to convince the customers more on various investment platforms they could consider. As the results have indicated, the value of total assets has increased, especially based on the capabilities that the management has developed over a period of time. According to Gaichuru et al. (2022), growth is witnessed in a financial institution when the total assets and market share expand within a considered timeframe. This is mainly due to consistent interaction patterns between the organization's staff, management, and clients.

In the context of a SACCO, Mugwe (2022) revealed that continuous adaptation capabilities had propelled the management to develop entrepreneurship skills that sought to match client needs and available innovative products. The respondents also admitted that the loan book portfolio had not experienced improvements, mainly based on the quality measures implemented to monitor various borrowers. According to Changamu et al. (2023), the lack of improvements in the loan book portfolio meant that there were increased NPLs due to

increased default rates from the borrowers. This, therefore, could have an interpretation that there may have been poor monitoring of loan book portfolios or a lack of appropriate measures for assessing borrowers' ability to repay the extended credit (Nadzua et al., 2025).

4.6.2 Interview Results

There were interviews conducted with 7 managers, and their responses are coded as BM1 to BM7. A total of four questions were asked regarding the growth of DT-SACCOs. The first question required them to explain the measures in place to support increased customer deposits in the DT-SACCOs. The provided feedback is based on four themes, which were provision of competitive interest rates, provision of different products, quality services, and ensuring that the process of opening cash deposit and savings accounts was easy. It was noted that the DT-SACCOs ensured that the competitive interest rates issued on both loans and cash deposits were one of the major reasons why customers increased. An interviewee, BM3, was directly quoted saying that

"Our interest rates on any saved money in the DT-SACCO attract reasonable annual rates as compared to other financial institutions."

The attractive rates gave customers assurance that their investments would increase their personal revenue. Additionally, giving the customers the alternative to select from multiple products enabled them to assess whether their demands would be met by any of the products. Furthermore, the DT-SACCOs also guaranteed quality services that comprised both human interactions and technology. This is so as to increase efficiency in communication and delivery of specific requests within a short timeline. Adding further to this, the DT-SACCOs made the process of opening deposit and savings accounts very easy

for anyone willing and interested. There was less documentation required and less complicated procedures to set up such types of accounts. An interviewee, BM2, was directly quoted saying that

"In simplifying the process of account opening, you can do it wherever you are and do not have to come to the DT-SACCO branch."

Past studies like Kathimuuri (2023) revealed that the presence of different products, well-experienced staff, and clear processes were major factors that enabled the increment of deposits in DT-SACCOs. Additionally, assurance that the customers' savings would attract higher interest enabled them to develop trust that would see to it that the amounts saved were increased (Mugendi, 2023). On the one hand, there were customers whose interest related to the products being issued, while on the other hand, there were customers whose interest was based on the ability of smooth transaction processes found in the DT-SACCO (Kihara & Bett, 2023).

The second question required the respondents to highlight the approaches used to raise public awareness of the existence of the DT-SACCO. The methods named are grouped into three themes, which are mainstream media, social media, and word of mouth. The respondents noted that mainstream media included television, radio, and newspaper advertisements. Through such avenues, the masses were able to learn a thing or two so as to make a decision on whether to join or not. Furthermore, the use of websites and social media platforms was considered part of the electronic media platform that provided information on the various products and services the DT-SACCO had, as well as the charges.

DT-SACCOs also incorporated the conventional approach where the sales staff visited various businesses, schools, and public and private organizations to let the public know about their products and services. An interviewee, BM1, was directly quoted saying that

"We are still among the financial institutions that value direct sales since they give customers a chance to be heard and their questions directly answered."

Similar approaches were named by Otieno (2023), who noted that the decision to join a DT-SACCO begins by seeing about their existence on electronic or paper media platforms. Further on, Camilleri (2022) also explained the strength of relying on direct conversation as a tool for entrepreneurship and as a platform to seek clarification on product concerns.

The third question required the respondents to elucidate the issues that had been affecting this DT-SACCO from reaching its potential as far as growth was concerned. The various issues noted were a weak governance system that was a point for poor leadership and misappropriation of institutional resources. Furthermore, most of the staff had low skills in recovering the various defaulted loans from clients. This, therefore, exposed the organization to loss of organizational resources, affecting growth prospects. There was also the problem of limited core capital to enable the DT-SACCOs' operations to extend their services to potential buyers.

Additionally, the respondents also complained of a tough operational environment caused by regulations and competition from other financial institutions such as commercial banks and microfinance banks operating in Meru County. According to Ocholla (2021), despite operational regulations safeguarding the operations of the DT-SACCOs, they limited the

scope under which the institution would operate or how much credit they would extend to a client. Problems related to liquidity and poor leadership were named by Singh et al. (2021) to be the lead cause for slow growth of financial institutions.

The fourth question required the respondents to elaborate on the types of training implemented for the staff to increase their knowledge of DT-SACCO operations. The types of training mentioned are grouped into three themes, which include mentorship programs, work-related workshops, and on-the-job training. The mentorship programs were noted to operate between the management and the staff. The management was tasked with the mandate to train the staff and equip them with leadership skills. An interviewee, BM7, was directly quoted saying that

"As the current leadership takes control, they are also very certain that they need to mentor potential staff to take the mantle."

An interviewee, BM2, was directly quoted saying that

"It feels more relieving knowing that the leadership of the DT-SACCO is well guarded and will be a going concern."

Such types of training were considered a long-term venture spanning months and years. As supported by Adna and Sukoco (2020), mentorship was the most suitable way of preparing future leaders in the organization.

Furthermore, the respondents in the current study also gathered that the DT-SACCOs organized frequent workshops with the sole purpose of equipping the attendees with knowledge regarding a specific field. This enabled the staff to adopt quickly to technology

and changes of systems and interact with other staff members in the process. There was also on-the-job training where departmental managers offered a more direct approach to staff under him/her. They would train the staff concerning organizational policies and processes to increase their chance of acquiring basic knowledge. An interviewee, BM6, was directly quoted saying that

"It is a standard practice to orient new staff on organizational systems or even the older ones on processes they are not yet accustomed to."

The decision of choosing a training method is mainly based on the availability of resources and institutional policies in place (Berg & Hassan, 2022). Additionally, the study's findings by King'ori et al. (2023) recommended a mixture of both electronic and physical training sessions to maximize time, resources, and the number of staff that would benefit from such a program.

The study also collected secondary data to assess the performance of the DT-SACCOs as shown in Table 4.11.

Table 4.11

Growth Parameters- Secondary Data

No.	Growth Parameters	2020	2021	2022	2023	2024	Mean	SD
1.	Total assets	3.23	3.84	3.88	4.08	4.10	3.83	1.26
2.	Number of Members	3.21	3.68	4.02	3.87	4.11	3.78	1.29
3.	Customer deposits	3.30	3.42	3.62	3.57	3.66	3.51	1.38
4.	Loan book portfolio	2.92	3.01	3.17	3.38	2.40	2.98	1.54
5.	Market share	3.40	3.52	3.64	3.72	3.88	3.63	1.31

The outcome in Table 4.11 points out that total assets, number of members, and market share had attained relatively high average means of 3.83 (SD, 1.26), 3.78 (SD, 1.29), and 3.88 (SD, 1.31), respectively, over the last 5 years. This is interpreted to mean that DT-SACCOs' ability to establish its operations within the scope of Meru County had gained a resounding growth, with more members, assets, and market share improving. Nevertheless, the loan book portfolio's average mean of 2.98 (SD, 1.54) indicates a struggle in ensuring NPLs remain within manageable levels.

The outcome agrees with the opinion of Changamu et al. (2023) on poor management of default rates facing DT-SACCOs. Notably, the dilemma of making decisions about whether to issue new credit to a borrower with less risk assessment, in the midst of piling pressure to make loan sales, has been facing officers within the scope of DT-SACCOs. According to Gupta and Nath (2024), the development of entrepreneurship skills seeking to compete against other financial institutions makes it a compelling task for the officers to determine the level of risk the DT-SACCOs are willing to accept to increase sales revenue.

Therefore, in concluding this section, the findings revealed that DT-SACCOs were able to leverage innovation on its products, technology, and customer-oriented strategies, with a focus on aligning theme with national digital finance goals and international fintech drifts. Notably, limitations such as weak governance and regulatory issues that had been persistent, the study managed to address them through adaptive management, marketing and staff training, to enhance growth.

4.7 Descriptive Statistics of Market Competition

Market competition was the first independent variable, with indicators like risk management, product diversification, market expansion, cost leadership, and teamwork. The descriptive results are provided in Table 4.12, and thereafter the interview results.

Table 4.12

Descriptive Results of Market Competition

Statements N=139	**1**	**2**	**3**	**4**	**5**	**Mean**	**SD**
Implementation of risk management measures	10 (7%)	8 (6%)	58 (42%)	35 (25%)	28 (20%)	3.52	1.34
Existence of different diversified products	0 (0%)	3 (2%)	9 (6%)	40 (29%)	87 (63%)	4.39	0.87
Employees involved in decision making process	90 (65%)	35 (25%)	7 (5%)	3 (2%)	4 (3%)	2.18	1.96
Cost leadership is done	3 (2%)	5 (4%)	6 (4%)	50 (36%)	75 (54%)	4.13	0.90
Staff are duly informed on market trends	65 (47%)	40 (29%)	19 (14%)	9 (6%)	6 (4%)	2.85	1.42

According to Table 4.12, 87(63%) of the respondents strongly agreed and 40(29%) agreed on a mean of 4.39 and an SD of 0.87 that the management had allowed the existence of different diversified products to suit clients' needs. Additionally, 75(54%) strongly agreed and 50(36%) agreed on a mean of 4.13 and an SD of 0.90 that cost leadership was done to promote efficient use of resources. Nevertheless, 90(65%) of the respondents strongly disagreed and 35(25%) disagreed on a mean of 2.18 and an SD of 1.96 that employees were involved in the decision-making process on market expansion. The interpretation of the results is that there were different SACCO products that were based on clients' demands. These products enabled the institutions to develop a competitive market in the financial sector.

The management had made deliberate efforts to ensure that their institutions were recognized as customer-oriented DT-SACCOs for effectiveness in product and service provision. Therefore, to achieve this goal, the institutions had competent experts that specialized in managing costs, hence promoting efficient use of resources. According to Jamaluddin et al. (2023), use of organizational resources in a manner that is efficient requires balancing business demands and response patterns to address the needs. If the response pattern is not yet well developed, excessive use of resources or misappropriation is expected. Notably, any action on resource utilization requires a justifiable reason to minimize waste (Karimi et al., 2024). The results support the dynamic capabilities theory on the basis that the management had developed sustainable methods to utilize internal and external resources in addressing the changing environment.

Nevertheless, the study discovered that the decision-making process on how, when, and where to conduct market expansion did not involve the staff. According to Muteshi et al.

(2024), poor involvement of staff in a decision-making process is linked to low experience and exposure to making informed decisions that can sustain the growth objective of the DT-SACCO. In disagreement, Kihara and Bett (2023) indicated that within the Kenyan context, most roles assigned to the staff are similar to what the management does. The only exception is the supervisory roles, which may be effectively learned with time.

According to Nadzua et al. (2025), making expansion decisions may need to involve employees who may contain information regarding the new market the DT-SACCO is venturing into. This reduces risks and increases revenue projection due to clarity in actionable steps. Additionally, some of the employees have been denied growth opportunities despite having accumulated a wealth of experience from their previous roles in and out of the DT-SACCO. Therefore, not being involved demoralizes them to not give any information that may enable the institution to save on organizational resources.

4.7.2 Interview Results

There were interviews conducted with 7 managers, and their responses are coded as BM1 to BM7. A total of four questions were asked regarding the growth of DT-SACCOs. The first question required them to highlight the types of market competition strategies implemented in DT-SACCOs. Through three themes, the feedback noted included increased marketing initiatives, partnering with other corporations to increase sales, and cost leadership. The DT-SACCO's main strategy was to increase sales through direct marketing of products and services to various potential clients. This was done through the services of sales and operational staff. They took their time to explain and influence the customer’s decisions on organizational products and services. Their wealth of experience

enabled them to become more aggressive and committed towards increasing the total sales of the DT-SACCOs. An interviewee, BM6, was directly quoted saying that

"Sales and marketing is a critical department that is fully supported to ensure we become competitive in the market."

Comparing this finding with Gupta and Nath (2024), increased sales and marketing initiatives enabled the SACCO staff to reach out to community members for more customer numbers and quality savings pools, especially when dealing with group members. Further, the DT-SACCOs were also able to partner with various corporations that would enable increased sales of assets and business accounts, hence attracting mutual benefit with these organizations. The other market competition strategy included the use of a cost leadership approach, which entailed providing various SACCO accounts and loans at suitable charges and rates, respectively. By positioning themselves as cost-efficient institutions, different customers considered them as reliable and effective towards addressing their financial problems (Mbokazi & Maharaj, 2024).

The second question required the respondents to explain how customer service improved the market competition in this SACCO. Based on their responses, two themes were created to represent satisfaction and loyalty. In regard to satisfaction, the customers that interacted with DT-SACCO staff got a chance to have their questions and concerns addressed. Therefore, the presence of customer service officers, whose role was to provide solutions, enabled the members to feel connected with the institutions. They were thus able to feel satisfied with the various services and products issued by a specific DT-SACCO. Continued efforts by the customer service staff to provide solutions in the long term led to loyalty among the clients. This was because less time and resources were wasted by the

customers when faced with a banking problem or a general inquiry. They were only required to make a phone call, send a text message, or send an email for a direct response. An interviewee, BM4, was directly quoted saying that

"There are customers who will never be served by different staff. They mainly conduct all banking businesses through one customer service staff."

An interviewee, BM7, was directly quoted saying that

"Customer service is the front phase of the DT-SACCO where clients' inquiries, complaints, and compliments are provided. This makes the area very important."

An interviewee, BM5, was directly quoted saying that

"In customer service, the DT-SACCO may lose and gain the full trust of the customers. It only depends on what the interaction will be."

Notably, to ensure customer satisfaction and loyalty, consistent communication and discussion are encouraged (Muathe, 2020).

The third question required the respondents to describe how the regulatory measures supported the establishment of growth strategies in DTSACCOs. Unanimously, the respondents revealed that regulatory measures supported their institutions through two themes: transparency and accountability. On the first theme, the study revealed that regulations enabled the DT-SACCO practice of transparent transactions that were within the regulatory framework. Therefore, this improved the client's trust that their invested finances, in the form of deposits and savings, would not be misappropriated. An interviewee, BM6, was directly quoted saying that

"The law is a shield that enables the trust between the DT-SACCO and customers to exist."

Comparatively, Nadzua et al. (2025) agreed that regulations from the government were the only sure way of ensuring that the client's wealth was not embezzled by a few individuals in a SACCO. Additionally, accountability was the second theme where the interviewees indicated that the government held each officer liable for funds they managed. This meant that in case of a loss, the liability was incurred on an individual basis rather than collectively.

The last question required the respondents to explain the challenges experienced in ensuring the market competition was sustained. Various feedback indicated that the DT-SACCOs faced inadequate staff that had quality networks to incorporate new businesses. Therefore, they relied on old clients for referrals, which had average returns. They also noted that the institution experienced staff poaching by large financial institutions. In agreement, employee turnover was a major concern in the SACCO setup, causing skill loss that took time to replace. An interviewee, BM2, was directly quoted saying that

"Employee poaching is a major threat to DT-SACCOs since the best staff are easily absorbed by larger institutions, hence depriving us of top talent."

There were also increased business demands, particularly in the context of technological incorporation in the DT-SACCO. This was a common occurrence, as discovered by a study of Nderitu and Kiiru (2022), in that customers expected more from the institutions in comparison with what other financial institutions were offering in the market. In concluding the section, the results have indicated that DT-SACCOs have been moving

towards improving customer-focused strategies, cost leadership and open governance, in their initiative to align with national digital finance and international fintech trends.

4.8 Descriptive Statistics of Technology Adoption

The study sought to establish the influence of technology adoption on the growth of DT-SACCOs. Indicators such as user involvement, incorporation of ICT infrastructure, communication systems, training programs, and management support were examined. The descriptive results are provided in Table 4.13, and thereafter the interview results.

Table 4.13

Descriptive Results of Technology Adoption

Statements N=139	**1**	**2**	**3**	**4**	**5**	**Mean**	**SD**
Clear communication systems	96 (69%)	28 (20%)	6 (4%)	4 (3%)	5 (4%)	2.20	1.82
Enhanced banking processes	0 (0%)	4 (3%)	7 (5%)	43 (31%)	85 (61%)	4.43	0.85
Present management support strategies	6 (4%)	9 (6%)	73 (53%)	40 (29%)	11 (8%)	3.40	1.39
Training programs for staff	3 (2%)	2 (1%)	18 (13%)	23 (17%)	93 (67%)	4.10	0.96
User involvement	95 (36%)	124 (47%)	69 (12%)	38 (3%)	6 (2%)	3.18	1.47
Monitoring and evaluation of technologies	95 (36%)	124 (47%)	31 (12%)	8 (3%)	6 (2%)	3.56	1.32

A statement with a mean of 4.43 and an SD of 0.85 attracted 85(61%) of the respondents to strongly agree, while another 43 (31%) agreed on banking processes being enhanced due to the incorporation of ICT infrastructure. Table 4.13 also indicates that 93(67%) strongly agreed and 23(17%) agreed on a mean of 4.10 and an SD of 0.96 that there were training programs to increase their technological knowledge for efficiency among the staff. However, 96(69%) of the respondents strongly disagreed and 28(20%) disagreed on a mean of 2.20 and an SD of 1.82 that there were clear communication systems in place to provide feedback on DT-SACCOs' technology.

Based on the outcome, the interpretation was that most DT-SACCOs had incorporated the necessary infrastructure to support ICT, hence making the banking processes more efficient. Additionally, the operations staff had undergone training to enable them to have the necessary skills and knowledge to interact with the adopted technology. Therefore, having the capacity to not only adopt but also train staff has been linked to improved organizational performance by Nalyanya et al. (2021). This is because it leads to increased morale and enables the staff to align precisely on organizational mission and vision. In the long run, knowledge is shared and human errors are significantly reduced.

Comparing the results of Cieslak and Valor (2024), technological advancement in an organization can only be effective if the management is able to orient them on basic interaction to minimize frustrations that may lead to employee resistance to the specific technology in place. In agreement with the resource-based view theory, the incorporation of technology in the operations of the DT-SACCOs enabled the institutions to enhance their internal resources, which are further strengthened by the ICT skills incorporated through training to the employees.

Despite such notable outcomes, the study noted that undeveloped communication structures failed to support employee feedback on the implemented technology. As also noted by Bonsu (2024), organizational bureaucracy works against feedback mechanisms since information is supposed to trickle from the top to lower levels of management. In agreement, Wanjohi et al. (2024) reveal that the disruption caused by the incorporation of technology in an organization may lead to an increased number of mixed feedback, majorly due to poor reception or lack of necessary skills by the staff to interact with it. Therefore, before technological innovation is stabilized, the management may minimize their giving excessive feedback to avoid contradicting information. Nevertheless, Ogutu (2023) notes that the main idea of technological incorporation is to aid in frequent and sure communication between the management and staff. Therefore, increased communication is expected due to enhanced secure methods of interactions.

4.8.2 Interview Results

There were interviews conducted with 7 managers, and their responses are coded as BM1 to BM7. A total of four questions were asked regarding the growth of DT-SACCOs. The first question required them to explain how training was conducted on technology among the DT-SACCO staff. The staff were noted to undergo training through two major themes that included external and internal trainers. The external trainers were experts and consultants in technology incorporated to offer training or installation services to the DT-SACCOs. These experts had a background experience with financial institutions so as to enable the staff to easily blend with the intended technological innovation. Internal trainers included managers within the DT-SACCOs that had adequate knowledge on the application of a specific technology.

They offered training through group meetings or in person within the departments and at the expense of the DT-SACCOs' expenditure. An interviewee, BM3, was directly quoted saying that

"ICT external experts have trained us before, particularly on the AI incorporation in DT-SACCO operations."

A similar method of training was noted by Nguyen et al. (2023), who compared different training workshops within and out of the DT-SACCOs. They revealed that there was minimal difference since, in both cases, the staff were able to easily understand the basic concepts of technology suitable for their operations. Further, Nurudeen and Olumuyiwa (2021) indicated that on-the-job training was mainly used when orienting new staff to the operational technology, while external training in workshops was used to boost knowledge or when there was a change in systems.

The second question required the respondents to describe the measures implemented to enhance employee acceptance of the implemented digital technology. The feedback provided noted that DT-SACCOs used its official channels of internal communication to let the staff know of digital technology in place. They were also trained on how to interact with the technology to reduce errors and increase efficiency. In other DT-SACCOs, they involved representatives of staff in the process to ensure that any suggestions with regard to either an upgrade or a complete overhaul were known by the staff. This also catered to a supportive environment that would increase the interaction pattern between the management and the staff. In comparison, training and increased communication patterns were also

proclaimed by Odero et al. (2022) as causal agents for inclusivity and employee support for a specific technology.

The third question required the respondents to highlight the types of technologies that had been implemented in the last 2 years. The technologies mentioned included the implementation of internet banking, mobile banking, fintech applications to support customers, and customer relationship management systems. An interviewee, BM2, was directly quoted saying that

"Mobile banking is one of the most commonly used technologies by almost every customer with a smartphone."

An interviewee, BM3, was directly quoted saying that

"We launched the internet banking for customers outside the country and were willing to deposit remittances through our DT-SACCOs."

A study developed by Ogutu (2023) found out that mobile and internet banking were some of the major technologies revolutionizing DT-SACCO operations. Another study pointed out the incorporation of fintech applications, which enabled clients to access digital loans from financial institutions through mobile applications (Omwando & Moturi, 2021).

The fourth question required the respondents to indicate the various risks encountered when dealing with different forms of technology in the DT-SACCOs. The risks mentioned were grouped into two themes, which were cyber insecurity and risks emanating from operations. On cyber insecurity, there were hacking complaints from the respondents, who revealed that once the DT-SACCO experienced such forms of threats, customers never felt safe investing

their resources in the organization. Additionally, a successful access by an unauthorized person led to the loss of financial resources that were hard to replace. There were also operational risks, which were brought about through poor ICT frameworks. This caused increased exposure to unauthorized internal or external access to SACCO's files and documents. An interviewee, BM2, was directly quoted saying that

"Cyber threat keeps on advancing, hence requiring more quality resolutions to avoid unauthorized and malicious access of systems.'

In a report by Ruan and Jiang (2024), cyber insecurity issues led to increased organizational inefficiencies and reduced trust since the clients felt as if the staff in charge of security systems were not well trained to contain a cyber threat in the future.

In concluding this part, the study noted that the DT-SACCOs had incorporated fintech, aligned with AI and international trends through boosting efficiencies in banking and empowering the skills of the staff. Previous gaps such as those related in communication and cyber risk, were noted to persist with emphasis being on strengthening feedback mechanisms and in the area of management of risk.

4.9 Descriptive Results of Management Capability

The study in this section aimed to examine the influence of management capability on the growth of deposit-taking SACCOs. The indicators included decision-making proficiencies, engagement of staff through mentorship, efficient operations, quality work culture, and corporate governance. Table 4.14 provides the questionnaire results, and thereafter the interview results are also given.

Table 4.14

Descriptive Results of Management Capability

Statements N=139	1	2	3	4	5	Mean	SD
Management is proficient in their decision-making processes	0 (0%)	3 (2%)	5 (4%)	39 (28%)	92 (66%)	4.28	0.81
Engagement of staff through mentorship is encouraged	8 (6%)	11 (8%)	76 (55%)	24 (17%)	20 (14%)	3.45	1.38
Cooperation between the management and staff has resulted to efficient operations	87 (63%)	35 (25%)	10 (7%)	5 (4%)	2 (1%)	2.59	1.76
Quality work culture has been boosted through respect and integrity	6 (4%)	10 (7%)	81 (58%)	23 (17%)	19 (14%)	3.27	1.44
Corporate governance is consistently practiced	95 (68%)	28 (20%)	11 (8%)	5 (4%)	0 (0%)	2.13	1.85
Management is in constant communication with the banking regulators	9 (2%)	7 (3%)	58 (36%)	44 (47%)	21 (12%)	3.26	1.45
Knowledgeable on all regulations	9 (6%)	7 (5%)	11 (8%)	44 (32%)	68 (49%)	4.19	0.95

Table 4.14 shows that 92 (66%) of the respondents strongly agreed and 39 (28%) agreed on a mean of 4.28 and an SD of 0.81 that the management was proficient in their decision-

making processes. In addition, 68 (49%) of the respondents strongly agreed and 44 (32%) agreed, with a mean of 4.19 and an SD of 0.95, that the staff and management were knowledgeable on all regulations from the government regarding banking practices. Nevertheless, 95 (68%) strongly disagreed and 28 (20%) disagreed on a mean of 2.13 and an SD of 1.85 that corporate governance was consistently practiced in their DT-SACCO.

The interpretation of the results was that the present management team in DT-SACCOs of Meru County portrayed proficiencies in making operations decisions and general direction that the institution would take. The authoritative structure in any organization is considered a building block towards setting precedence on general operations that take place (Kyabarongo et al., 2024). Therefore, a DT-SACCO being led by a group of proficient management teams enhanced their ability to experience growth due to sustainable practices that minimize errors and promote professionalism. According to Kiconco et al. (2023), the decisions made in an organization can only be sustained through reliable, tested, and well-researched practices, as derived from the management.

This culture of excellence was also founded in the DT-SACCO's operations, leading to increased interest in understanding the banking regulations. As revealed by Collis and Anand (2021), the existence of banking policies from the government can only exist and take root if the employees get motivated by the management to learn and understand the regulations. The motivation aspect can be as a result of reward or through mentorship opportunities that exposed the officers to various decision-making processes (King'ori et al., 2023). In support of the dynamic capability theory, the results provide that a leadership that mentored their employees to identify opportunities and turn them to their advantage

led to increased efficiencies in adhering to established regulatory frameworks. Inconsistency in practicing prudent corporate governance was also discovered in the current study. Kurgat et al. (2025) linked poor corporate governance to institutional politics that created loopholes in proper management of organizational resources. This was in terms of failing to follow the organizational policies by staff and the management. Increased negligence within the DT-SACCOs was major evidence of a lack of a strong institutional framework to offer guidelines on the processes and procedures.

4.9.2 Interview Results

There were interviews conducted with 7 managers, and their responses are coded as BM1 to BM7. A total of four questions were asked regarding the growth of DT-SACCOs. The first question required them to explain the different methods used by the management to instigate changes in the DT SACCOs. The methods discussed by the respondents related to the implementation of new policies, developing an innovative culture, and employee involvement in decision-making. Based on these themes, interviewees revealed that managers were equally responsible for developing new policies. These policies facilitated an easier transition from older to new operations, hence a reduction of ambiguity. In addition, the management was also willing to stir an innovative culture that sought to enable employees to be progressively minded and thus adapt to changes effectively. The management team members were also discovered to have applied a tactic of including the staff in the decision-making process. This method enabled the DT-SACCO's staff to contribute their perspective regarding the proposed change. An interviewee, BM1, was directly quoted saying that

"Employee management is such a hard task that it requires different approaches, such as policies and even including them in decision-making, if need be."

Supporting the results, Shkeily and Abdullah (2021) indicated that a working policy framework and employee involvement were commonly used methods by the management in enhancing developments in a DT-SACCO.

The second question required the respondents to describe the various government regulations that had enabled the management to perform their tasks efficiently. The first major quoted regulation was the SACCO Societies Act of 2008. This act related to licensing, regulation, and supervisors of DT-SACCOs. Through such a regulation, the management's conduct was keenly observed as a measure of conducting SACCO operations within the permissible regulations. Further, the second regulation, the Crimes and Anti-Money Laundering Act, 2009, was noted by the respondents to have enabled the management act in integrity. The overall operations in the DT-SACCO were operated in a manner that sought to protect customers' deposits from loss, embezzlement, or waste.

The third question required the respondents to highlight the mentorship programs present for the management to empower employees into leadership. The various mentorship programs that were mentioned were grouped based on departmental themes such as banking operations mentorship programs, credit management mentorship programs, and strategic management mentorship programs. The mentorship programs on banking operations enabled the management to equip junior operations officers with quality leadership skills that sought to enhance their decision-making capabilities when accepting deposits and savings, opening bank accounts, and other front office operations.

The credit management mentorship programs were developed to ensure that the credit officers were equipped with management skills to perform the process of borrower appraisal effectively to distinguish between potential defaulters and non-defaulters. This was a major area that required quick solutions and leadership training to minimize the NPLs within the DT-SACCO loan portfolios. An interviewee, BM4, was directly quoted saying that

"Increased NPLs has pushed the management to mentor officers on leadership and decision-making to differentiate risky and non-risky borrowers."

An interviewee, BM7, was directly quoted saying that

"Operating in a risky business environment required clear solutions to counter the challenges. Credit management mentorship is a program to counter lending risk."

The last group of mentorship programs was in strategic management. The trainees were selected from various departments with the highest potential for being institutional leaders in making decisions. They were thus trained on how strategies were developed and triggers to specific decision-making patterns. This was instrumental in making sure that the DT-SACCO was a going concern (Tashtamirov, 2023). An interviewee, BM2, was directly quoted saying that

"Being in a position to make quality strategies can only be done through experience; hence the need to mentor younger professionals in strategic management."

The fourth question required the respondents to elaborate on the techniques used to ensure that management capabilities were within the acceptable standards in leading DT-SACCOs. The techniques mentioned are grouped into three themes, such as setting clear goals and expectations, risk management, and consistent learning. The technique of setting clear goals and expectations enabled the management team members to understand what was required of them and how to know they had achieved the set targets. An interviewee, BM3, was directly quoted saying that

"Just like everyone else, management requires clarity on what they are to achieve and in what timelines."

According to Mbokazi and Maharaj (2024), clear goals and expectations increased institutional focus and reduced time and resource wastage. The second technique that was described was the risk management by the managers. The technique enabled them to avoid any activities or decisions that would expose the organization to losses or legal fines. Through such measures, the DT-SACCOs were able to propel their growth mechanism to higher dimensions.

In concluding this part, the findings have noted that there had been enhanced management proficiency and knowledge of regulations within DT-SACCOs. This therefore, was an indication that the institutions had addressed previous gaps that were noted. In terms of fintech integration and alignment with AI, DT-SACCOs have ensured that the process of decision making follows the guidelines as per SASRA. In as much as not all have finalized the incorporation, the infrastructural framework and policies, points out readiness in adoption of advanced global fintech trends in the cooperative sector.

4.10 Descriptive Results of Product Innovation

The study aimed to determine the influence of product innovation on the growth of DT-SACCOs. The measured indicators were products released, quality of enhanced products, customer retention rate, customer acquisition cost, and product policies in place. Table 4.15 provides the results, and thereafter the interview results are also given.

Table 4.15

Descriptive Results of Product Innovation

Statements N=139	**1**	**2**	**3**	**4**	**5**	**Mean**	**SD**
Increased new products innovations	0 (0%)	5 (4%)	8 (6%)	49 (35%)	77 (55%)	4.51	0.72
The is a quality assurance department	7 (5%)	10 (7%)	68 (49%)	35 (25%)	19 (14%)	3.43	1.38
Customer retention rate has been high	5 (4%)	7 (5%)	70 (50%)	46 (33%)	11 (8%)	3.54	1.30
Determination of the exact customer acquisition cost	2 (1%)	5 (4%)	10 (7%)	36 (26%)	86 (62%)	4.38	0.87
Products policies have cautioned the DT-SACCO from market shocks	86 (62%)	42 (30%)	8 (6%)	3 (2%)	0 (0%)	2.29	1.82
Products are innovated through known procedures.	6 (4%)	10 (7%)	59 (42%)	48 (35%)	16 (12%)	3.74	1.28

The findings in Table 4.15 show that 77 (55%) strongly agreed and 49 (35%) agreed on a mean of 4.51 and an SD of 0.72 that there had been increased new product innovations in the bank. In addition, 86 (62%) strongly agreed and 36 (26%) agreed on a mean of 4.38 and an SD of 0.87 that the customer retention rate had been high due to consistently innovating products to suit their needs. However, 86 (62%) of the respondents strongly disagreed and 42 (30%) disagreed on a mean of 2.29 and an SD of 1.82 that the DT-SACCO was able to determine the exact customer acquisition cost and the value they brought into the institution.

The interpretation is that DT-SACCOs located in Meru had developed new products founded on innovation. These products were based on the previous customer demands raised in their interactions with the SACCOs. These products enabled customers to remain committed as members of the SACCOs due to increased satisfaction of their financial needs. The same approach was also suggested by Nderitu (2023), who revealed that Meru town' SACCOs had been able to attain agility due to the use of digital marketing on innovated products. It is notable that when an organization such as a DT-SACCO takes their time to develop a product that is customer-centered, they gain the trust of the clients as a financial institution that listens to their recommendations.

According to Equity Bank (2020), other financial institutions such as Equity Bank have been capitalizing on this approach to become the best bank, capturing global attention. Nevertheless, the limiting factor that was noted was that the cost attribute of acquiring and managing customers was not well assessed. This, therefore, was an indication that some of the efforts that were invested in acquiring new customers had low economic impact as compared to the deposits and value of loans extended to them. Comparatively, FSD Kenya (2024) revealed that the process of acquiring new customers based on the present products

was mainly a gamble since some came at a high cost but with low savings, deposits, or credit extensions. To curb such imbalance, Said (2023) noted that the choice to invest in a specific activity with a notion of new customer acquisition needed to be informed by spending reasonable costs uniformly on all potential customers.

4.10.2 Interview Results

There were interviews conducted with 7 managers, and their responses are coded as BM1 to BM7. A total of four questions were asked regarding the growth of DT-SACCOs. The first question required them to explain different procedures used to formulate and implement innovation of various products. The interview respondents pointed out that the management was in charge of formulation while the staff implemented product innovation. Therefore, to see to it that there was consistency, the managers took the responsibility of identifying opportunities in the market through current trends and customer demands. An interviewee, BM6, was directly quoted saying that

"The management keeps vigilance with what is happening around to identify suitable opportunities."

These opportunities were the foundation for generating ideas on how to maximize them (Mweu & Mung'ara, 2021). The strategic management was tasked with quality idea generation that was evaluated and refined to fit with the organizational vision and mission. Thereafter, the management allocated responsibility to the product development experts in and out of DT-SACCOs. These developers came up with a prototype of the intended products. The testing was amicably done under different phases, leading to implementation of the final product by the officers. These officers had a responsibility of raising public awareness to customers and the public.

The second question required the respondents to describe how the management promoted quality measures on products released. The responses on quality measures were in two themes, which included setting quality standards and client engagement programs. On quality standards, the respondents noted that the management set a bare minimum of what should be perceived as a quality standard. It was through this metric that any product developed was assessed for conformity. Furthermore, the customers were also engaged through diverse interactive programs to provide their views on how the product suited their personal demands. An interviewee, BM2, was directly quoted saying that

"The first three months of a new product launch are crucial determinants of whether the customers' needs have been addressed."

Through such types of opinion, the management is able to understand the areas of improvement so that the product is accepted in sustenance of long-term customer demands (Kyabarongo et al., 2024).

The third question required the respondents to highlight some of the product policies in place to support innovation. The various policies mentioned by the respondents are in three themes, which include policies addressing customer demands, policies addressing collaborations, policies that support product innovation, and fact-based decision-making of policies. On the existence of products that were centric to customers' demands, they addressed customer demands and expectations. According to Kuguru et al. (2022), innovative products provided a variety of alternatives that enabled the customers to focus on savings, deposits, and loan needs for personal development. Additionally, there were also other policies that increased collaborations between different customers and the DT-

SACCOs' staff. The expectation from both parties was that each of them had something to offer the other.

The DT-SACCOs' staff were required to provide financial solutions to the customers but at a cost that the clients funded. The decision towards the type of products required to be supported by insightful facts (Karimi et al., 2024). This reduced ambiguous decision-making processes and also encouraged clear timeframes for product development, testing, and implementation. Additionally, innovative products also relied on technological advancements to ease the process of accessing the products. Through such policies, customer support was improved to handle any unforeseen circumstances (Bonsu, 2024).

The fourth and last question required the respondents to elaborate on the challenges experienced in developing and implementing product innovation. It was noted that the market uncertainty and reaction towards the product were major concerns. This was because the provision of a product was not a guarantee that it would be accepted in the market. Therefore, being certain of its reception was not an easy process. Furthermore, the changes in taste and preference of DT-SACCO's customers were also hard to attain, as they kept changing. The informing factor to the changes was due to external influence, market trends, inflation, and the political stability of the nation. Communication challenges were also limiting the process of developing quality products. According to Aila et al. (2021), customers' expectations were only addressed through a clear communication pattern from them to the officers and then the management. If the flow was affected, the information became distorted, leading to the development of different or otherwise unsuitable products (Gaichuru et al., 2022).

In concluding this part, the results have indicated that DT-SACCOs have innovated their products to satisfy customer's needs and improved client retention though digital marketing. In integrating their operations with national and international fintech trends and AI, the results have noted that enhanced customer insights and reduction of barriers to communication could be a possible solution. Therefore, in address to market uncertainty and changing customer preference, the outcome notes on the need to incorporate technologies that support data-driven decisions.

4.11 Hypothesis Testing Through Correlation Analysis

In testing of hypotheses, Pearson correlation was used to examine whether to reject or fail to reject the four null hypotheses that indicated that market competition, technology adoption, management capability, and product innovation did not have an influence on the growth of DT-SACCOs. Table 4.16 provides the hypothesis test outcome.

Table 4.16

Correlation Analysis of Adaptive Capability on Growth of DT-SACCOs

		Growth of DT-SACCOS	Market Competition	Technology Adoption	Management Capability	Product Innovation
Growth of SACCOS	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	139				
Market Competition	Pearson Correlation	.609	1			
	Sig. (2-tailed)	.001				
	N	139	139			
Technology Adoption	Pearson Correlation	.830	.217	1		
	Sig. (2-tailed)	.000	.000			
	N	139	139	139		
Management Capability	Pearson Correlation	.320	.050	.019	1	
	Sig. (2-tailed)	.002	.001	.003		
	N	139	139	139	139	
Product Innovation	Pearson Correlation	.571	.314	.209	.108	1
	Sig. (2-tailed)	.003	.000	.108	.209	
	N	139	139	139	132	139

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

4.11.1 Market Competition

The correlation coefficient value of market competition, as noted in Table 4.16, is $r = 0.609$ at $\alpha < 0.001$ and a 99% significance level. This value was an indication of moderately high influence of market competition on growth. Therefore, the study's null hypothesis, whereby market competition did not have influence on growth, was rejected. In a more overt explanation, the study noted that the ability of the DT-SACCOs to become

competitive in the market was strong enough, resulting in organizational growth. According to Achieng (2021), the emergence of the SACCO sector had set the pace for tough competition with the existing financial institutions. This may have been associated with unique entrepreneurial strategies adopted to ensure that customer numbers subsequently increase over time.

The DT-SACCO has been able to devise a business model that sustains their presence despite the changing business landscape and increasing demands from stakeholders like the government and the customers. In Nairobi County, Waithaka and Odollo (2024) noted that critical growth strategies that caused competitiveness within the DT-SACCOs, such as market expansion, diversification, and cost leadership, had correlations of 0.782, 0.742, and 0.22, respectively. Further, as a way of ensuring digital market competitiveness among SACCOs, Nderitu (2023) noted that social media, mobile banking, and internet banking had positive correlations of 0.743, 0.365, and 0.231, respectively.

4.11.2 Technology Adoption

The correlation coefficient value of technology adoption, as noted in Table 4.16, is $r = 0.830$ at $\alpha < 0.000$ at a 99% significance level. This value was an indication of the high influence of technology adoption on growth. Therefore, the study's null hypothesis, whereby technology adoption did not have influence on growth, was rejected. The outcome is an indication that the DT-SACCOs have strong policies and execution plans towards technology adoption. They had incorporated ICT infrastructure to ensure that there is growth within the departments. Therefore, considering other factors, technology adoption had been prioritized with attention given to the predictive modeling that promoted sustainability of specific technology in banking operations.

According to Aspekt (2024), aligning organizational operations to digitization was a guarantee towards sustainability and increased effectiveness in operations. This is because growth in DT-SACCOs can only be truly achieved if the technology in place aligns with the customer demands and digital outlook in the industry. Comparatively, Rwechungura (2024) found out that technology rating had a correlation of 0.520 on fintech incorporation. Additionally, mobile banking had a correlation of 0.419 with DT-SACCOs' financial performance (Njoroge & Nasieku, 2023). Furthermore, Wanjohi et al. (2024) discovered that financial technology capability had a positive correlation of 0.845 with the growth of Kenyan DT-SACCOs.

4.11.3 Management Capability

The correlation coefficient value of management capability, as noted in Table 4.16, is $r = 0.320$ at $\alpha < 0.002$ at a 99% significance level. This value was an indication of the weakest influence of management capability on growth. Therefore, the study's null hypothesis, whereby management capability did not have influence on growth, was rejected. Similarly, Kihara and Bett (2023) found out that corporate governance had a correlation of 0.477 with Nairobi's DT-SACCOs performance. Contrary to the findings, a positive correlation of 0.822 between projects' governance and the performance of Meru County's DT-SACCOs was established by Njeru (2021). Furthermore, as part of the change management, Nderitu and Kiiru (2022) similarly discovered that leadership had an average correlation of 0.450, while stakeholders such as employee involvement had a correlation of 0.857 on the performance of DT-SACCOs.

4.11.4 Product Innovation

The outcome of product innovation's correlation, as noted in Table 4.16, is r = 0.571 at α < 0.003 and a 99% significance level. This value was an indication of a moderate influence of product innovation on growth. Therefore, the study's null hypothesis, whereby product innovation did not have influence on growth, was rejected. On the one hand, past studies have showcased different results, with a study like Said (2023) finding out that product differentiation had a weak positive correlation of 0.309 on the growth of Kenyan DT-SACCOs. On the other hand, Gaichuru et al. (2022) discovered a positive correlation of 0.460 between product innovation and the performance of DT SACCOs in Meru County.

4.12 Multiple Regression Analysis

Model summary analysis of variance and regression weights are the multiple regression analyses metrics conducted in the study. This is to ensure that the influence of adaptive capability on the growth of deposit-taking SACCOs was exhaustively determined.

A model summary was used to examine to what extent adaptive capabilities influenced the growth of DT-SACCOs, as indicated in Table 4.17.

Table 4.17

Model Summary of the Influence of Adaptive Capability on Growth of DT-SACCOs

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.860[a]	.740	.706	3.14865

a. Predictors: (Constant), Product Innovation, Management Capability, Technology Adoption, Market Competition

In the determination of the percentage influence of adaptive capabilities, regression (R) is revealed by Table 4.17 as 0.860, while R-squared is 0.740, revealing. This indicates that adaptive capabilities such as market competition, technology adoption, management capability, and product innovation, when combined, had a 74% influence on the growth of DT SACCOs. The other 26% was based on other factors not examined in the study.

Further, the study conducted ANOVA analysis to answer the general objective, which evaluated the influence of adaptive capability on the growth of DT-SACCOs. The results are provided in Table 4.18.

Table 4.18

ANOVA Results of the Influence of Adaptive Capability on Growth of DT-SACCOs

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1080.830	4	270.208	96.06	.001[b]
	Residual	379.702	135	2.813		
	Total	1460.532	139			

a. Dependent Variable: Growth of DT-SACCOS

b. Predictors: (Constant), Product Innovation, Management Capability, Technology Adoption, Market Competition

Table 4.18 notes that the significance value is 0.001 and the F-statistic is 96.06. A significance value that is less than 0.05 is an indication that a positive influence of adaptive capability on the growth of DT-SACCO exists. The interpretation is that the incorporation of market competition, technology adoption, management capability, and product innovation led to increased growth.

Additionally, the study had a model which indicated: $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$

Where:

Y = Growth of DT-SACCOs

βi = Coefficients to be estimated

β_0= Constant

X_1= Market competition

X_2 = Technology adoption

X_3 = Management capability

X_4 = Product innovation

e= error

To determine the coefficients of the model, regression weights were computed as indicated in Table 4.19.

Table 4.19

Regression Weights of Adaptive Capability on Growth of DT- SACCOS

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	Beta	Std. Error	Beta		
(Constant)	4.601	1.063		4.400	.000
Market Competition	.490	.183	.485	2.689	.001
Technology Adoption	.176	.082	.174	2.148	.003
Management Capability	.284	.085	.276	3.352	.002
Product Innovation	.307	.123	.300	2.511	.001

a. Dependent Variable: Growth of DT-SACCOS

According to Table 4.19, the coefficient for market competition is 0.490, technology adoption is 0.176, management capability is 0.284, and product innovation is 0.307 at significance values of 0.001, 0.03, 0.02, and 0.001, respectively. It is notable that all the

variables had significance values that were <0.05. This meant that market competition, technology adoption, management capability, and product innovation were statistically significant. Therefore, the model was Y = 4.601 + 0.490X1 + 0.176X2 + 0.284X3 + 0.307X4 + 1.063e. Notably, without the inclusion of the four adaptive capabilities, growth of DT-SACCOs would be 4.601. A further increment of market competition by 1% increased growth by 0.490, at a significance value of 0.001. An increment of technology adoption by 1% increased growth by 0.176, at a significance value of 0.001. An increment of management capability by 1% increased growth by 0.284, at a significance value of 0.001. An increment of product innovation by 1% increased growth by 0.307, at a significance value of 0.001.

Market competition in the DT-SACCOs led to increased growth due to quality risk management measures. According to Waithaka and Odollo (2024), being focused on ensuring market competition enabled the institutions to reduce risky operations and capitalize on opportunities. Additionally, having the capability to differentiate products was also a key stronghold that propelled the growth system in the DT-SACCOs. According to Wawire (2022), the presence of different products in financial institutions was also noted to boost expansion strategies in different markets for increased revenue. Furthermore, incorporated teamwork between the management and the officers led to work efficiency, since all the team members felt that their contributions to the organization were valued.

Furthermore, the technology adoption initiatives in the DT-SACCOs were noted to bear fruit, as far as growth was concerned. It was determined that the ICT infrastructure was present and various employees had undergone training programs to equip them with the necessary skills for interaction in the banking system. According to Tashtamirov (2023),

the existence of such programs with the support of the management promoted clarity of expectations and increased motivation in assigned roles. In such an instance, Shkeily and Abdullah (2021) proclaimed that clarity of operations was one of the indicators of management efforts to involve the employees, particularly in the context of decision-making. Otherwise, the minimal communication system weaknesses may have led to poor execution of tasks within various departments.

Additionally, despite the management capabilities having a weak influence on growth, their contribution was considered significant. This was associated with their decision-making proficiencies as demonstrated through efficiency experienced in the DT-SACCO operations. Additionally, the management capabilities provide a conducive environment for mentorship growth and also a working culture that is splendid. According to Olajide (2024), the existence of experienced management was the foundation for quality organizational structures. These structures make it possible for policies to be established and processes to be deeply rooted in organizational vision and in support of employee motivation in attaining the assigned roles.

What was found insufficient was the inability of the management to fully adhere to the corporate governance in place. It is thus noted that accountability within the management spectrum was lacking, negatively affecting the operations of the DT-SACCOs. The study also noted that product innovation as incorporated in the DT-SACCOs supported growth. This was made possible due to the frequency of release of products that were developed and enhanced as the customers wanted. The existence of quality products was closely associated with various policies in place (Ngoda & Kising'u, 2024).

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The purpose of this study was to evaluate the influence of adaptive capability on the growth of deposit-taking savings and credit cooperative societies in Meru County. The specific objectives assessed the influence of market competition, technology adoption, management capability, and product innovation on the growth of DT-SACCOs in Meru County, Kenya. A mixed-method approach was used in the study to gather quantitative and qualitative data. Further, descriptive survey research design was used in the process of collecting data from the 10 headquarters of DT-SACCOs in Meru County. The respondents included 10 branch managers, 32 senior cash officers, 29 loan department supervisors, 41 cash officers/tellers, and 68 loan officers. Branch managers were interviewed while closed-ended questionnaires were administered to all other respondents.

5.2 Summary of Results

The results provided in sections 5.2.1 to 5.2.5 relate to market competition, technology adoption, management capability, product innovation, and growth, respectively. The questionnaire, interview, and secondary data results are provided in summary form.

5.2.1 Market Competition and Growth of DT-SACCOs

Data collected through questionnaires established that the management had consciously worked to make sure that DT-SACCOs were known as customer-focused in order to provide products and services effectively. To be able to accomplish this, the institutions

employed qualified professionals with expertise in cost management, which encouraged the effective use of resources. However, the study found that staff members were not included in the decision-making process.

Interview replies indicated that marketing campaigns, joint ventures with other corporations to boost sales, and cost leadership were the kinds of market competitiveness tactics used in DT-SACCOs. Customer service also increased market rivalry by enhancing customer loyalty and satisfaction. By increasing accountability and transparency, the regulatory actions also aided DTSACCO's expansion strategy development.

At a 99% significance level and $\alpha < 0.001$, the market competition correlation coefficient value was r = r=0.609. This showed that market competition had a moderately high influence on growth.

5.2.2 Technology Adoption and Growth of DT-SACCOs

Data collected through questionnaires established that the majority of DT-SACCOs had integrated the ICT-supporting infrastructure, hence making banking operations more effective. To ensure they had the skills and knowledge needed to work with the adopted technology, the operations staff had also received training. Notwithstanding, the study found that inadequate communication systems did not facilitate staff input on the deployed technology.

According to interviewees' comments, DT-SACCOs depended on internal and external staff training to develop their technological proficiency. A supportive environment that would improve the pattern of contact between management and staff, training, and the provision of feedback through official channels were further measures used to improve

employee adoption of the digital technology. The DT-SACCOs were already equipped with technology, including customer relationship management systems, fintech applications for customer service, online banking, and mobile banking. However, the operational and cyber insecurity risks were the most common ones that were encountered when working with various types of technology.

At the 99% significance level, the technology adoption correlation coefficient value was $r = 0.830$ with $\alpha < 0.000$. This demonstrated a high influence of technology adoption on growth.

5.2.3 Management Capability and Growth of DT-SACCOs

Data collected through questionnaires established that the management team of Meru County's DT-SACCOs demonstrated competence in deciding on operational choices and the overall course the organization will follow. Any organization's authoritative structure was regarded as a fundamental component for establishing guidelines for overall operations. Notably, a significant indication of the absence of a robust institutional framework to provide instructions on the processes and procedures caused inefficiencies in the DT-SACCOs.

According to the interviewees' comments, the management employed a variety of strategies to bring about changes, such as introducing new regulations, creating a creative culture, and involving staff members in decision-making. Furthermore, the management provided mentorship programs for banking operations, credit management, and strategic management in order to enable staff members to assume leadership roles. Additionally,

risk management, goal-setting, and continuous learning were employed to make sure that management skills met acceptable levels in leadership.

At the 99% significance level, the management capability correlation coefficient value is r = r=0.320 with $\alpha < 0.002$. This showed that management capability had the least influence on growth.

5.2.4 Product Innovation and Growth of DT-SACCOs

Data collected through questionnaires established that Meru's DT-SACCOs created innovative products based on the demands made by the customers in their prior interactions with the staff. Therefore, since their financial needs were better met, these products allowed clients to stay loyal SACCO members.

The management encouraged quality measurements on issued items by establishing quality standards and client involvement initiatives, according to interviewee responses. It was also mentioned that the personnel carried out product innovation, while the management was responsible for creating policies and procedures. Additionally, market unpredictability, shifting consumer preferences and tastes, and communication difficulties were among the difficulties encountered when creating and executing product innovation.

At a significance level of 99% and $\alpha < 0.003$, the correlation result for product innovation is r = r=0.571. This showed that product innovation had a moderate influence on growth.

5.2.5 Growth of DT-SACCOs

Data collected through questionnaires established that a financial institution's performance was positively impacted when its clients were able to relate to its various products, leading

to increased adoption. Additionally, the management's abilities had grown as a result of their interactions with clients, as they persuaded them of the many investment platforms they may want to explore. According to the findings, the entire assets' worth had grown, particularly in light of the management's acquired capabilities over time. The respondents also acknowledged that the loan book portfolio had not improved due to insufficient quality measures put in place to manage borrowers.

Interviewee replies indicated that competitive interest rates, a variety of products, high-quality services, and making it simple to open savings and cash deposit accounts were among the policies in place to encourage more client deposits. Additionally, word-of-mouth, social media, and mainstream media were employed as strategies to increase public knowledge of the DT-SACCO. Additionally, mentorship programs, work-related workshops, and on-the-job training were among the training methods used to improve the staff's operational knowledge.

The secondary data showed that Meru County's SACCO establishment capacity has increased dramatically. Increases in members, assets, and market share were indicators of this. Nonetheless, the average mean of 2.98 (SD, 1.54) for the loan book portfolio indicated that it was challenging to maintain NPLs below acceptable limits.

5.3 Conclusions of the Study

It was concluded that market competition influenced growth positively due to the ability of the management to establish customer-focused operations that were implemented by quality staff. The DT-SACCOs were also able to capitalize on marketing campaigns and partnerships to improve sales. Nevertheless, the decisions made in the DT-SACCOs to

adopt different market competition methods did not involve the staff. This therefore led to increased staff turnover, as they mostly joined other financial institutions that would incorporate their opinion in the decision-making process.

The conclusion made on technology adoption was that it significantly influenced growth. This was mainly because of increased ICT training for staff and integration of infrastructure necessary to support banking systems. The technology adopted included internet banking, mobile banking, fintech applications, and customer relationship management systems. Nevertheless, cyber insecurity and operational risks still persisted, exposing the DT-SACCOs to financial losses, poor reputations, and declined business growth.

It was also established that the management capability had a weak but positive influence on growth. This was mainly due to inefficiencies caused by the absence of a robust institutional framework on how processes and procedures were to be conducted. Notably, the management was competent and updated on various developments in banking operations. Their competence was anchored on learning and development, risk management, and goal setting. Additionally, they offered guidelines on best practices through mentorship programs in banking, credit, and strategic management.

The conclusion made on product innovation was that it significantly influenced DT-SACCOs' growth. This was majorly supported by increased quality products present in the institutions. These products were based on customer demands and established organizational policies and procedures. Nevertheless, the unpredictability of the market and changes in customers' demands negatively affected the consistency in developing innovative products in the DT-SACCOs.

5.4 Recommendations of the Study

The study recommends that to improve market competition, the board of management in DT-SACCOs should consider developing a policy framework that offers guidelines on inclusivity of the staff in decision-making. The policy should provide long-term direction on the quorum of staff needed at any decision-making process, conflict resolution on decisions, and the system of staff training, particularly in determining the quality of decisions made. This aligns with dynamic capabilities theory on the perspective of stressing the need for DT-SACCOs to restructure internal capabilities for continued growth. The staff are also recommended to collaborate with the management through official communication channels in short-term perspective, before making decisions to leave the organization. In terms of practice and policy, the management DT-SACCOs should ensure that staff feedback systems are institutionalized to align strategies with demands from the market

To improve adoption of technology at higher capacity, the study recommends that the DT-SACCO's management should consider recruiting cybersecurity experts. These personnel will be responsible for ensuring that the ICT systems are well secured from intrusion. This aligns with resource-based view theory by emphasizing leveraging internal assets such as ICT infrastructure and employee expertise, for sustained advantage. Therefore, in policy and practice, the DT-SACCOs' management should establish ICT governance and cybersecurity protocols. The staff are also recommended to ensure that they enhance short-term goals entailing confidentiality by having strong passwords that are only known to them. This will minimize unauthorized access to their computers, hence reducing operational risks.

In improving the management capability, the study recommends that the board of management should develop policies that are meant to improve clarity on processes and procedures. This should be anchored on the regulatory framework that guides the entire banking industry in the long-term perspective to promote corporate governance. This aligns with dynamic capabilities theory which underscores the need for the management to note, sense and take advantage of opportunities into growth. In terms of policy and practice, there is need for the management to collaborate with SASRA in promoting transparency by allowing consistent audit. There should be more focus on enhanced risk mitigation measures by the management team members to enhance efficiency in operations and decision-making proficiencies in the short-term perspective.

The study's recommendations on product innovation are that there is a need for the management to invest in current research and development practices. This will equip the DT-SACCOs with both current and expected customers' banking preferences, market shifts, and potential opportunities they can take advantage of, in short-term perspective. This aligns with Schumpeter's Theory of Innovation, which emphasizes on innovation as a key contributory element to economic growth. The management of SACCOs could consider developing customized products that can attract new clients. In terms of policy and practice, the study recommends structured frameworks that will provide directions on the timelines needed to develop products and involve the staff. There should also be increased training for the staff by the management on the development process of products and policy frameworks. The knowledge they acquire during the training will be instrumental towards providing clear background information to customers on the suitability of developed products in the long-term perspective.

5.5 Implication on Policy and Theoretical Development

5.5.1 Implication on Policy

The outcome supports the study to recommend on the need for the management to develop policies to emphasize on how staff can be included in making decisions to improve their commitment level to the organization and take advantage to market competition. If there are policies that encourage staff involvement in decision making, it will enhance cohesion and effective operations. The study recommends that in terms of technology adoption, there is need to give priority to cybersecurity and consistent training in technology, to reduce operational risk exposure. Therefore, the solidification of IT is expected to uphold the reputation of the DT-SACCOs as key financial provider.

In terms of management capability, the results have categorically pointed out the need for explicit institutional policies that are crucial towards banking processes, management of risk, and staff mentorship programs. When such policies are implemented, the management should ensure that they are in line with SASRA's oversight. In terms of product innovation, the findings pointed out the need for established policies that guide on customer feedback mechanism, research and development, as measures to enable the DT-SACCOs effectively adapt to market shifts.

5.5.2 Theoretical Developments

There is need to modify the Schumpeter's theory within the context of cooperatives despite its emphasis on innovation and the key growth enabler. This is because, the findings have proved that institutional governance and social responsibility, play pact in DT-SACCOs which is not the same case in traditional firms. The study also recommends that need for

integration of dynamic capabilities and resource-based view theories with Schumpeter's framework. This is because, it gives an all-rounded synopsis of the how DT-SACCOs are able to combine innovation, management, and management for enhanced growth, while addressing stakeholder's demands.

5.5 Suggestion for Future Studies

In examining the influence that adaptive capability had on the growth of DT-SACCOs, the concentration was in Meru County. Therefore, the replicability of the results can only be used in a similar setting; hence, the need for future studies to consider other counties and regions (geographical expansion). Additionally, since the banking industry also comprises banks and microfinances, a similar study should be conducted to assess the various adaptive capabilities present in these institutions. The study included various branch managers hence future studies could also include regional managers in the study for exhaustive feedback.

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