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ADOPTION OF DIGITAL ALTERNATIVE DELIVERY CHANNELS ON OPERATIONAL PERFORMANCE IN SACCOS: EVIDENCE FROM SELECTED CASES IN TANZANIA

BY

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A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF BUSINESS MANAGEMENT OF MOSHI CO-OPERATIVE UNIVERSITY

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CERTIFICATION

The undersigned certifies that he has read and hereby recommends for acceptance by the Moshi Co-operative University. A research Dissertation titled, "Adoption of digital alternative delivery channels on operational performance in SACCOs: Evidence from selected cases in Tanzania" in fulfilment of the requirements for the award of a degree of Masters of Business Management of Moshi Co-operative University

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LIST OF ABBREVIATION & ACRONYMS

ANOVA	Analysis of Variance
ATM	Automated Teller Machine
CDF	Co-operative Development Foundation
CRDB	Cooperatives Rural and Development Bank
DADC	Digital Alternative Delivery Channels
GEPG	Government
ICT	Information and Communication Technology
LFS ADVISORY	Lincoln Financial Securities Advisory
MNO	Mobile Network Operators
M-WALLET	Mobile Wallet
NBFIs	Non-Bank Financial Institutions
NGOs	Non-Governmental Organisations
OTC	Over the Counter
PoS	Point of Sales
SACCOS	Saving and Credit Co-operative Society
SACCOS	Savings and Credit Cooperative Societies
SCCULT	Savings and Credit Cooperative Union League of Tanzania
SSRA	Social Security Regulatory Authority
TAM	Technology Acceptance Model
TCB	Tanzania Commercial Bank
TCDC	Tanzania Co-operative Development Commission
TPB	Tanzania Postal Bank
TRA	Tanzania Revenue Authority
USSD	Unstructured Supplementary Service Data

ABSTRACT

The current study was on the adoption of digital alternative delivery channels (DADC) on operational performance in SACCOS: evidence from selected cases in Tanzania. The objective of this study was to find out the scope of adoption of digital alternative delivery channels in SACCOS, examine members' experience with respect to digital alternative delivery channels in Tanzania SACCOS, and determine the impact of digital alternative delivery channels on operational performance of the SACCOS in Tanzania. A concurrent research design was used whereas the research approach was a mixed research approach involving quantitative and qualitative data collection. Data were collected through self-administered questionnaires for 281 respondents from 20 selected SACCOS and 7 key informant interviews using an interview guide. Quantitative data was summarised and presented in tables, frequencies, mean scores and percentages tables. The study found that the scope of adoption of digital alternative delivery channels was high with a mean score of 3.78 and a standard deviation of 0.627. Mobile Banking, Wallet/App, Automated Teller Machines (ATM), Internet Banking (IB) and Point of Sale (PoS) were the widely adopted digital alternative delivery channels among the SACCOS in Tanzania. It was also found that users of digital alternative delivery channels in the SACCOS had a good experience on services that are offered by digital alternative delivery channels efficiently. Customer satisfaction after the adoption of digital alternative delivery channels was found with significance (P-Value = 0.001). The adoption of digital alternative delivery channels proved normal variation with SACCOS operational performance and financial performance (p-value < 0.05). It is concluded that, the scope of adoption of digital alternative delivery channels is good, Digital alternative delivery channels user's experience is positive and the impacts of digital alternative delivery channels influences performance of SACCOS. It is recommended that the Tanzania Commission for Co-operative Development (TCDC) should formulate a way to assist small SACCOS to smoothly adopt these digital alternative delivery channels for operational efficiency of their SACCOS in Tanzania. It is recommended that SACCOS should maintain and ensure all customer disputes related to digital alternative delivery channels are attended on time; this will create more confidence in the users. In this regard, speed of services that are offered by digital alternative delivery channels should be kept to the higher side.

CHAPTER ONE

1.0. INTRODUCTION

1.1 Background to the Study

The integration of technological innovations within the financial industry has significantly facilitated the implementation of electronic delivery channels, with the primary objective of improving the provision of services to clients (Ndung'u, 2020; Nyawara, 2019; Tambasi, 2019). The implementation of innovative technologies has greatly enhanced the expeditious processing and dissemination of information. This has resulted in a reduction of operational costs, increased efficiency and productivity, and the ability to reach a broad customer base through various channels, regardless of geographical and temporal constraints. Consequently, these advancements have significantly improved customer satisfaction by enabling the provision of efficient and high-quality services (Mwashiuya and Mbamba, 2020). Likewise, Digital Alternative Delivery (DADC) provides higher efficiency and accuracy due to reduced human errors that may occur during operations (Oreku, 2020). Consequently, scholars have defined the Digital Alternative Delivery (DADC) system as the utilisation of electronic delivery channels to deliver services and products to the customers (Mujahed et al., 2021; Oreku, 2020; Kariuki, 2019). Digital alternative delivery channel basically refers to those channels that extend the reach of services beyond the traditional SACCOS or bank branch operational channel, as a result of innovations in digital technology (Tangi *et al.,* 2021). In this study digital service delivery channels referred to the alternative electronic channels that are used by Savings and Credit Cooperative Societies (SACCOS) to deliver services to their members in Tanzania. These channels include internet, Point of Sale (POS), Automated Teller Machines (ATMs) and Mobile money transfers among others.

The Savings and Credit Cooperative Societies (SACCOS) are financial cooperatives that aim at meeting financial needs of all members, in particular the poor, by encouraging savings and granting loans (Ciruela-Lorenzo et al., 2020). The ownership of the entity is vested in its members, who exercise democratic management over it. Savings and Credit Cooperative Societies (SACCOS) play a significant role in fostering socio-economic development for both members and communities at large. SACCOS facilitate convenient access to financial services, promote savings behaviour,

generate employment opportunities, directly contribute to community development initiatives such as enhancing access to social services, stimulate business growth, and enhance the income and living standards of their members (Ciruela-Lorenzo *et al.,* 2020).

Around the world, financial digital alternative delivery channels (DADC) became popular in the 1980 with banks in the United Kingdom (UK) then the United States of America (USA) in 1983 (Khatoon *et al.,* 2020). Studies in the developed economies indicate that online banking was the most popular channel with more than 70% of the users, the dominance is owed to customers' focus on the value and convenience (Malaquias and Hwang, 2019; Prita *et al.,* 2018). For example, the first ATM was set up in June 1967 on a street in Enfield, London at a branch of Barclays bank. A British inventor named John Shepherd-Barron is credited with its invention (Prita *et al.,* 2018). Thereafter, different technological inventions have been taking place all around the world in the financial sector to include SACCOS (Khatoon et al., 2020).

SACCOS are now in a global challenge of conversion to internet services for use due to market forces from FinTechs. "Fintech" is a portmanteau of the words "financial" and "technology," and it refers to the use of technology to provide financial services (Mention, 2019). Fintech encompasses a wide range of innovations that leverage advancements in software, algorithms, and data analysis to enhance and automate various aspects of the financial industry. These innovations can be applied to diverse areas such as banking, insurance, investment management, payment systems, and more.

FinTechs as one of innovation from market forces refers to financial technologies on internet banking, blockchain, P2P lending, and cloud computing that are not subjective to physical distance and could be accessed easily and at lower cost. These are adoption market opportunities for SACCOS to establish electronic delivery channels aimed at enhancing services, however the extent of adoption is not clear. FinTechs remains a solution for financial inclusion of rural areas where many people are financially excluded (Neufeld *et al.,* 2021). Thus, enables users of financial services located far away from the bank branches to access financial services through digital delivery systems. Studies by Raza et al., (2021) and Arner *et al.,* (2015) explores that, the introduction of FinTech has created a way for all entities and individuals to have access

to all financial products and services at reasonable costs, everywhere at any time thereby supporting livelihood positively.

The adoption of digital services in Africa and other emerging nations has been rather sluggish. However, there has been observed growth in the acceptance of mobile financial services (Gronbach, 2020). Studies by Jebarajakirthy and Shankar, (2021); Souiden et al, (2020); Mori and Mlambiti, (2020) acknowledge that, the accessibility of mobile phones surpasses that of essential necessities such as water and power for a larger portion of the population. Consequently, mobile banking has gained significant traction in Africa as a means to extend financial services to previously underserved individuals. As for the ATMs for example, the highest concentration in Africa to start with has been in South Africa, Egypt and Morocco followed by many other countries in the continent (Ndekwa *et al.,* 2018). In Kenya for example, Mwalimu SACCOS was among the first SACCOS to use ATMs followed by many others (Asmath, 2020). The daily transactions of banks and SACCOS has continuously grown with those institutions that have maintained strong branch networks with a good backup of electronic delivery channels to serve clients who never visit bank counters (Asmath, 2020).

With regard to experience of SACCOS transformation to the use of DADC specifically Using internet, Point of Sale (POS), Automated Teller Machines (ATMs) and Mobile money transfers among others. There remains a silent observation with few on the adoption process, particularly in Kilimanjaro that motivated this study. However, across countries studies show that experience with digital technology affects price, time, knowledge to use the online system and satisfaction of users. Customer's judgement from experience point of view affects their decision on service and quality of digital delivery. Others are empathy and good relationships to ensure available digital goods and services online which affects the confidence of customers (Wanyonyi and Ngaba,2021; Mbugua and Kinyua, 2020; Koori et al, 2018; Bett, 2018).

Tanzania being among the earliest countries in Southern Sahara to undergo massive digital transformation, financial institutions were forced to align with the digital usage in their daily operations and provision of service to their clients (Rawal, 2021; Mori and Mlambiti, 2020; Asmath, 2020). This digital transformation can be witnessed with

the growth and use of sophisticated technology like Government Electronic Payment Gateway (GePG) and increase of internet users. Internet users have considerably grown to more than 30 million according to the Tanzania Telecommunication Authority (TCRA, 2020). According to TCRA (2020), a total of 299.26 million mobile money transactions for example were conducted in September 2020 alone. The huge rise in the number of transactions also implies an increase in value of business for the financial institutions using this digital channel. Rawal (2021) further acknowledges that the amount transacted through mobile wallets and internet banking has increased by 56% during the third quarter of the year 2020.

With the recent transformation of Microfinance Institutions in Tanzania however, the number of SACCOS that have been issued licences to operate by June 2022 were 512 (BOT, 2022). Out of these, it was reported that 42% of SACCOS at different stages had implemented some digital operations. With the same transformation, members dropped from 596,974 in 2020 to 520,819 while outstanding loans increased from Sh422.7 billion to Sh436.4 billion. One reason mentioned by the Bank of Tanzania report (BOT, 2022) is the low rate of usage of ICT and fully fledged digital systems to enhance operations and ease the way non-performing loans are handled among others.

Further studies by Kule *et al,* 2020; Kariuki, 2019; Tambasi, 2018 acknowledge that digitization influence operationalization of SACCOS with greater productivity and efficiency by serving members at best, it help to discover problems, reduces poor loan recovery performance, solves credit project implementation problems which include low service levels, coordination, access and financial recording, increases their Return on Equity and Return on Assets, allow members access services anywhere and anytime, SACCOS staff to serve members from their business premises. However, there is a need to examine the digital alternative delivery channels on operational performance of the SACCOS in Tanzania.

1.2 Statement of the Problem

While there are numbers of studies that have been done on technical and administrative aspects of ICT utilisation by SACCOS in Tanzania (Lyimo and Mbesigwa 2021; Keller, 2021; Ngongo, 2019; Misra, 2021; Rawal, 2021; Mori and Mlambiti, 2020; Asmath, 2020; Mshana, 2020; Mhando, 2018), but they have not revealed the adoption

of digital alternative channels for SACCOS service delivery in Tanzania. There have been complaints raised on DADC usage in SACCOS performance on loans and other service delivery to members, despite the existing barriers of DADC usage efforts nationwide. Studies have shown that the effectiveness of DADC adoption and usage on SACCOS performance to some extent remains unknown and also has not answered the needs of the members (Rawal, 2021; Mori and Mlambiti, 2020).

In addition to that, despite the fact that SACCOS activity has recently increased considerably, the significant growth is lacking and SACCOS as financial institutions are still far from reaching a significant portion of the population that lacks access to digital financial services. There are still reports on several occasions of wrongly allocation of loan, poor outreach, frauds, and misappropriation of loan services in SACCOS and members remain uninformed. Therefore, this study intends to explore adoption of digital alternative delivery channels in SACCOS by using evidence from selected cases in Tanzania.

The widespread use of mobile banking in Africa has been driven by the evolving business landscape and the growing expectations of customers, particularly in reaching the unbanked population, the Tanzanians' SACCOS are supposed to adopt digital technologies and investing in ICT by upgrading network infrastructure and procuring management information systems (MIS) to easy their operations and serve customers at best (Mwashiuya and Mbamba, 2020; Patel, 2020; Kavulya, 2018). Generally, the objective has been to save operating expenses and enhance the quality of the services provided to clients by providing optional channels all the time, achieving high processing speed and accuracy in transaction processing thereby reducing long waiting time and queues adapted from the traditional banking system. Evidence suggests that Tanzania SACCOS have not fully adopted DADC. According to the ICA-Africa report(2020), in Tanzania there are about 6178 registered SACCOS, but there are 218 registered SACCOS adopted at one component of DADC. Likewise, As a consequence of frequent electronic service outages, SACCOS members continue to wait in line, particularly at the end of the month and during school holidays.

Recent studies in Tanzania have concentrated on SACCOS adoption of digital services and customer satisfaction (Mshana, 2020; Mwashiuya and Mbamba, 2020) while others has concentrated on the effects of computerised services on financial performance of

SACCOS (Okumu, 2021; Patel, 2020). However, it is important to understand the status of digital transformation as the business world has moved in that direction. Through this, Tanzania SACCOS may be able to take a positive course of actions to improve performances or maintain good actions currently being undertaken. Studies that have been done in Tanzania are scanty regarding adoption of DADC and their resultant operational performance. This calls for the current study on the adoption of digital alternative delivery channels and operational performance in SACCOS in Tanzania where a significant portion of the population may be still financially excluded. Digitization of SACCOS operations can contribute to financial inclusion but also giving scientific alert to policy makers on how policies may be set to support actions to reach more populations through digital channels.

1.4 Research Objectives

1.4.1 Main objective

The main objective of the study is to explore the adoption of digital alternative delivery channels on operational performance in SACCOS: Evidence from selected SACCOS in Tanzania.

1.4.2 Specific objectives

Specifically, the study is sought to:

i) Find out the scope of digital alternative delivery channel in the selected Tanzania SACCOS.

ii) Examine members' experience with respect to digital alternative delivery channels in the selected Tanzania SACCOS.

iii) Determine the influence of digital alternative delivery channels on operational performance of the SACCOS in Tanzania.

1.5 Research Questions

The study is sought to answer the following research questions;

i) What are different types of digital alternative delivery channels adopted by SACCOS in Tanzania?

ii) What is the usage of digital alternative delivery channels in SACCOS?

iii) Why low adoption of digital alternative delivery channels in Tanzania SACCOS?

iv) What are the member's experience on digital alternative delivery channel in Tanzania SACCOS?

v) How digital alternative delivery channel adoption does affect operational performance of these SACCOS in Tanzania?

1.5.1 Research Hypotheses

H_0 - *There is no significant relationship between DADC and SACCOS operational efficiency*

H_1 - *There is a significant relationship between DADC and SACCOS operational efficiency.*

1.6 Significance of the Study

It is expected that; the findings of this study will expand understanding related with adoption of digital alternative delivery channels in Tanzania SACCOS in improving their operational and financial performance by reducing costs of operations and broadening their scope of revenue sources. Promoting financial inclusion and sustainable economic growth, employment and decent work for all fulfilling the Sustainable Development Goal (SDG 8). Likewise, the study is in line with Sustainable Development Goal (SDG 10) for reduced inequalities; and industry, innovation and infrastructure Sustainable Development Goal (SDG 9). All being global goals set up in 2015 by the United Nations General Assembly (UN-GA) and are intended to be achieved by 2030.

This study will show the extent to which SACCOS in Tanzania have been able to adopt and make use of the digital transformation in selection of best Digital alternative delivery channels components to serve members. The study also will contribute to the body of knowledge in the area of Digital alternative delivery channels by the Savings and Credit Co-operative societies in the country at large. The study also is in support of the National Science and Technology of 1985 for Tanzania. It is from the findings of this study that, policy makers are able to come out with some policy frameworks about the technology adoption in the SACCOS to improve service delivery. Furthermore, this study will contribute to a deeper understanding of the customer experience for those SACCOS already adopting Digital alternative delivery channels and roles of digital transformation as DADC in value creation.

CHAPTER TWO

2.0. LITERATURE REVIEW

2.1 Definitions of the Key Terms

2.1.1 Digital alternative delivery channel

Digital alternative delivery channel basically refers to those channels that extend the reach of services beyond the traditional SACCOS or bank branch operational channel, as a result of innovations in digital technology (Tangi *et al.,* 2021). In this study digital service delivery channels will be referred to the alternative electronic channels that are used by SACCOS to deliver services to their members in Tanzania. These digital alternative delivery channels include but are not limited to Mobile banking, Agency banking, Automated Teller Machines (ATMs), Point of Sale (PoS) and Internet banking.

2.1.2 Digital service delivery channels

Digital service delivery channels are the various online or electronic platforms and methods through which organisations provide services to their customers, clients, or users (Tangi et al., 2021). These channels leverage digital technologies to offer convenience, accessibility, and efficiency in delivering products or services.

2.1.3 Mobile Banking

Mobile banking refers to the use of a mobile device, such as a smartphone or tablet, to access and manage one's banking accounts and conduct various financial transactions. However Mobile banking can also be used in other mobile phones which are not smartphones as well and performs the same services that are found in the smartphone. This is achieved with the use of Unstructured Supplementary Service Data (USSD) code. Both Mobile banking applications (Mobile banking Apps) and Unstructured Supplementary Service Data (USSD) code offers a convenient and secure way to manage one's financial transactions on the go, without the need to visit a bank branch or ATM. Mobile banking can perform services like cash withdrawals, deposits, Funds transfers, Balance Inquiry, Mini statements and Utility payments (Chawla & Joshi, 2019). Same definition is adopted for SACCOS operations in Tanzania.

2.1.4 Automated Teller Machines (ATMs)

An automated teller machine (ATM) is a specialised computer that allows bank clients to complete bank transactions without the need to see a bank representative (Nazaritehrani & Mashali, 2020). In this study, the definition is adopted for SACCOS members to use ATMs without the presence of their SACCOS employees. These ATMs can provide a number of services like cash deposit and withdrawal, funds transfer, Balance Inquiry and Utility payments.

2.1.5 Point of Sale (PoS)

A point of sale, or point of purchase, is where there is a ring up between customers and the sellers. When customers check out online, walk up to the checkout counter, or pick out an item from the stand or booth, they are at the point of sale. The point-of-sale system is the hardware and software that enable the business to make the sales (Rauschnabel et al., 2022). Same definition is adopted for SACCOS members in the study area. These PoS can offer a number of services like accepting card payments, cash deposits and withdraws, balance inquiry, utility payments and funds transfer.

2.1.6 Internet Banking (IB)

Internet banking, also known as online banking, e-banking or virtual banking, is an electronic payment system that enables customers of a bank other financial institution to conduct a range of financial transactions through the financial institution's website (Lin et al., 2020). This definition is also used in this study for the SACCOS members in Tanzania. Internet Banking services shift the powers and authority of the account to the respective account holder/customer. Through this channel customer can perform following services Balance inquiry, generate mini-full account statement, funds transfer, Forex services, electronic payments, requests cheques and utility payments

2.1.7 Savings and Credit Co-operative Society (SACCOS)

SACCOS is referred to as a group of people or small society united together with a common goal of mobilising deposits and disbursing loans to her members. SACCOS are voluntary associations whereby members regularly pool their savings, and subsequently obtain loans which they use for different purposes (ICA, 2017). Same definition will be adopted in the study.

2.1.8 Adoption of digital alternative delivery channels

This refers to migration from the traditional system of offering services to customers to a new digital alternative delivery channel whereby customers are facilitated to be

able to access all the services from anywhere at any time by their financial institutions like SACCOS, banks or Microfinances (Tebeli, 2020). In this study, adoption of digital alternative delivery channels will be referred to as migration from the traditional system usage by SACCOS members to new technologies in the financial market. Traditional system is that members has to visit the SACCOS premises to get the services and Modern system is the one that SACCOS member do not have to visit the SACCOS premises rather can be access all the SACCOS services from anywhere and at any time with the use of digital channels.

2.1.9 SACCOS operational performance

SACCOS operational performances refers to reaching targets in terms of accepting/mobilising deposits from her members and issuing of loans to her members Kariuki (2019). According to this study, operational performances will be referred to as efficiencies in providing convenient and reliable services to clients (members) with no barriers in terms of distance in mobilisation of deposits, withdraws and loan processing as well as at a very minimum cost of operation.

2.1.10 Financial technology (FinTech)

Financial technology sometimes referred to as Fintech describes a new technology that seeks to improve and automate the delivery and use of financial services (Suryono et al., 2020). At its core, fintech is used to help companies, business owners, and consumers better manage their financial operations, processes, and lives by utilising specialised software and algorithms that are used on computers and, increasingly, smartphones. In this study, FinTech will be used to mean the financial technologies that SACCOS in Tanzania are using in delivery of financial services to members and other clients.

2.2 Theoretical Review

2.2.1 Diffusion of Innovation Theory

The diffusion of innovations theory describes the pattern and speed at which new ideas, practices, or products spread through a population. The main players in the theory are innovators, early adopters, early majority, late majority, and laggards. The theory was developed by Rogers to explain the diffusion of the innovation process (Rogers, 2015). The theory advocates that the spreading out of innovation is a process by which, through certain channels, novelty is communicated among the members of a social

system over time. According to the theory, there are four elements involved in the process of idea, practice, or object dissemination: a) it should be classified as innovation; b) it must be communicated through certain channels; c) it must be adopted among members within a social system; d) it must take into account duration or the time factor.

Contrary to other theories like the Technology Acceptance Model (TAM), the Diffusion of Innovation theory is broader and can be applied to various types of innovations, not just technology. TAM, on the other hand, is specifically tailored to the adoption of technology. Diffusion of Innovation theory categorises adopters into groups based on their willingness to adopt an innovation. TAM doesn't explicitly include adopter categories; it focuses more on individual perceptions. Diffusion of Innovation theory considers the complexity of the innovation as a factor influencing adoption while TAM on the other hand incorporates perceived ease of use, which is related to simplicity but not identical (oyelana et al., 2021).

The Diffusion innovation theory acknowledges the internet as the component that influences how members of the community adopt new technology. The stages that are involved in the process include early adopters, early majority, late majority, and finally the laggards. Thus, the process begins with innovation whereby innovation is described in the form of an idea, practice, or object that is perceived as new by potential adopters and should be considered as desirable to adapt. The characteristics of innovation help to explain different levels of the adoption of innovation. The strength of the theory is that; diffusion of innovation theory lies in its applicability as stated by Bakkabulindi (2014). A large volume of studies across multiple disciplines have utilised the theory as a framework; it has yielded similar results across the board, from journalism studies to health communication, thus confirming the diffusion process. However, the weakness of the theory lies in the limitations that it works better with adoption of behaviours rather than cessation or prevention of behaviours. It doesn't take into account an individual's resources or social support to adopt the new behaviour or innovation (Pesl Murphrey, 2000). The theory is relevant in the current study on adoption of DADC as it is assumed that the technology needs to diffuse among SACCOS applications and definitely to the clients who are members to the SACCOS.

2.2.2 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) was introduced by Davis (1985) and being modified in 1986 is one of the most widely used models to explain user acceptance behaviour. This model is grounded in social psychology theory in general and the Theory of Reasoned Action (TRA) in particular (Fishbein, & Azjen, 1975). SACCOS studies assert that beliefs influence attitudes, which lead to intentions and therefore generate behaviours. Correspondingly, Davis (1986, 1989) introduced the constructs in the original TAM to include perceived usefulness (PU), perceived ease of use (PEOU), attitude, and behavioural intention to use. Among the constructs, PU and PEOU form an end-user's beliefs on a technology and therefore predict his or her attitude toward the technology, which in turn predicts its acceptance.

Davis (1989) conducted numerous experiments to validate TAM by using PEOU and PU as two independent variables and system usage as the dependent variable. He found that PU was significantly correlated with both self-reported current usage and self-predicted future usage. PEOU was also significantly correlated with current usage and future usage. Overall, he found that PU had a significantly greater correlation with system usage than did PEOU. Further regression analysis suggested that PEOU might be an antecedent of PU rather than a direct determinant of system usage. That is, PEOU affects technology acceptance (TA) indirectly through PU. The relevance of the TAMs theory in this study is that SACCOS clients need an understanding of the technology behind the use of DADC.

Certain studies assert that TAM may have fascinated more ease and quick research, such that less consideration has been given to the real problem of technology acceptance (Lee et al., 2003). Today, research on technology acceptance is still ongoing, and thus an understanding of the assumptions, strength and limitations of the Technology Acceptance Model is essential for anyone willing to study user acceptance of technology. This explanation becomes relevant for this particular study as DADC may be new to some SACCOS members and particularly with how the variables in the model may be operationalised. The weakness of the model however, some scholars confirm that external variables are mediated by PEOU and PU and that any additional variable contributes little to the explanation of the variance in a system (Granić & Marangunić, 2019). Thus, the external variables provide a better understanding of what influences PU and PEOU, and their presence guides the actions required to influence greater use of systems.

In summary, while TAM focuses on the perceived ease of use and perceived usefulness, other theories like Communication Channel Theory and the Adoption Curve Theory offer different perspectives on technology adoption, diffusion, and fit with tasks. These theories incorporate additional factors such as social influence, communication channels, and task characteristics. Researchers and practitioners often choose the theory or combination of theories that best suits their specific context and research questions. TAM in the current study fits best as it is assumed that, SAACOS and members are only able to use the DADC if they accept the technology through the perceived ease of use but also the anticipated benefits.

Combining TAM and Technology Diffusion Theory provides a comprehensive view of the adoption process. TAM on one hand helps to explain individual-level factors, while Technology Diffusion Theory provides insights into the broader societal and organisational influences on adoption. For instance, TAM is used to analyse the factors influencing individual users' acceptance, while Technology Diffusion Theory is employed in the study to examine how these individual decisions contribute to the overall diffusion of digital service delivery within SACCOS in Tanzania. Thus, leveraging both TAM and Technology Diffusion Theory enhances the depth and breadth of the study on the adoption of digital service delivery, capturing both individual perceptions and the organisational context i.e. SACCOS.

2.3 Empirical Literature Review

2.3.1 Types of digital delivery channels used by SACCOS for service delivery

Digital Alternative Delivery Channels (DADC) are alternative means for providing banking services directly to the customers through which customer can access financial services without visiting a physical branch (Pazarbasioglu *et al.,* 2020; Bilan *et al.,* 2019; Gomber *et al.,* 2018). Kim *et al,* (2018) in their study on Mobile financial services, financial inclusion, and development using a systematic review of academic literature found that, alternative delivery channels which are highly adopted are mobile banking, agency banking, ATMs, Point of Sale (PoS) and internet banking. Likewise, Ziegler *et al,* (2021) in the global alternative finance market benchmarking report put forwards that, alternative delivery channels are the newer methods of carrying on banking and micro finance operations under which SACCOS falls. These digital alternative delivery channels serve as an alternative to complement the existing

delivery channels which are normally through the counters. Ziegler *et al,* (2021) insist that at this stage, it cannot be considered as a replacement to the existing structured delivery channels, but rather as an advanced interface to leverage the use of any service that is also being offered through conventional channels (FINTECH, 2017).

Empirical evidence has indicated that, huge distance to reach financial institutions has been said to be the major obstacle to gain access to financial products and services at affordable costs. Innovations in financial technologies sometimes referred to as FinTechs such as internet banking, blockchain, P2P lending, and cloud computing are not subject to physical distance and could be accessed easily and at lower cost. The FinTechs enables users of financial services to be located far away from the bank branches, providing a promising way to facilitate financial inclusion outside major cities in more rural areas where many people are financially excluded (Neufeld *et al.,* 2021). The introduction of FinTech has created a way for all entities and individuals to have access to all financial products and services at reasonable costs, everywhere at any time thereby supporting livelihood positively (Raza et al., 2021, Arner *et al.,* 2015). The limitation if these studies are general in nature and their findings cannot be generalised in the Tanzania context.

Metzger *et al,* (2019) in their working paper on Migrant remittances: alternative money transfers channels using a regression analysis found that alternative delivery channels have been adopted first by commercial banks like and mobile network operators. Metzger *et al* (2019) further found that commercial banks started using ATMs for both cash deposit and cash withdrawal. The study concluded that there is big potential for banks to operate well using digital platforms. This study however was focused on commercial banks and its findings cannot wholly be relevant for SACCOS in Tanzania. The current study is focused on the adoption of digital alternative channels for SACCOS which produces results that are very specific to SACCOS operation.

Echew *et al,* (2021) in their study on financial inclusion in Ethiopia using a correlation analysis found that, digitization of products and services offered by SACCOS is a direct result of digital transformation. Echew *et al,* (2021) further argue that digital transformation has transformed the finance sector and become a not an option to SACCOS. Likewise, Tambasi (2019) in his study on the influence of electronic delivery services on customer satisfaction in Kenyan SACCOS using a regression analysis found that there was significant use of technology to manage their operations

digitally. With that regard, members can normally send their statutory contributions via mobile wallets, apply for loans online and get the amount online, manage loans and other records automatically and maintain account books. The two studies however, their focus was on financial inclusion while the current study is on the adoption of DADC in which the findings and applicability of the findings could be different.

2.3.2 SACCOS Members' experience on the use of DADC

Researchers in customers' experience on service delivery acknowledge that the monetary cost of products or services is what is given up or forgotten to obtain it (Maina *et al.,* 2020; Kariuki, 2019). Thus, in studies on related topics, price has often been conceptualised and defined as a sacrifice (Maina *et al.,* 2020). There are three components to the concept of price: objective price, perceived nonmonetary price, and sacrifice. The objective monetary price (simply put, the amount of money paid for a product) is not equivalent to the perceived price (that is, the price as understood and recorded in the mind of the consumer) since consumers do not always know or remember the actual price paid for a product. Instead, they encode the price in a way that it is meaningful to them (Kariuki, 2019). In the current study, the price is referred to as a cost of using DADC in access and purchase of services but now specifically in the study for the SACCOS in Tanzania.

Bett (2018) in her study in digital disruption in the financial service industry: a case of Afya SACCO in Kenya using a descriptive statistic found that, there is a relationship between price including time, power supply, internet networks, knowledge to use the online system and satisfaction on digital service delivery channels used. Bett (2018) research findings have further indicated that price is one of the determinants of service delivery and efficiency as viewed from customers' point of view (experience). When customers were asked about the value of services rendered, they consistently considered the price charged for the service (Bett, 2018). In those cases, in which consumers did not consider price in forming their judgments about the quality of service, it was generally because they lacked a reference price as also said by Mbugua and Kinyua (2020). Still, though, this group ranked price as an important factor when it came to their overall performance on digital service delivery channels by their SACCOS. The current study is done in Tanzania in which customer experience may be different due to the business environment and other factors affecting customer experience in the SACCOS context.

Koori *et al.* (2018), in their study on the impact of social media usage on organisational performance of SACCOS in Kenya using a regression analysis found that building a good relationship with the customer is one of the key elements of measuring customer experience in service delivery. Koori et al, (2018) research findings shows that empathy plays an important role when dealing with customers online. Addressing a SACCO member by his name, knowing what digital service delivery channel he used and offering new options to his taste, makes him feel important and that the business has thought about him and his needs. SACCOS have adopted various service quality channels and relationship-building initiatives designed to give members a reason to do business with their societies as also found by Mbugua and Kinyua (2020). However, this study was focused on the usage of social media platforms by SACCOS members while the current study is focused on the total adoption of DADC by SACCOS in Tanzania. Findings of the study must be different due to the focus of the two studies.

A study by Wanyonyi and Ngaba (2021) on digital financial services and financial performance of SACCOS in Kakamega County, Kenya using a correlation analysis found that, quality product or service delivery must have an acceptable amount of reliability; that is the product/service must perform its intended function over its intended life under normal situations and operating circumstances. Most consumers are reluctant to buy digital goods and services online because they do not have enough information to be confident with their purchases (Wanyonyi and Ngaba (2021). The study findings further put forward that, one of the reasons that many SACCOS members would like to use the counters is the unreliability of the on-line service when paying for their statutory fees or applying for a loan. However, if a service proves to be reliable, then members will use it and become satisfied with the delivery channel. The current study was done in Tanzania in a totally different environment of which findings also may be different.

2.3.3 DADC and operational performance of service delivery

Tambasi (2018) in his study on loan recovery for SACCOS in Kenya using a descriptive statistics identified two problems as major causes of poor loan recovery performance: firstly, credit project design problems include debt versus equity, realism versus aspiration (how realistic the projection of the project designer is), expected value versus dispersion (detailed consideration of the variety of results which occur in the field), bookkeeping, convenience versus borrower cash flow patterns, collection

mechanism, institutional scope or range of services offered and interest rates. Secondly is about credit project implementation problems which include low service levels, coordination, access (i.e. information problem and lack of decision-making experience in lending to specific target groups) and financial recording. If SACCOS had been using digital alternative channels, most of the problems mentioned could have been discovered earlier enough for them to solve them. Things like ageing of debts could have been easy to determine non-performing loans (NPL). The study by Tambasi (2018) further suggests that the best alternative for the SACCOS to perform well and serve members at best is to digitise the different operations. However, this study did not come out with findings on the adoption of DADC and operational performance of SACCOS in Tanzania. The current study looked in the adoption perspective.

Sacco *et al.,* (2021) in their study on Sustainable digitalization: using a systematic literature review to identify how to make digitalization more sustainable found that, digitization comes with greater productivity and efficiency in managing operations in a SACCOS. For instance, credit committee members in most cases are not very effective in collecting loans that are overdue. This may be due to a number of reasons such as inadequate funds to make follow up, lack of (fuel and) transport facilities by loan officers and poor timing of borrowers e.g. in rural areas where people may be going to work in their farming and other livelihood activities. This is evident as you may mostly find that in most SACCOs, there is a large amount of loan issued to members but the rate of recovery is very low. To what extent the loan/credit screening variables are effective in determining one's capacity to borrow/qualify for the loan? e.g. asset/ collateral, guarantors, group guarantee, savings level, deposit, age, education, experience in conducting the business, the alternative source of income and sex. Even if all these criteria are being followed before issuing loans, the weakness in supervisory and loan committee members to make effective loan provision processes and follow-ups create a problem. The ICA (2005) showed that, organisation of co-operative credits to individuals depends on the way the loan is used and the regularity with which it is repaid. The borrowers have to show the reason for loans and be evaluated by the committee before issuing the loan. The conflicts usually arise as some members want to take their voluntary savings or emergency loans then they find there is inadequate or no funds at that time to meet their needs. This study however used a systematic literature review of the study done by others in the study area while the

current study uses primary data to assess the adoption of DADC on performance of the selected SACCOS in Tanzania.

Kule *et al,* (2020) in their study on credit management systems and financial performance of savings and credit cooperatives (SACCOS) in mid-western Uganda using a descriptive study found that, for SACCOS to be sustainable, members ought to be obtaining value. From the assessments made as well as previous studies done on this subject, digitization increases their Return on Equity and Return on Assets (Kule *et al.,* 2020). Equally importantly, their study found that integration with mobile money is one of the biggest drivers of sustainability as members can easily access services anywhere and anytime. These findings are similar to that of Byaruhanga (2019) who did an assessment of financial sustainability of SACCOS in Uganda: for the Uganda Revenue Authority Staff SACCO (Doctoral dissertation, Makerere University) and found that when a member relocates from the primary SACCO location, they do not have to worry about an interruption in the access to SACCO as their institutions' products are digitised. This study came out with findings on the use of mobile money alone. The current study looks at multiple digital platforms adoption in relation to the operation of the SACCOS in Tanzania. This means that the findings of the current study is more than mobile money usage.

Likewise, Kariuki (2019) in his study on effects of adoption of technology on performance of deposit taking SACCOS in Kiambu County, Kenya found that, closely allied with the subject of members obtaining value, digitization makes it more convenient for members to receive services. Convenience has been brought about due to mobile applications that allow SACCOS staff to serve members from their business premises (Kariuki, 2019). Furthermore, Adoption of the electronic process, a typical workday can be reduced by as much as half the time that was normally used to accomplish the tasks. Sacco *et al.,* (2021) further acknowledge that, the main driver for this is the fact that tasks such as verifying/making/doing reconciliations (or reconciling accounts); generating reports and processing transactions can be done with a single button click. With increased efficiency comes the ability to quickly comply with regulations. This study was focused only on deposits using the digital platforms while the current study is focused on more usage of the digital platforms for SACCOS in Tanzania.

2.4 Conceptual Framework

The conceptual framework discusses the impact of adoption of digital alternative delivery channels to the operational performance of SACCOS which will be used in this study. The discussion at conceptual level where the key indicators are studied and specify their impacts to SACCOS operational performance. The linking has several merits such as showing the boundaries of investigation to guide the researcher. The indicators (Parameters) for the adoption of DADC are usage of digital alternative delivery channels, member's experience on the digital delivery channels in service delivery by the SACCOS and the extent of adoption of digital alternative delivery channels.

Figure 2.1: Conceptual Framework on Adoption of DADC on Financial Performance of SACCOS

Independent Variable   Intervening Variables   Dependent Variable
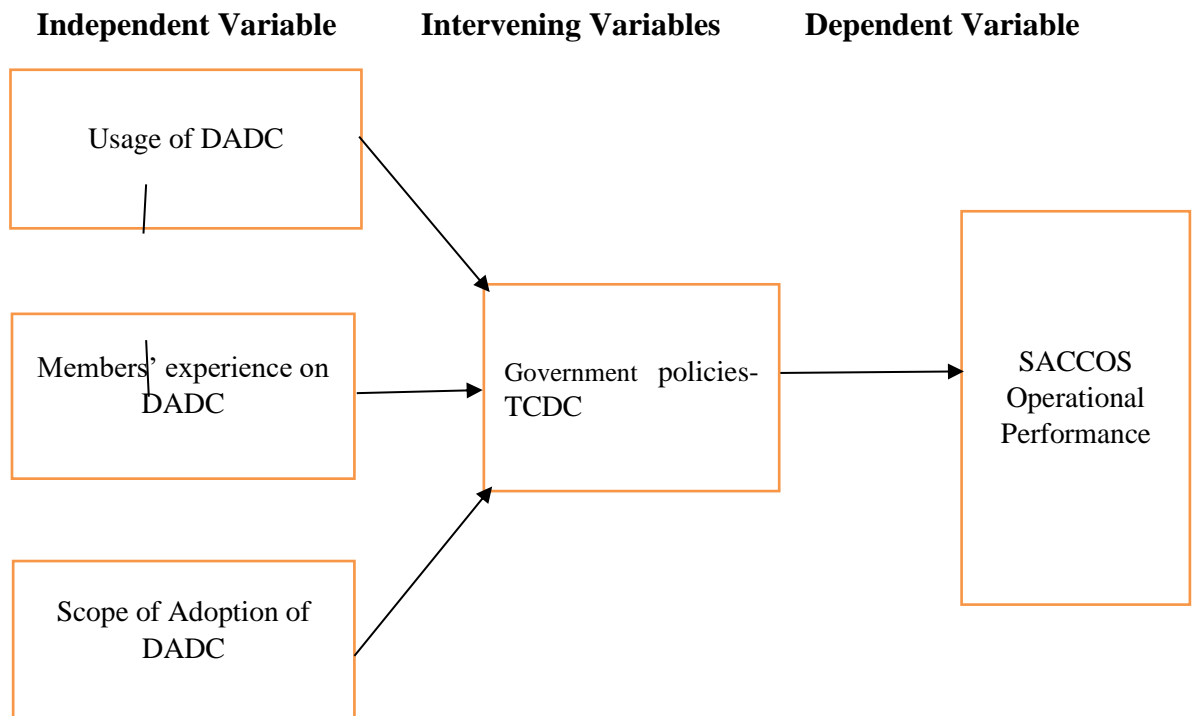
Figure 1: Conceptual Framework

Source: Researchers' own Construct (2022)

The relationship between the dependent and the independent variables are mediated by the intervening variable where in this case are the government policies and the Tanzania Commission for Cooperative Development (TCDC). When the two intervene positively to the adoption of DADC it is expected that the SACCOS operational

performance improves while if they affect the adoption negatively, then the operational performance for the SACCOS also is expected to be negative.

CHAPTER THREE

3.0. RESEARCH METHODOLOGY

3.1 Overview

This chapter covers the methodological part that was used in this study. Based on the description of the studied objectives, the study developed knowledge based on the positivism philosophy that the researcher and the object of inquiry are independent. Moreover, the justification of the methodology chosen is explicitly described on the research design, area of study, population, sample size, sampling and sampling procedures, variables and measurements, data collection instruments and analysis undertaken over the studied phenomenon.

3.2 Research Design

In this study, a cross-sectional research design with a mixed approach was used to explore adoption of digital alternative delivery channels and operational performance in Tanzania SACCOS. Cross-sectional research design is quicker and more cost-effective than longitudinal studies which require sustained effort and resources over an extended period. The design also helps studies to be completed in a shorter timeframe to provide a snapshot of a population at a specific moment in time. This can be valuable for understanding the current state of affairs, assessing prevalence rates, or identifying patterns or trends.

Both qualitative and quantitative data was collected for integration and triangulation. This approach aims to enhance the overall validity and reliability of the research findings by using multiple sources or methods of data collection and analysis. Quantitative approach was used to represent data in mathematical calculations, percentage and computations that gives concrete translation of a situation in the study whereas qualitative data was used for narration to complement the quantitative data with more explanation of the issues that could not be captured in numbers. This research approach was used to make it easier to capture respondent's personal experiences to gain deeper and clearer understanding (Siame, 2020).

3.3. Geographical Coverage

The study was conducted in Moshi and Dar es Salaam, Tanzania for selected cases of SACCOS. The SACCOS included in the study from Kilimanjaro are Wazalendo, ELCT ND, TPC, KCMC Workers, Karanga Parish, Moshi Municipal Teachers,

Ng'ambo, TRA, Muungano Kikavu Chini and Majengo Parish. Dar es Salaam SACCOS included Wazo Hill, CRDB Workers, TCC, Urafiki, Kiluvya Lutheran Church, TANESCO Workers, TCRA, IFM Workers, Mount Kibo, and Muhimbili Saccos Ltd. The selection of the study areas was influenced by several justifications. The first justification was based on the presence of a large number SACCOS in the study areas (TCDC, 2022). This gave an excellent opportunity to collect the required data in Kilimanjaro and Dar es Salaam. The second justification was the researcher's accessibility to the respective SACCOS concerning the subject matter which simplified the exercise of gathering data within a short period. Ghauri (2022) recommended that the study must avoid selecting the places with no or limited possibility of obtaining the required information for the study. Dar es Salaam and Kilimanjaro are among the areas that have adopted technology in operations of SACCOS in the country making it a suitable choice for the study (NBS, 2022). The familiarity of the geographical areas also was another reason for a choice of the study area; this made the data collection process to be smooth and successful.

3.4. Population, Sample and Sampling Techniques

3.4.1. Population

According to Kothari *et al,* (2022), the term population means an entire group of individuals, events or objects that have common observable characteristics. It refers to all elements that meet certain criteria for inclusion in a given universe. The population for this study was all SACCOS in Tanzania which were 2 541 in total with active members being 1 218 661 according to the Tanzania Commission for Cooperative Development (TCDC, 2022). However, the sampling frame included only the population of the 20 selected SACCOS in the two regions, 10 being those that have adopted DADC with 10 that have not adopted ADC in the study areas.

3.4.2 Sample size

While doing scientific study a researcher wishes to cover the whole population, but due to size may become difficult or impossible for a researcher to cover the whole population as a result the researcher is required to select a sample from the whole population. The nature of this study required only 20 SACCOS randomly selected from Dar es Salaam and Kilimanjaro regions. The sample size was 384 determined using the formula of Fisher, Mayland & Burns (1991) for population greater than 10 000 calculated as:

$$n= Z^2dq/ d^2 \quad \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(1)$$

Where:

 n—The desired sample size.

Z—The standard normal deviation, set at 1.96, which corresponds to 95 percent confidence level.

p—Skewness level estimated at 50 per cent. q—1.0 – p.

d—the degree of accuracy desired,

here set at 0.05 corresponding to the 1.96.

In substitution, $n = (.962)^2 \times (0.5)^2 / (1 - 0.5) = 384$

However, the number of participants who were able to be reached during the study were only 281 respondents representing 73.2% of the expected number of respondents due to a number of reasons including non-availability at the time of the study. The response rate was considered enough for the study to proceed.

3.4.3. Sampling procedures

After the sample size is determined, the study then uses proportionate sampling technique to select the participants for the study from each region and each SACCOS under the study. This sampling technique is important to balance the number of participants for the two regions selected but also for the participating SACCOS in the study (adopters and non-adopters of digital alternative delivery channel). Managers, Heads of ICT (for the adopters) and Chairpersons of the respective SACCOS boards were used as key informants. Members from each selected SACCOS, Members from SACCOS that adopted DADC were those who have been in their SACCOS before and after adoption of DADC. Respondents were obtained randomly from those who visited the SACCOS and asked them for some minutes to respond to the questionnaire. This is because they were assumed to understand better the situation of the traditional service delivery approach and the current digital alternative delivery channels to service delivery. The proportion of the sample size is as indicated in Table 3.1.

Table 3.1: Sample Size

Group	Adopters	Non-adopters	Total
Number of Respondents	178	103	281

3.5. Data Collection Tools and Methods

The following data collection methods and tools were used to collect data from the respondents and the key informants:

3.5.1 Questionnaire

A questionnaire is an instrument of data collection from individuals using a formally designed schedule of questions (Veal, 1997). The method was selected because it gives the respondent sufficient time for reading or the investigator to help in understanding the questions and answer it freely. This method helps to collect the needed data in a short time and from different respondents. Kombo and Tromp (2006) asserted that the questionnaire is a research instrument that gathered data over a large sample and Kothari (2004) added it is free from bias of the interviewer.

In this study, a structured questionnaire was used to collect primary data. Structured questionnaires require a lower cognitive load on the respondents; they reduce the amount of thinking that a respondent needs to undertake to complete the task. This generally leads to higher response and more accurate data. Additionally, they are easier for the researcher to code and analyse. The study used questionnaires as one of the techniques for primary data collection. The questions in these questionnaires were designed purposely, to give answers to the research questions bringing awareness of the problem arranged according to the study themes.

3.5.2 Key informant interview

The purpose of key informant interviews is to collect information from a wide range of people including community leaders, professionals, or residents who have first-hand knowledge about the community. Key informant interviews are qualitative in-depth interviews with people who know what is going on in the community. The key informant interviews were used to supplement data or information about the respondent's personal characteristics and environment which is often of great value in interpreting results (Kothari, 2004). Key Informant Interviews were used specifically

with five (5) Board members, and three (3) managers of the SACCOS. This technique was valid and very effective for the researcher to gather additional data that were collected by asking probing questions as well as making follow-up to clarify on answers provided by respondents. The interviews were held personally by the researcher on the problem in question and took about 25 minutes each after confirmation of the interviews appointment by the targeted interviewees.

3.6 Validity and Reliability

3.6.1 Validity

The research adopted a content validity where a measuring instrument runs satisfactory analysis of the topic under the study, and sample of the investigated item to be considered by drawing significant and valuable inference from score on instrument (Crew, 2003). Content validity is essential for ensuring that assessment tools are meaningful, relevant, and accurately measure the construct or content they are intended to assess. It plays a fundamental role in establishing the overall validity and credibility of measurement instruments. The literature in the different themes of the study was read so that the contents are well covered. The instrument was then validated by the supervisors and specialists at the University to enable the content to address the purpose and avoid ambiguity further in the study.

3.6.2 Reliability

The reliability of data minimises errors and biases in research. To ensure reliability, a pilot study was done as the main technique of ensuring reliability of the data collected, documenting research procedures as suggested by Yin, (2009) cited by Magembe, (2011) to achieve reliability. A Cronbach Alpha Coefficient to assess the reliability or internal consistency of a set of measurement scales or items in the questionnaire was done. An alpha coefficient of 0.76 was obtained indicating that the questionnaire was strong enough to be used in the study as suggested by Yin (2009). Then, a test and re-testing of instruments to the segment of respondents before the actual study is undertaken was also done to see that if some items are removed or changed what could be the reliability of the instrument. Comments that were obtained were considered in perfecting the instrument and being used for the entire study.

3.7 Data Analysis Procedures

Data was first sorted for accuracy and completeness, summarised in a meaningful way and then entered into computerised software; the Statistical Package for Social Sciences (SPSS) analytical package. The interpretation was in descriptive and inferential statistical methods in respect to the main variables captured according to objectives of the study. Quantitative and qualitative data from the study were analysed and presented in the form of tables, frequencies and percentages. While in some cases, inferential statistics was done to come out with concrete findings.

The Analytical model is presented objectively for the purpose of linking the independent variables and dependent variables following stated research objectives as follows: The first objective aimed to find out the scope of digital alternative delivery channel in SACCOS. Descriptive statistics was employed to identify different types of DADC; their frequency usage, reasons for adoption. The description involved DADC such as ATM (Automated Telling Machine); IB (Internet banking)/Electronic wallets; SACCOS Agency /Merchant; Mobile Banking, Wallet/App; E-wallet (Prepaid cards, Store cards); Point of Sales (POS); Cash deposits boxes; Customer call centre / Interactive Voice Response); Mobile Wallet (SACCOS having MPESA, TIGO PESA, AIRTEL MONEY, HALOPESA) account; Mobile Application (Mobile App for Android or IoS); and Merchant (*Lipa Namba*).

In the second objective which is on exploring members' experience with respect to digital alternative delivery channels in Tanzania SACCOS. Analysis follows the responses from the interviewees were collated, compared and cross-checked to determine particularly the experience with the members on the performance of the digital service delivery channels and the general environment in which the SACCOS strives in the digital service delivery.

Third objective, to determine the impact of digital alternative delivery channels on operational performance of the SACCOS in Tanzania. Impacts of the DADC was analysed through Analysis of Variance (ANOVA) and a regression model being run to further test for the significance of the independent variables on their effects on the performance of the SACCOS.

H_O – Impacts of Digital Alternative Delivery Channels have no significant influence on operational performance of SACCOS.

$$PF = \beta_0 + \beta_1 LA + \beta_2 MT + \beta_3 BI + \beta_4 CD + \beta_5 CW + \beta_6 BP + \beta_7 SP + \varepsilon \ldots \ldots \ldots (2)$$

Where;

LA = Loan Application,

MT = Money Transfer,

BI = Balance Inquiries,

CD = Cash Deposits,

CW = Cash Withdraws,

BP = Bills Payments,

SP = Statutory Payments.

β_i = are coefficient of independent variables

β_0 = the constant term

ε = the error term which stand for the unexplained variations in the model

Table 3. 1: Table for Variable Definition and Meaning

Variable	Value	Definition	Units
Performance	PF	Numerical	Increase in deposits and loans	T. Shillings
Loan application	LA	Numerical	Increase of share capital	T. Shillings
Money transfer	MT	Numerical	Increase in income and Profit	T. Shillings
Balance enquiries	BE	Numerical	Current Account	Frequency
Cash deposits	CD	Numerical	Current Account	T. Shillings
Cash withdraws	CW	Numerical	Savings Account	T. Shillings
Bills payments	BP	Numerical	Consultations and Training	T. Shillings
Statutory payment	SP	Continuous	Current Account	Units

3.8 Ethical Considerations

The study was taken with conscious effort to make sure that top confidentiality and protection of rights of all participants are observed throughout the period of the study. Thus, the ethical considerations were based on the principle of voluntary participation of the respondents where nobody was coerced to participate in the study. Additionally, creation of awareness on the significance of the study was explained to participants of the study. Therefore, participants were fully informed about the procedures, confidential issues and any potential risks involved in the study based on its requirement for the fulfilment of academic studies to enable the participants to give their consent and goodwill to participate. Likewise, participants were assured that no information received will be made available to anyone who is not directly involved in the study. The questionnaire was also not be marked in any way to provide any identification of the respondents

CHAPTER FOUR
FINDINGS AND DISCUSSION

4.0 FINDINGS AND DISCUSSION

4.1 Introduction

This section presents data that was obtained in the course of the study, the data analysis and results obtained. Furthermore, findings and discussion is presented from one objective to the other. Deductions of meaningful explanations relating to the research findings are presented to put the direction of the findings.

4.2 Socio-demographic Characteristics of Respondents

4.2.1 Sex distribution of respondents

This study involved 281 respondents who participated in the survey of adoption of digital alternative delivery channels in selected SACCOS in Tanzania. The study participants included SACCOS managers and members from both adopted and non-adopted SACCOS. Tables below present the results.

Table 4. 1: Gender of Respondents (n=281)

Variable	Frequency (n= 281)	Percent (%)
Male	188	66.9
Female	107	38.1
Total	281	100

Results from Table 4.1 show the respondents general information about their genders. The information has been summarised in Table 4.1 where 281 respondents from 20 selected SACCOS who participated in the study indicated that the majority 188 (66.9%) were male while 107 (38.1%) were female. This implies that a significant number of the survey participants from the selected SACCOS were male than their female counterparts. This may be attributed to the selection of the participants which involved certain targeted respondent's i.e, SACCOS members. Gender of the

respondent was important to be captured in this study so as to assess the involvement male and female members in the studied SACCOS.

Table 4. 2: Age Brackets

Variable	Frequency (n =281)	Percent (%)
19 – 30	92	32.74
31 – 40	84	29.89
41 – 50	76	27.04
51 and above	29	10.32
Total	281	100

Table 4.2 shows various age groups of the study participants in the digital alternative delivery channels in the study area. From the study findings, it is evident that the young age group, age bracket 19 - 30 were the majority 92 (32.74%) of the respondents followed by the age bracket of 31 – 40 years who were 84 (29.89%). The much older age group bracket who were between 41 – 50 years of age were 76 (27.04%). The distribution of age brackets and the results implies that there is a good distribution of middle age group and elder group. This age distribution helped the study assess the decisions that can be made based on their age range and distribution. Having a majority of groups with young and middle age implies adoption of digital alternative delivery channels is likely to be simpler than the older groups. The measures of the SACCOS adoption to digital alternative delivery channels may have compelled users to adapt the change in their daily routines, making them more aware of their surroundings and thus being able to manage the immediate situational change.

For those SACCOS adopted digital alternative delivery channels, this young age and middle age group distribution have facilitated invention of other new simpler digital alternative channels.

Table 4. 3: Education Level

Variable	Frequency (n= 281)	Percent (%)
Master	67	21.84
Postgraduate Degree	51	18.15
Bachelor Degree	103	36.65
Advanced Diploma	31	11.03
Diploma	15	3.34
Certificate	11	3.91
No formal Education	3	1.07
Others	0	0.00
Total	281	100.00

Table 4.3 shows the distribution of various levels of education for the respondents who participated in the study. The results show that respondents with bachelor degrees were the majority 103 (36.65%) among respondents followed by those who have Master degrees 67(21.84%). Respondents with Postgraduate degrees, Diplomas and Certificates were 51 (18.15%), 31 (11.03%), Diplomas 15 (3.34%) and Certificates 11 (3.91%) in each group respectively. From the results of the study it can be summarised that, a large group of respondents are educated enough to use the digital alternative delivery channels in the study areas be the SACCOS staff or members for both the adopter and non-adopters of the studies SACCOS.

Table 4. 4: Experience in Adoption of Digital Channels

Time	Frequency (n =281)	Percent (%)
No experience at all	87	30.96
Less than 1 year	33	11.74
Between 1 – 3 years	81	28.82
Between 4 – 6 years	49	17.43
Above 6 years	31	11.03
Total	281	100.00

Table 4.4 reveals the experience of study participants contacted for the study about what experience they have regarding SACCOS on the adoption of the digital delivery channels. The largest group among the respondents were represented by no experience at all who were 87 (30.96%). This may be attributed to the number of respondents from 10 SACCOS that have not adopted DADC. Among the respondents, the majority 81 (28.82%) had an experience between 1 – 3 years in the adoption of the digital delivery channels followed by those between 4 – 6 years who were 49 (17.43%). The respondents who have adopted the digital channels in less than a year were 33 (11.74%) while those with more than 6 years were 31(11.03%). The findings of the study generally show that, most of the respondents through their SACCOS have a good experience in the adoption of the digital delivery channels. These respondents have experience before their SACCOS adopted DADC as well as the experience after their SACCOS adopted DADC. The experience in the usage of digital platforms for Savings and Credit Cooperative Societies (SACCOS) members implies that these members are engaging with various digital tools and technologies to manage their financial activities within the cooperative.

4.2.2. Scope of digital alternative delivery channel in SACCOS

The research question to be answered was 'What are the different types of digital alternative channels adopted by SACCOS in Tanzania?

Objective one of this study was on finding out the scope of digital alternative delivery channels in the studied SACCOS. Studied SACCOS were those which adopted at least one digital alternative delivery channel and her members have an experience of less than a year or above one year. Managers of these SACCOS and members were involved in responding to three research questions, which were:

(i) What are different types of digital alternative delivery channels adopted by SACCOS in Tanzania?

(ii) What is the usage of digital alternative delivery channels in SACCOS?

(iii) Why low adoption of digital alternative delivery channels in Tanzania SACCOS?

4.2.2.1 Different types of DADC

The results of the participants' responses for the different types of DADC are shown in 4.5. From the descriptive statistics conducted, results have shown that, on average, the SACCOS studied has well adopted the digital delivery channels with a mean score of 3.78 and a standard deviation of 0.602. The mean value being at that level, indicates that scope of adoption is good for the SACCOS that were studied while the standard deviation which is a measure of the amount of variation or dispersion of a set of values has indicated to be to the lower side showing that the values are close to the mean of the set that was analysed.

Mobile Banking, Wallet/App was the digital channel with the highest mean score (3.12) with a standard deviation of 0.621. This is an agreement by the respondents that this is a digital channel which is mostly used in the SACCOS studied. This may be attributed by the fact that, with the arrival of smartphones, mobile applications, and the internet from the year 2010, SACCOS have progressively embraced mobile banking applications as a means to reach more prospective members, offer efficient service delivery channels, and earn incomes in the process. As indicated in Table 4.5, many of the study participants agree that Mobile Banking, Wallet/App being the most adopted digital alternative delivery channel.

Table 4.5: Different Digital Alternative Channels Adopted by SACCOS (Multiple)

Digital Channel	Frequency	Percent (%)	Mean	Std. Dev
ATM (Automated Telling Machine)	72	25.62	3.01	0.576
IB (Internet banking)/Electronic wallets	24	8.54	3.09	0.577
SACCOS Agency /Merchant	39	13.88	1.99	0.623
Mobile Banking, Wallet/App	16	5.93	3.12	0.621
E-wallet (Prepaid cards, Store cards)	27	9.61	1.89	0.598
Point of Sales (PoS)	29	10.32	2.90	0.499
Cash deposits boxes	15	5.34	1.01	0.778
Customer call centre / Interactive Voice Response)	33	11.74	1.27	0.664
Mobile Wallet (SACCOS having MPESA, TIGOPESA, AIRTEL MONEY, HALOPESA) account	32	11.39	3.189	0.599
Mobile Application (Mobile App for Android or IoS)	33	11.74	2.99	0.611
Merchant (*Lipa namba*)	16	5.69	1.89	0.571
Overall			3.78	0.602

This is because of the flexibility of the Mobile Wallet/App channel; this channel accommodates members with normal mobile phones and those with smartphones. SACCOS opted to use these channels because the members have mobile phones, and from those mobile phones owned by SACCOS members, they have mobile wallets like M-Pesa, Tigo Pesa, Airtel money, Halopesa and T-Pesa. Through mobile wallets, customers can easily send money to SACCOS accounts without visiting SACCOS premises, and they can also transfer cash from SACCOS accounts to their mobile wallet. These services are real-time services and SACCOS members/customers get

instant notification after successful completion of transaction. Members can easily process the transaction from anywhere at any time.

Automated Teller Machines (ATM) and Internet Banking (IB) were the next digital channels mostly used in the SACCOS studies with mean scores of 3.01 and 3.09 respectively. The findings indicate that ATMs and IB were among the accepted digital alternative delivery channels by the users of financial services from the studied SACCOS. The findings also are in agreement with that of Mugo *et al,* (2019) on the performance analysis of debit card services on deposit-taking SACCOs' financial performance who found that SACCOS in Kenya have widely adopted the usage of ATMs. Likewise, the findings are in agreement with that of Mugo *et al,* (2018) in the study of effect of mobile communication services on performance of SACCOS in Kenya who found that, 62.6% of the SACCOS in Kenya has adopted internet banking as most of the members for the SACCOS now can use the internet in their transactions. However, from the studied SACCOS findings indicate that SACCOS members accepted internet banking (IB) rather than ATM because IB users can access services from anywhere, they have wide options of services compared to ATM that has limited services and members will be required to visit the ATM to get the services.

Point of Sale (PoS) has a mean score of 2.90 while Agency banking and E- wallet has a mean score of 1.99 and 1.89 respectively. The Point of sale by having a mean score of 2.9 is an indication that it has attracted much usage by having a mean score of more than the average of 2.5. This is an implication that it has been well adopted. This is because PoS is mostly used by SACCOS customers who own businesses that are financed by SACCOS loans. These customers use these PoS to simplify the direct cash deposit to their SACCOS account. These members have businesses like Hotels, Super and Mini markets. Agency banking and e-wallets seem to have lower adoption rate as indicated by their lower mean scores. Likewise, the standard deviations of the two digital channels 0.623 and 0.598 respectively are to the higher side which indicates a dispersion of statistics from the mean. From the studied SACCOS it was noticed that, SACCOS were not ready to invest a lot in agencies because of the associated costs of recruiting the agents, sharing the revenue with agents by giving them commissions, This was in agreement with Mugo *et al,* (2019) on the performance analysis of debit card services on deposit-taking SACCOs' financial performance in Kenya that, point

of sale and e-wallets has not been well adopted in the Kenyan SACCOS compared to mobile banking and ATM usage among SACCO's members.

Cash centres and cash deposit boxes were the digital channels with the lowest mean score at 1.27 and 1.01 respectively. This is an indication that the two digital alternative delivery channels have not been well adopted by the SACCOS studied. This might be attributed by a number of reasons including that, SACCOS members are not used to enquiring through telephone for whatever reasons or the SACCOS has not been able to promote that digital channel. Likewise, cash deposit boxes might not seem to be convenient to the users. As a result, the SACCOS have not moved to that direction of adoption. The findings are in agreement with that of Boehm, (2022) who found that SACCO's culture in Africa has not been utilising the concept of call centres while developing a new conceptual framework for cultural democracy.

The usage of multiple digital platforms by SACCOS members can signify a strategic approach to service delivery, emphasising accessibility, member engagement, innovation, and risk management. It is important for SACCOS to carefully plan and implement these platforms to derive maximum benefit for both the institution and its members.

4.2.2.2 Uses of the digital alternative channels

The research question here was 'What is the usage of DADC in SACCOS?

The study participants were asked on a multiple response on the usage of the digital alternative channels for their SACCOS. The responses are shown in Table 4.6.

Table 4. 6 : Level of agreement for Usage of Digital Alternative Delivery Channels in SACCOS

Items	1 SA F	%	2 A F	%	3 N F	%	4 D F	%	5 SD F	%	Mean
Loan application	71	28.4	81	32.4	35	3.5	39	8.1	24	5.9	3.46
Money transfer (EFT)	77	41.9	74	39.7	27	5.1	42	5.9	30	7.4	3.97
Balance enquiry	61	44.1	52	38.2	6	4.4	10	7.4	8	5.9	4.07
Cash deposits	60	44.9	51	37.5	5	3.5	11	8.1	8	5.9	4.07
Cash withdrawal	58	42.6	54	39.7	8	5.9	8	5.9	8	5.9	4.07
Bills payments	63	45.6	48	35.3	10	7.4	8	5.9	8	5.9	4.07
Statutory payment	49	44.8	50	37.6	9	4.9	11	5.8	10	6.9	4.07
Loan disbursement	52	41.2	52	38.2	9	6.6	9	6.6	10	7.4	4.08

Loan repayment	50	44.1	52	38.2	6	4.4	8	5.9	10	7.4	4.08
Electronic account statement	53	46.3	49	36.0	6	4.4	8	5.9	10	7.4	4.09

SA=strongly agree, A=Agree, N= Neutral, D=Disagree, SD= strongly disagree

Source: *Field data, (2022)*

This finding is in line with that of Omwando (2019) who found that users of digital alternative delivery channels for the SACCOS in Kenya mostly use the digital platforms for loan application. Likewise, Tambasi (2019) found that SACCOS members pay more attention to the uses of electronic performance in loan application as the product is one of the important areas for their financial inclusion. As a result, SACCOS clients are very much motivated to learn how online loan applications are done. Online Loan application was preferred by clients because it is simple and no bias. The system quickly assesses if the member requesting a loan is eligible for loan application, how much can the customer be disbursed and quickly responds to the customer with complete information. SACCOS preferred online loan applications because of its accuracy and time serving. Some incidences of loan application failure, system downtime, slower pace of service delivery and failure of users' navigation in the electronic platforms have been reported.

Likewise, five other factors: money transfers, balance enquiry, cash deposits, cash withdrawals and bills payments had the same mean score at 4.07%. The uses of DADC seem to have moderate uses to SACCOS clients in the study areas. Looking at these uses, most of them are frequent actions that happen in most of the daily transactions that any user of a financial institution may do (Kašpárková, 2018). The finding of the study is also supported by one key informant who mentioned that:

> ``…*Our system's frequent enquiries are dominated by the action such as balance enquiry, cash deposits, loan application, withdrawals and money transfer…*" (19th September, 2022).

The findings of the study imply that there are some actions that are dominant on a daily SACCOS operation. Users of the digital platforms have freedom of usage of the DADC. By having the digital alternative delivery channels in place, users are motivated to perform as many transactions as possible to the level of their needs.

Furthermore, bill payments, statutory payments and loan disbursements had the highest mean score. The findings were a bit shocking especially with the bills payments as

there are many alternatives for different services like banks, mobile money transfers using different telephone networks. According to the key informant interviews by the management of the SACCOS studied, one Manager informed the researcher that:

> "…*Our SACCOS is among the largest in Tanzania. Members include all staff across the country of whom are required to join once they are employed. We have noticed that, at the beginning of the year and mid-year, most staff apply for loans to pay school fees and other expenses. It has increased users of bills payment through our digital system significantly…" (21st September, 2022)*

With this explanation, it is obvious that some other DADC uses may not be at the same rate all year around, but may be at a higher rate of usage at some point in time. The findings are in agreement with that of Tambasi, (2019) who found that ATMs were very busy during weekends and pay days for employees in the public and private sectors in Kenya.

As for loan repayments and e-statement it was observed with a higher performance with a mean score of 4.08 and 4.09 respectively. The findings imply that most users of the DADC were paying well their loan dues through digital platforms. Likewise, users of the DADC were very active in checking their balances through the digital platforms. At different times, all the key informants also were in agreement with what the respondents have said where one of the key informants said that:

> "*…The use of DADC encourages users to use the platform at any time conveniently. For instance, looking at how much is your loan balance can always be checked at any point in time. Likewise, some people have the habit of checking balances before they make any transaction. The action has been made simple that you can know what you have before you spend…" (23rd September 2022)*

This is evidence that DADC users in SACCOS are motivated to stretch and do better in their designated financial actions as a pre-action to their transactions. The findings are consistent with that of Kajwang, (2022) who found that financial transactions in insurance payment are dominated by pre-actions on either checking balances or debts before the real payments are made. Kajwang (2022) adds that, payments in the form of subscriptions and risk coverage fulfils a range of other monetary needs is a huge motivation for safety of assets and life assurance. These are products which have been

historically being sold by SACCOS at low rates but currently they are becoming more pronounced. Findings of this study also acknowledge that, any use of the digital platforms is obviously directed at fulfilling some economic needs of the user in the form of bill payments, personal cash withdrawal or deposit and meeting social obligations.

4.2.2.3 Causes of low adoption of DADC

The research question here was 'Why low adoption of DADC in Tanzania SACCOS?

This part of the study was specifically for the SACCOS that has not adopted the digital alternative channel usage. Participants in the study were asked about the reasons for the low adoption of the DADC in their SACCOS. Multiple responses were received from the 10 SACCOS respondents as presented in Table 4.7.

Table 4.7: Reasons for low/none adoption of DADC (Non-adopters)

Usage	Frequency	%age
Expensive to develop a digital platform	21	70.00
Small SACCOS	18	60.00
Board and management focus	17	56.67
Comfort zone for members and management	16	53.33
No need	9	23.33

From Table 4.7, study results have shown that generally there are specific reasons for the SACCOS that have not adopted the DADC in their operations. Among the highest rated reasons 21 (70.00%) was rated that have indicated that, it is expensive to develop a digital platform for the SACCOS operations followed by a SACCOS being small is a reason for non-adoption of the digital alternative channels in the operations. The findings of the study are in agreement with that of Wanyonyi and Ngaba (2021) on the study of digital financial services and financial performance of savings and credit cooperative societies in Kakamega County, Kenya that, 51.20% of the SACCOS in the study area has not adopted to the digital channels because they were not able to meet the costs associated with moving from the traditional mode of operation. Conclusions

made from the study findings were that failure to meet the costs was due to the fact that the SACCOS were small to utilise the economies of scale for the adoption of the digital alternative channels. The findings also are in agreement with the key informants where one of them said that:

> *"...Digital platforms are good and they seem to have good implications to the users to bring about good and speed customer service. However, for small SACCOS and those with shaky liquidity levels, the system is expensive to purchase and implement..." (23rd September 2022)*

Results from Table 4.7 has also indicated by more than 50% that boards and management focus 17 (56.67%) and members and management comfort zones 16 (53.33%) are the reasons as to why they have not adopted DADC while only 7 (23.33) responses indicated that there was no need for adoption of DADC for the SACCOS. The implication of the findings is that, there are some SACCOS of which they have not adopted DADC because of the decisions not made by their boards and at the same time the management have no focus on the change from the current state to the digital operations. The findings further imply that, the responses that indicated that there was no need to adopt DADC are the respondents who are not comfortable with changes, they are in their comfort zone using traditional SACCOS operations of which they were very low. This indicates that many there were in need of the adoption of DADC. The findings of the study are in agreement with that of Zangiacomi *et al,* (2020) in the study of moving towards digitalization using a multiple case study in manufacturing who found that the need for digital operations in SACCOS was required by SACCOS in their operations. The findings are also supported by the key informants where one of the SACCOS Manager informed the researcher that:

> *"...We are very passionate that we use the digital platforms at the fullest capacity in operations. However, sometimes the vision of the Board and that of the management move in the opposite directions. Likewise, at the general meetings, it has been difficult to convince members that a big amount of money is to be invested in a digital platform. Some members are still fond of visiting their SACCOS, meeting employees, making transactions and making enquiries in* person…" (*23rd October, 2022).*

These findings imply that, there is sometimes a complication with the boards to make sound decisions to invest in DADC. However, it is indicative that some members wish to visit SACCOS physically which requires a change of altitude and acquisition of skills to use the digital platforms.

4.2.3 Members' Experience with Respect to Usage of DADC in Tanzania SACCOS

The research question here was 'What are the experiences of SACCOS members on usage of DADC in Tanzania?

4.2.3.1 Level of satisfaction to the DADC

In this part, study participants were asked on their level of satisfaction with the usage of the DADC in their SACCOS. Table 4.8 shows multiple responses results of their responses.

Table 4. 8: Satisfaction on the Use of DADC

Item	Frequency	Percentage
Quality services	121	43.06
Quick responses to queries	87	30.96
Improved loan processing	111	39.50
Time saving	121	43.06

When respondents were asked as to what extent DADC have contributed to their level of satisfaction, the highest response of 43.06% responded to the reason that DADC have resulted in quality services and time saving each respectively. With regards to quick responses of queries and improvement on loan processing, the responses were 30.96% and 39.50% respectively. The results indicate that SACCOS digital alternative users were satisfied to the higher level. Likewise, respondents of the study rated that; time saving was another area that was satisfying them at 43.06%. The response being above rated at the indicated levels was termed as a good satisfaction level for the DADC users in the studied SACCOS. The findings are also in agreement with that of Tambasi, (2019) in the study of influence of electronic delivery services on customer satisfaction at Mwalimu National SACCO in Kenya who found that, time saving, efficient loan processing, quick enquiry responses and quality services were the elements that

satisfied digital serve users. The findings also were in agreement with the key informants where one of the ICT Manager informed that:

> *"…There has been good time saving to members by the use of the digital platforms to transact with their SACCOS. Likewise, time savings has been experienced by the cashiers and the rest of the employees for serving the clients. Most of the clients will do the transactions and enquiries online leaving time for staff to do other activities like dealing with books of accounts and developing new products…" (23rd October,2022).*

The findings imply that members of the SACCOS to the greatest level are satisfied with the usage of the digital platforms for their transactions with their institutions.

4.2.3.2 Speedy services and control of transactions

When respondents were asked on the issue of speedy services and control of transactions, they categorically indicated that DADC have very well improved the speed of services (87%) while those who responded the speed and control of transactions have not improved were only 13%. Results of the responses are as shown in Table 4.9 below.

Table 4. 9: Speedy services and control of transactions

Speedy Services and Control of Transactions	Percentage
YES	87%
NO	13%

The findings were supported with the key informants where one the SACCOS Managers confirmed that:

> *"…The speed of services has improved tremendously in terms of service delivery but also in terms of each transaction being performed. Both clients and employees are able to transact within a short period of time which makes them both happy at the end of the day…" (23rd October 2022).*

The findings of the study are also in agreement with that of Kibanga, (2022) in the study of risk management on member advancement of licensed deposit taking SACCOS in Nairobi City County in Kenya. Further findings of the study declared that

members and employees of the SACCOS acknowledge speed of services but all that of transactions than the traditional mode of operand.

4.2.3.3 SACCOS Website

The respondents were asked to state whether the SACCOs website is up to date and responsive to the requirements. About 66% of the respondents responded with a Yes while 34% responded with a No response. Table 4.10 presents the findings.

Table 4. 10: SACCOS Website Update

Website Update	Percentage
YES	66%
NO	34%

The implication of the findings is that, when the SACCOS Website is not updated, some information about the SACCOS becomes obsolete. An outdated website can give the impression that the SACCOS is not up-to-date or that it does not care about its members. This can lead to a loss of credibility and trust, which can hurt the SACCO's bottom line. Likewise, an outdated website is less likely to be found by potential members or customers. This can lead to a decrease in traffic to the website, which can hurt the SACCO's ability to generate leads and sales. Maintaining an outdated website can be more expensive than maintaining a modern website. This is because outdated websites often require more manual updates and maintenance. Outdated websites also are more likely to be vulnerable to security risks. This means that the SACCO's data and members' information may be at risk. Generally, an outdated website can have a number of negative implications for a SACCOS. It is important for SACCOS to keep their websites up-to-date in order to protect their credibility, attract new members, and keep their data safe. Website is also a marketing tool where SACCOS can post their products and services.

As such, users of the digital platform become not informed of the different matters concerning their SACCOS. These results are in agreement with Mugo, (2019) on the study of an empirical investigation on the effect of mobile banking services on financial performance of deposit-taking SACCOS in Kenya. The findings of the study indicated that members were demoralised on visiting the SACCOS Websites because they websites were not updated, not attractive and user friendly

4.2.3.5 Suggestions to improve current status

The member respondents were asked to suggest what would improve the current status. Table 4.11 displays the results of the respondents' responses.

Table 4. 11: Suggestions for Improvements

Improving the current status	Frequency	Valid Percentage
Update contributions and beneficiaries' information	121	43.06
Create awareness to members on new tools of payment	45	16.01
Update individual payments regularly	25	8.89
Need to network and be more responsive to customers	41	14.6
Respond promptly to queries	32	11.39
Create Mobile pay bill number	31	11.03
Create more interactive portal	26	9.25
Update website with current payment status	45	16.01
Regularly update the website	61	21.70
To update the statements memory	32	11.39
Update allotments more promptly	28	9.96
Online banking services	61	21.70
Improve to track defaulter timely	11	3.91
Total		100

Data results in Table 4.11 indicate that, 43.06% of the respondents suggested that the website should update the contributions and beneficiaries' information while 16.01% of the respondents said that the SACCOS should create awareness to members on new tools of payment. 21.70% of the respondents said that there should be regular updates of the website. Likewise, respondents were of the opinion that there should be updates on individual payments regularly at 8.89% and update Websites with current payments at 16.01%. The rest of the updates that were mentioned by the respondents stood at between 14.6 and 9.06% with regards to the updates. The overall findings implication is that, there are a number of suggestions for the users of the DADC with regards the Website updates of which the SACCOS management need to work on them as part of the improvement of the adoption of the DADC.

4.2.3.6 Products offered through digital platforms

During an interview data were collected and some of the products delivered are ATMs, Internet banking, mobile banking, Point of Sale, Mobile Applications, Merchants and

Cash deposit boxes. With regards to the products offered through the digital platforms, respondents were asked to state whether the current products meet their needs as members and users of the DADC. The outcomes of their responses are displayed in table 4.13 below.

Table 4. 12: Products Offered through DADC Meeting Needs (n= 281)

Response	Frequency	%age
YES	186	61.19
NO	95	33.81
Total	281	100.00

Among the respondents, the majority 186(61.19%) said that they were satisfied with the products offered through the digital alternative channels to meet their needs while 95 (33.81%) said that they were not satisfied with the products offered through the DADC. This may be attributed to members from SACCOS that have not or partially adopted DADC. The general implication from the findings is that users of the DADC in the studied SACCOS in Tanzania are satisfied with the products offered through the digital platforms.

Table 4.14 of the results indicated that 23.33 of the members thought they were highly professional in DADC, while 60% of the members said they were professional and 16.67% rated them being unprofessional. The ICT manager and other Managers said they were highly professional and professional respectively as the positions are held by only one person.

4.2.3.8 SACCO Employees responsiveness and courteousness

When participants were asked to rate the level of responsiveness to technology and towards clients of the SACCOs, respondents rated employees by 56.67% that the employees were highly responsive while respondents rated by 23.33% of the respondents said they were responsive, while 20.00% responded that employees of the SACCOS were unresponsive. Results are presented in Table 4.15.

Table 4. 13: Employees Responsiveness and Courteousness

Item	Frequency	Percentage
Highly responsive	159	56.65
Responsive	92	32.74
Unresponsive	281	10.61

4.2.4 Correlation analysis of members experience

For the study to establish that, in each of the variables analysed there was a statistical significance difference between them with regards to the experience of users of DADC, a correlation analysis was run. Results of the findings are presented in Table 4.14.

Table 4. 14: Correlation between variables and clients experience

		Level of service satisfaction
DADC Efficiency	Pearson Correlation	0.179**
	Sig. (2-tailed)	0.001
	N	281
Website updates and responsiveness	Pearson Correlation	0.112*
	Sig. (2-tailed)	0.021
	N	281
Offered products through DADC	Pearson Correlation	-0.043
	Sig. (2-tailed)	0.313
	N	281
Employees Efficiency	Pearson Correlation	0.317**
	Sig. (2-tailed)	0.000
	N	281

Key: ** The test was carried out at 95% while the * The test was carried out at 90% confidence interval. Sig. (2-tailed) is the normal curve.

From Table 4.14, findings of the study established that there is a positive and negative relationship between the variables. With regards to the DADC efficiency correlation to the level of satisfaction it was found that, there was a significant level of satisfaction with a P-Value = 0.001. Results of this study also established that, was also a positive relationship with Pearson correlation of 0.179**. With regards to the rating of DADC offered products, results showed a negative relationship with level of satisfaction with Pearson correlation of - 0.043. There was a statistically significant difference on the level of employees' responsiveness and courteousness with a p-value =0.000.

Likewise, with regards to ICT efficiency in terms of website updates, results of this study showed a statistically significant difference with p-value 0.021. The general implication of the findings of the study is that members are satisfied with DADC as indicated in their experience in the variables tested with an exception of the products offered through DADC which have come out with a negative statistical significance value.

4.2.5 Impacts of DADC on operational performance of SACCOS in Tanzania

The third objective of the study was to determine the impacts of DADC on operational efficiency of the Tanzania SACCOS. For that case, the study used some inferential statistics to determine operational performance of the SACCOS under investigation entailing, coefficient of determination (R-Square), analysis of variance as well as paired t-test.

4.2.6 Diagnostic tests

A diagnostic test as per regression analysis was carried out. Linearity test was done to ascertain the linear relationship of variables using Pearson Correlation coefficient. Normality test was done to ascertain if the variables have a normal distribution. Multicollinearity test was done to determine the association between predictor variables.

4.2.6.1 Multicollinearity test

The study assessed multicollinearity using the variance inflation factors (VIF). The rule of thumb is that VFI which is an indicator of presence of multicollinearity should be less than 10 else there is (Field, 2009). Table 4.17 of the results revealed that there was no multicollinearity since all the values for VIF were less than 10.

Table 4.15: Multicollinearity

	FVI	Tolerance
Loan application	1.691	0.521
Money transfer	1.992	0.127
Balance inquiry	1.756	0.523
Cash deposits	1.712	0.153
Cash withdraw	1.892	0.231
Bills payment	1.771	0.512
Statutory payments	1.678	0.326

4.2.6.2 Test for linearity

Results presented in Table 4.17 positive significant linear relationship between loan application, money transfer, balance inquiry, cash deposit, cash withdraw, bills payment and statutory payment on operational efficiency of the SACCOS at r =0.671, 0.712, 0.667, 0.881, 0.823, 0.731 and 0.712 respectively and p< 0.05 significant level.

Table 4. 16: Linearity Test (n=281)

		Operational efficiency
Loan application	Pearson Correlation	.671
	Sig. (2 tailed)	.000
Money transfer	Pearson Correlation	.712
	Sig. (2 tailed)	.000
Balance inquiry	Pearson Correlation	.667
	Sig. (2 tailed)	.000
Cash deposits	Pearson Correlation	.811
	Sig. (2 tailed)	.000
Cash withdraw	Pearson Correlation	.823
	Sig. (2 tailed)	.000
Bills payment	Pearson Correlation	.731
	Sig. (2 tailed)	.000
Statutory payments	Pearson Correlation	.712
	Sig. (2 tailed)	.000
Correlation is significant at 0.01(2 tailed)		

Source: Field data (2023)

Table 4.18: Normality test

Here the measures that are done in normality are kurtosis and skewness. The rule of thumb is that the two measures should range between -2.0 and +2.0 (Cooper and Shneider, 2008).

Table 4. 17: Normality test

	N	Skewness		Kurtosis	
	Statistics	Statistics	Standard error	Statistics	Std. Error
Loan application	20	-1.002	.311	-.261	.623
Money transfer	20	-1	.311	-.124	.623
Balance enquiry	20	-.091	.311	.521	.623
Cash deposits	20	-.312	.311	.155	.623
Cash withdraw	20	-.796	.311	-.241	.623
Bills payment	20	-.871	.311	-.516	.623
Statutory payments	20	-.973	.311	-.626	.623

Results in Table 4.18 indicate that the measures of skewness and kurtosis are normally distributed as the variables under the study and operational efficiency are normally distributed as the values are between -2 and +2.

Table 4. 18: Model summary

Model	R	R-square	Adjusted R-Square	Std. deviation of the estimate
1	0.712	0.736	0.733	0.34661

The coefficient of multiple determinations, commonly known as the adjusted R2, is the percentage of the variances in the dependent variable explained uniquely or jointly by the independent variables. The perfect variation had a regular coefficient of resolve (R^2) is 0.736 which indirect that 73.6% of the variations in the operational performance of the SACCOS that has adopted DADC are caused by the independent variables under the study (loan application, money transfer, balance enquiries, cash deposits, cash withdrawal, bills payments and statutory payments).

Using the SPSS program kit in the case of multiple regression the following results were obtained as presented in Table 4.20.

Table 4. 19: Regression coefficients

Model		Unstandardised Coefficients		Standardised Coeff.			
		B	Std Error	Beta	t	Sig.	
1	(Constant)	1356.21	2963.32		.399	.615	
	Loan application	3	1				
	Money transfer	.890	.056	1.111	19.804	.000	
	Balance	21.675	11.023	.142	3.016	.016	
	enquiries	-2.112	.056	-.121	-3.332	.013	
	Cash deposits	4.123	21.706	0.29	.254	.012	
	Cash withdrawal	3.910	15.650	.098	.966	.030	
	Bills payments	19.102	9.231	.078	.871	.012	
	Statutory payments	7.102	5.128	.092	.806	.011	

Dependent variable: Operational Efficiency

Based on the nonstandard coefficients the following regression equation is obtained:

$$y = 1356.213 + 0.890\ x_1 + 21.675\ x_2 - 2.112\ x_3 + 4.123\ x_4 + 3.910\ x_5 + 19.102\ x_6 + 7.102 x_7 \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(3)$$

where

x_1 = loan application,

x_2 = money transfer,

x_3 = balance enquiries,

x_4 = cash deposits,

x_5 = cash withdraw,

x_6 = bills payments,

x_7 = statutory payments.

The result is that most part of the total variance is generated by the regression equation. All the dependent variables turned out significant at $p<0.5$. The significant coefficients of regression results show that the relationship between the independent and dependent variables is statistically significant. This means that the relationship is not due to chance, and that there is a real association between the variables. The signs of the

coefficient which in this case were all positive indicates the direction of the relationship. A positive coefficient means that as the independent variable increases, the dependent variable also increases. If it could have been otherwise negative, then a negative coefficient could have meant that as the independent variable increases, the dependent variable also decreases. The magnitude of the coefficient indicates the strength of the relationship. A larger coefficient means that the relationship is stronger.

Table 4. 20: Variation Analysis - ANOVA

	Sum of squares	Df	Mean Square	F	Sig.
Regression	2.322	4	0.592	5.113	0.001
Residual	0.004	39	0.000		
Total	2.341	51			

Predictors:	loan application, money transfer, balance enquiries, cash deposits, cash withdrawal, bills payments and statutory payments
Dependent variable	Operational efficiency

Critical value = 2.669

In order to test the validity of multiple regression models a general test must be used, which investigates whether all the independent variables have regression coefficients equal to zero, or in other words if the explained variance is not due to a random variable. The regression coefficients of the sample have as correspondents the following regression $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7$ (Kulcsar, 2009). The alternative and null hypotheses are formulated as follows:

H₀ = $\beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = \beta_7 = 0$

H₁ = not all β coefficients are equal to 0

The F test, which necessitates an examination of the variance listed in the ANOVA table above, should be used to test the null hypothesis. It is clear from the data in the preceding table (Table 4.18) that the calculated F value for the variance produced by the regression is 5.113. the critical value of F, with four degrees of freedom and a significance level of 0.01. The alternative hypothesis, which states that all regression

coefficients are equal to zero, does not need to be accepted, according to a comparison of the values of F. This indicates that the adoption of digital delivery channels on operational performance is one of the dependent variables that multiple regression models have a substantial impact on.

Similarly, the ANOVA analysis reveals that the reversion model exhibited a mean of 0.1%, indicating that the statistic was highly suitable for drawing inferences about the population parameter. This is supported by the fact that the significance level (p-value) was found to be less than 5%. The obtained value (5.113) exceeded the expected value (2.669), suggesting that the independent variables (loan application, money transfer, balance enquiries, cash deposits, cash withdrawal, bills payments, and statutory payments) collectively exert a substantial influence on the operational efficiency of the SACCOS that has implemented DADC in Tanzania. The obtained p-value being less than 0.05 indicates that the observed effect is statistically significant.

4.2.5 Pre- and post- DADC adoption on operational efficiency SACCOS

The study conducted an independent t-test to see if there is a statistically significant variation in the means of operational performance before and after the introduction of DADC. This study aimed to evaluate the null hypothesis that there is no significant difference in the mean values of the two groups, as compared to the alternative hypothesis that there is a significant difference in the mean values of the two groups.

Table 4. 21: Group Statistics – Mean Differences

Period	N	Mean	Std. Deviation	Std. Error Mean
Before adoption of DADC	7	2.08*	1.251	3.019
After DACD adoption	7	3.53	1.277	3.7661

Based on the outcomes shown in Table 4.22, the mean of the efficiency operational performance was 2.08* compared to 3.53 after the adoption of the DADC in the studied SACCOS. The results indicate that the operational performance of SACCOS was less before than after the adoption of the DADC. These findings support that the adoption

of DADC brings about efficiency in SACCOS operational performance than the traditional operations, which translates into better financial performance of the SACCOS. The findings are supported by findings from other scholars like the studies by Omwando (2021), Kajwang (2022) and that of Mwashiuya & Mbamba (2020).

Table 4. 22: Independent Samples T-test

	Levene's Test for Equality of Variance		T-Test for Equality of Means				
	F	Sig.	T	Df	Sig. tailed	2-mean difference	Std. Error differences
Equal variance assumed	0.136	0.022	-5.012	15	0.000	-2.997	5.992
Equal variance not assumed			-5.031	12. 212	0.001	- 2.997	5.871

The Levene's test was run to assess the equality of variance between the two groups, namely the operational performance before and after the adoption of DADC. This test provides information on whether the variance of the dependent variable is approximately equal across the two groups. If the Levene's test yields a significant result, indicating a Sig. value of less than 0.05, it can be concluded that the two variances are considerably different. However, if the significance level (Sig.) is more than 0.05, it indicates that the difference between the two variances is not statistically significant. In other words, the two variances can be considered approximately equal. According to the findings presented in Table 4.5, the Levene's test yielded a significance value of 0.022, indicating that it is not statistically significant at the 0.05 level. The results indicate that adoption of DADC is better for operation performance in the studied SACCOS than if the SACCOS could continue with the traditional mode of operations.

According to the results of Levene's test, a T value of -5.012 has been observed with 15 degrees of freedom. A statistical significance value of $p < 0.001$ was also determined. Hence, a notable distinction exists between the two cohorts, indicating that the level of significance is below 0.05. Hence, the results of the study establish a

significant difference between operational performance before and after adoption of DADC by the SACCOS which have adopted the digital mode of operations. When the findings are examined in conjunction with the results presented in Table 4.4, it becomes evident that the utilisation of DADC leads to enhanced operational performance.

CHAPTER FIVE

5.0. SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

Chapter five provides a comprehensive overview of the study's findings, drawing upon the data reported in the prior chapter. The chapter systematically presents the outcomes achieved in relation to each target, offering a cohesive and organised summary of the research. The chapter additionally presents the study's conclusions and recommendations.

5.2 Summary of the Key Findings

5.2.1 Demographic characteristics

Demographic characteristics are the attributes that describe the status of people or a person such as age, gender, ethnicity, or income. In study findings, demographic characteristics can imply a number of things. In this study, the majority of the respondents were female, which implies that the population of interest is also mostly female or SACCOS membership is dominated by female members. The study findings also indicated that participants of the study were dominated by the middle-aged group which implies that SACCOS have an energetic population and are mature to understand adoption of DADC in the respective institutions they are. The majority of the participants also were experienced with usage of digital channels which means that it could not be a big problem for SACCOS to institute DADC in their operations. It is important to consider the demographic characteristics of the study participants when interpreting the study findings. This is because the findings may not be applicable to all groups of people.

5.2.1 Scope of digital alternative delivery channel in Tanzania SACCOS

5.2.1.1 Types of DADC adopted

The general descriptive statistics has shown that generally SACCOS in Tanzania has well adopted the digital delivery channels. A good level of adoption of digital channels in SACCOS implies that these organisations are embracing new technologies to improve their services.

5.2.1.2 Uses of DADC

The study results have shown that most of the users of the digital channels in the SACCOS studies are used for loan applications. The findings of the study have also shown a different result which was not expected where statutory payments which include savings is lower than the loan application where was for statutory payments. Money transfers and statutory payments were the next mostly usage of the digital alternative.

5.2.1.3 Causes of DADC low adoption rate

Findings have indicated that, among the highest rated reasons was that it is expensive to develop a digital platform for the SACCOS operations followed by a SACCOS being small is a reason for non-adoption of DADC. Findings also have shown that more than boards and management focus and members and management comfort zones are the reasons for low adoption of DADC among the SACCOS.

5.2.2 Members' experience with respect to usage of DADC in Tanzania SACCOS

5.2.2.1 Level of satisfaction to the DADC

Findings have shown that, the highest response to the reason that DADC have resulted into quality services while quick responses of queries and improvement on loan processing. The results have also indicated that SACCOS DADC users were satisfied to the higher level on the usage of digital platforms. A high level of satisfaction on the usage of digital channels in Tanzania SACCOS implies that members are happy with the services they are receiving. This is a positive sign for SACCOS, as it indicates that they are meeting the needs of their members.

5.2.2.2 Speedy services and control of transactions

With regards to the speed of services and control of transactions, findings have shown that DADC have very well improved the speed of services. Queue of customers waiting to be served in SACCOS halls have reduced tremendously, SACCOS members are not bounded by the opening and closing SACCOS hours, Services like Balance Inquiry, Bills payments, Cash deposits and cash withdrawals can be performed over the DADC at anytime and anywhere. Those who responded that the speed and control of transactions have not improved were only few.

5.3 Conclusions

5.3.1 Scope of digital alternative delivery channel in Tanzania SACCOS

From the findings of the study in objective one, it is concluded that, Mobile Banking, Wallet/App, Automated Teller Machines (ATM), Internet Banking (IB) and Point of Sale (P0S), were the widely adopted DADC among the SACCOS in Tanzania. SACCOS Agency banking and E- wallet were the least adopted DADC among SACCOS. It is further concluded that, the uses of the DADC are loan applications, statutory payments, money transfers and statutory payments.

5.3.2 Members' experience with respect to usage of DADC in Tanzania SACCOS

From the findings obtained on the members' experience on usage of DADC, it is concluded that DADC have resulted in quality services and quick responses of queries and improvement on loan processing. It is also concluded that, SACCOS DADC users are satisfied to the higher level with time saving. Equally important, from the Pearson correlation results, it is concluded that, there was a significant level of satisfaction by the respondents and users of DADC on efficiency. Also, further conclusion is that, users of DADC are not satisfied with the level of products offered but users being satisfied with the level of employees' responsiveness and courteousness to clients. Likewise, the study concludes that there was ICT efficiency in terms of website updates.

5.3.3 Impacts of DADC on operational performance of SACCOS in Tanzania

With regards to the operational impacts of DADC on performance of SACCOS, it is concluded that, there is a significant difference of the mean between the two groups i.e before and after adoption of DADC for the SACCOS under investigation. From the analysis of variance (ANOVA) results, and the group statistic mean but also the Levene's t-test results, it is concluded that, as far as efficiency of operational performance for the SACCOS, adoption of DADC have made a better performance in the following aspects.

5.4 Recommendations

Basing on the conclusions made of the findings, a number of recommendations are made as follows:

(i) Even though the scope of DADC has indicated that SACCOS in Tanzania has well adopted DADC, still there are a number of SACCOS that have not adopted yet. It is recommended that, for those SACCOS that have adopted to work much more on other products so that, users of the DADC in the respective SACCOS have much more choices to the variety of products. For the SACCOS that have not adopted DADC, there is a need for the Tanzania Commission of Co-operative Development (TCDC) to assist them in terms of boards, members and management training on the importance of DADC. With regards to the costs associated with development of digital platforms, small SACCOS may be advised to start slowly until and when they have fully adopted DADC.

(ii) Regarding the experience of the users of DADC, it is recommended that SACCOS should maintain the good output, ensure system reliability, and convenience to the services offered after the adoption of DADC to the users. In this regard, speed and accuracy of services should be kept to a higher priority. SACCOS also should make sure that at any point of time their websites are up and running, frequently updated with correct information, frequently asked questions (FAQ) are answered timely and displayed on the special page that can easily be accessed by the users. Websites should be designed in a way that users can easily surf regardless of customer educational level.

(iii) SACCOS members, the board and the management should be exposed to digital attachment programs whereby management and board will have the opportunity to learn from another SACCOS that adopted the DADC how they managed to adopt the DADC. Frequently training and seminars to Management, Board and SACCOS members so that they are updated more on the technology part. It is through these training sessions; more products may be developed but also the user's experience level in terms of satisfaction is much enhanced and may attract more SACCO's members to join.

(iv) Regarding the impacts of DADC on operational efficiency of the SACCOS, it is recommended that SACCOS should keep on improving their digital platforms so that more reports are generated to enhance the operational efficiency of the SACCOS. This goes with improvement in time taken to resolve customer DADC related queries. Turnaround time should not exceed 24 hours from the reported incidence time. Improving turnaround time will create confidence in customers in using the DADC's of a particular SACCOS and eventually generate more income.

(v) Training users and customers on the best and safe way to use these DADC example mobile Apps, ATMs or Internet Banking, that should never share their PIN with anyone not even the SACCOS. This will also create confidence and trust to customers with their SACCOS but as well with the DADC.

(vi) SACCOS that have adopted DADC It is recommended to ensure they have set security parameters to their DADC systems to ensure safety to customer accounts, transactions that are done through the DADC and SACCOS data. This can be done through setting time to time system penetration testing any loopholes in the system.

5.5 Theoretical Implications

4.3 Theoretical implication of the findings

the theoretical implications of study findings indicating positive digital platform adoption for Savings and Credit Cooperative Societies (SACCOS) have several significant ramifications. Based on the Technology Acceptance Models (TAMs), the positive adoption suggests that users find the digital platform acceptable and useful. This supports and extends existing Technology Acceptance Models by demonstrating that members of SACCOS are willing to adopt digital platforms for financial transactions and interactions.

Regarding the Innovation Diffusion Theory, the study findings could be interpreted in the context of the Innovation Diffusion Theory, suggesting that SACCOS members are early adopters of digital platforms within the financial sector. The positive usage may indicate that these cooperative societies are at the forefront of embracing financial technology innovations. Understanding these theoretical implications can help guide further research, policy-making, and strategic decision-making for SACCOS and similar financial institutions as they navigate the digital landscape towards adoption of DADC.

5.6 Recommendations for further studies

As the study was done only in 20 SACCOS to include 10 which has adopted the DADC and 10 which has not adopted DADC, the study recommends that:

(i) A study may be done to more SACCOS so that a wider range of findings may be established from the variables tested in the current study.

(ii) Studies may be done based on the same type of SACCOS i.e small ones or the medium and large so that experiences, impacts and challenges may be established from SACCOS that are at the same level of adoption to DADC.

(iii) Study covering other regions apart from Kilimanjaro and Dar es Salaam. That may wider range of findings from different regions in Tanzania mainland and Zanzibar

5.7 Contribution of the Study

Digitization of business operations all across industries has been a new way of conducting activities between the clients and the entities. This study contributes to the body of knowledge in terms of uncovering the status of the SACCOS in the Tanzanian context. As it is historically known, SACCOS were created to give hand to the needy but also as institutions that create financial inclusion. Thus, the study contributes to the body of knowledge of the fact that SACCOS are not a forgotten pass to digital inclusion in rendering their services. As Merchant payments are increasingly accessible through basic phones like SMS or USSD technology, as well as smartphones (NFC or QR code technology) across Africa, then, this study contributes to an understanding that, Tanzania is also moving in the same direction with the rest of Africa and even some most parts of the world as far as Fintech is concerned.

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APPENDICES

Appendix 1: Questionnaire for SACCOS Managers and Members

Introduction

Dear respondent, my name is KEITH MMARI, a student at Moshi Co-operative University (MoCU) pursuing a Master of Business Management (MBM). I am doing research on **'Digital alternative delivery channels and operational performance in Tanzanian SACCOS'**. I am kindly requesting your help in responding to the questions in the questionnaire I have. I also want to assure you that any information that you include in these questionnaires will be kept a secret in any way and it will not be exposed to anybody or institution as it is only for academic purposes as indicated above. I thank you very much for your cooperation.

SECTION A: RESPONDENTS BACKGROUND INFORMATION

1. Name of the SACCOS………………………………Region…………………
2. Designation …………………………………………
3. Gender
    (i) Male   ( )
    (ii) Female   ( )
4. Age
    (i)   19 – 30 years   ( )
    (ii) 31 – 39 years   ( )
    (iii) 40 – 49 year   ( )
    (iv) Above 50 years   ( )
5. Highest Academic Qualification
    (i) Masters   ( )
    (ii) Postgraduate Degree   ( )
    (iii) First Degree   ( )
    (iv) Advanced Diploma   ( )
    (v) Ordinary Diploma   ( )
    (vi) Certificate   ( )

(vii) No formal education

(vii) Other (Specify)…………………………………………………………

……………………………………………………………………..

6. Length of time since the adoption and usage of digital alternative delivery channels

 a) Less than a year   ( )

 b) Between 1-3 years   ( )

c) Between 4-6 years   ( )

d) More than 6 years   ( )

SECTION B: SCOPE OF DIGITAL ALTERNATIVE CHANNELS

Digital Channels

1. What digital channels does the SACCO currently use?
2. How long has the SACCO been using digital channels?
3. What are the main benefits of using digital channels for the SACCO?
4. What are the main challenges of using digital channels for the SACCO?

Scope of Digital Alternative Channels

1. What are the different types of digital alternative channels that the SACCO is considering?
2. What are the benefits of each type of digital alternative channel?
3. What are the challenges of each type of digital alternative channel?
4. How will the SACCO measure the success of its digital alternative channels?

Future Plans

1. What are the SACCO's plans for further development of its digital alternative channels?
2. How does the SACCO see digital alternative channels impacting its operations in the future?
3. How do you see digital alternative channels changing the way SACCOs operate in the future?
4. What are the biggest challenges that SACCOs face in implementing digital alternative channels?
5. What advice would you give to other SACCOs that are considering implementing digital alternative channels?

Please tick inside a check box

6. From the list of below, identify digital alternative delivery channels adopted by your SACCOS

Serial No.	Digital Alternative Delivery Channels	Tick (✓)
1	ATM (Automated Telling Machine)	
2	IB (Internet banking)/Electronic wallets	
3	Agency Banking /Merchant	
4	Mobile Banking/Mobile Wallet/ Mobile App	
5	E-wallet (Prepaid cards, Store cards)	
6	Point of Sales (POS)	
7	Cash deposits boxes	
8	Customer call centre / IVR (Interactive Voice Response)	

SECTION B: MEMBERS EXPERIENCE WITH DIGITAL CHANNEL ADOPTION

Digital Channels

1. How often do you use the SACCO's website or mobile app?

2. What are your reasons for using the SACCO's digital channels?

3. How satisfied are you with the ease of use of the SACCO's digital channels?

4. How satisfied are you with the security of the SACCO's digital channels?

5. How satisfied are you with the range of services available on the SACCO's digital channels?

6. How satisfied are you with staff in serving clients using the digital channels?

7. Do you have any suggestions for how the SACCO can improve its digital channels?

8. What is your opinion on speedy services and control of your transactions in digital alternative delivery channels.?

....
....
....

9. How do you compare quality services offered before adoption and after adoption of digital alternative delivery channels by your SACCOS?
…………………………………………………………………………………
…………………………………………………………………………………
………………

SECTION C: IMPACT OF DIGITAL ALTERNATIVE DELIVERY CHANNELS

1. How long did you have to wait to be served when you last visited the SACCO branch?

2. Were you able to find the information you were looking for on the SACCO website or mobile app?

3. How would you rate the knowledge and helpfulness of the SACCO staff?

4. Are you satisfied with the interest rates offered by the SACCO on its savings accounts and loans?

5. Are you satisfied with the range of investment products offered by the SACCO?

6. Describe contribution of digital alternative delivery channel in mobilizing SACCOS deposits before and after adoption.…………………………………………………………………………
…………………………………………………………….………………………
………………………………………………………………………………………
………………………………………………………………………………………

7. Describe how does digital alternative delivery channel impact SACCOS loan portfolio amount, volume and loan repayment before and after adoption?
………………………………………………………………………………………
………………………………………………………………………………………
………………………………………………………………………………………
………………………………………………………………………………..

8. Operational reports of the SACCOS, cut off time two years before and two years after adoption of DADC.

(Please put a tick beside the report that you can provide)

Serial No.	Report Name (Two years before and after Adoption)	Tick (✓)
1	Accounts deposit report (Monthly, Quarterly or Yearly)	
2	Depositors detailed report	
3	Account Opening and Closing report	
4	Account status report	
5	General loan report	
6	Loan disbursement report	
7	Detailed loan arrears report	
8	Loan repayment report	
9	Loan status report	
10	Dormant account report	
11	Re-Activated dormant account report	
12	Deposit Loan Ratio report	
13	Loan performance report	

Thank you very Much for your Response