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**EFFECTS OF DIGITAL BANKING CHANNELS ON CUSTOMER EXPERIENCE
WITHIN MICROFINANCE INSTITUTIONS IN KENYA**

MULILI FRANCIS MUTUA

MCOM/149872/2022

**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MASTER OF COMMERCE OF
STRATHMORE UNIVERSITY**



MAY 2024

DECLARATION

I declare that this thesis has not been presented, submitted, or approved for the award of a degree in Strathmore or any other university except where references have been made. No part of this thesis may be reproduced without the permission of the author and Strathmore University.

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Supervisor's Approval

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Supervisor:

Dr. Stella Nyongesa

Lecturer

Strathmore Business School

Signature  Date...30th May 2024

DEDICATION

I express my gratitude to the Almighty God for good health, sound mind and the opportunity to write this thesis. Also, I dedicate this thesis to my beloved family for their love and smiles of encouragement and hope always.



ACKNOWLEDGEMENT

I hereby express my gratitude to Dr. Stella Nyongesa for her honest directions and guidance given to shape my research work.



ABSTRACT

Customer experience remains a key success factor for financial institutions. With the current digital evolution, which has seen an increase in the number of customers, financial institutions have been pushed to re-design their products to adapt to the expectations of the growing digital customers. In a bid to avoid losing out to FinTech companies, banks have moved from their domain to design financial products fitting digital customer opportunities. Some customers prefer to undertake banking and pay bills from the comfort of their homes and transact on 24-hour basis. As a result, the trustworthiness of the banking applications, their ease of use, accessibility, assurance of customer privacy, availability of quality network and web interface is vital for speedy, convenient and reliable offering of satisfactory banking services leading to customer loyalty and positive referrals to their friends. However, Digital banking has also come with several risks including loss of funds and increasing cases of money laundering. Some customers also prefer hard cash because of illiteracy, lack of proper governing regulations and inadequate technological infrastructure. Even with the introduction of mobile, internet banking and electronic banking cards, some of the micro finance institutions customers are reluctant in utilizing the channels. The objective of this study was to determine the effects of digital banking on customers' experience among microfinance bank institutions in Kenya. The conceptual framework in this study was based on the Technology Acceptance Model (TAM) and expectancy disconfirmation theory. For this purpose, the study used descriptive research design and a sample of 400 digital banking customers were selected. Further, primary data was relied upon and was collected using structured questionnaires. A quantitative approach was used to analyze data through SPSS software and the results interpreted and presented using tables and figures. Pearson correlation techniques were used to establish the nature of relationship between the independent and the dependent variables while regression technique was used to determine the effect of digital banking channels on customer experience among microfinance institutions in Kenya. The study concluded that mobile banking, internet banking and electronic card banking in the microfinance institutions are significant determinants of the customer experience among digital banking customers of microfinance institutions in Kenya. The study recommended that the microfinance institutions in Kenya ought to tap on the benefits of the digital banking channels to enhance the experience of their customers. However, the adoption of digital channels comes with its package of challenges including cyber-attacks. The security of the technology systems ought to be enhanced to avoid loss of customer funds and information. The study was limited to digital banking customers in microfinance sector only leaving out customer experiences from other financial sectors including Savings and Credit Cooperatives (SACCO), insurance companies, commercial banks and credit unions.

Keywords: Mobile banking, internet banking, electronic card banking, customer experience and microfinance.

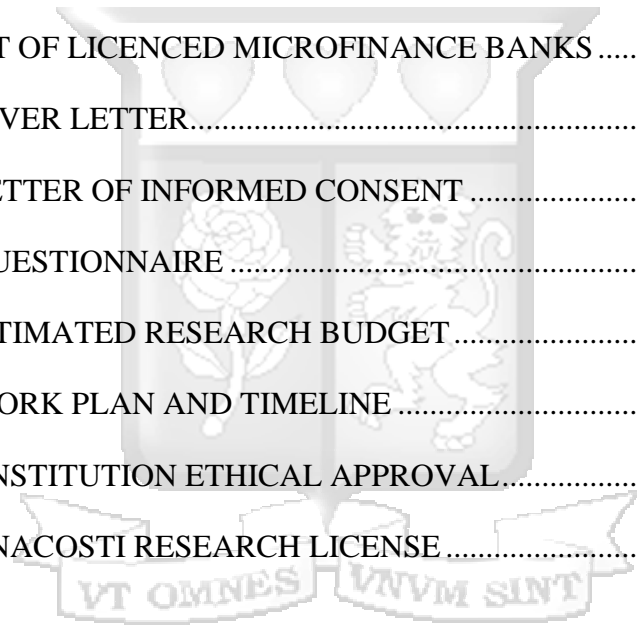
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DEFINITION OF TERMS

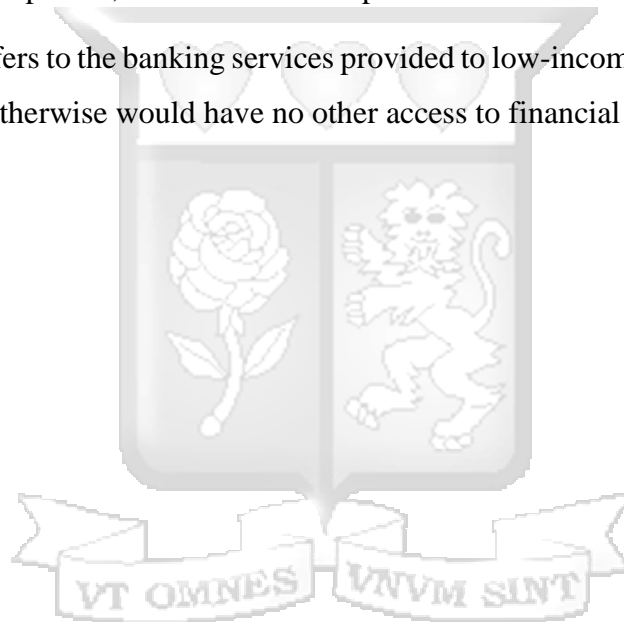
Customer experience refers to the customers' holistic perception of their experience with a company's products or services. It is the extent or the degree to which product consumers are satisfied and happy with the services and/or products offered by a business.

Mobile Banking refers to a product or services offered by the financial institutions through portable technology

Internet banking refers to an automated banking system that enables financial service consumers to transact online through a website operated by the financial institution.

Electronic Card Banking refers to the form of banking where a customer can make debit or credit card purchases in person, online or over the phone.

Microfinance: this refers to the banking services provided to low-income individuals or groups in the economy who otherwise would have no other access to financial services.



LIST OF ABBREVIATIONS

AI	Artificial Intelligence
AMFI-K	The Association for Microfinance Institutions in Kenya
ATM	Automated Teller Machine
CBK	Central Bank of Kenya
CDT	Cognitive Dissonance Theory
DB	Digital banking
DTM	Deposit taking microfinance
E-commerce	Electronic commerce
EDT	Expectancy Disconfirmation Theory
EFT	Electronic fund transfers
EMV chips	Europay MasterCard and Visa
ICT	Information and Communication Technology
KES	Kenyan Shilling
KMO	Kaiser-Meyer-Olkin test
MFI	Microfinance institution
NPS	Net Promoter Score
P2P	Person to person
POS	Point of Sale
SACCO	Savings and credit cooperatives
SMS	Short message service
SPSS	Statistical Product and Service Solutions
SSTs	Self-service technologies
TAM	Technology Acceptance Model
TRA	Theory of Reasoned Action
UK	United Kingdom
UPI	Unified payment interface
USA	United States of America
USSD	Unstructured supplementary service data
WAP	Wireless access protocol

CHAPTER ONE

INTRODUCTION

1.1 Background Information

Technology revolution is making a huge impact on service companies including financial service institutions (Ali, Ally & Dwivedi, 2020). Information technology concepts and techniques applied to banking products and services have become key fundamental subject matter of concern and importance to all financial institutions and undeniably a prerequisite for both local and global competitiveness in the overall banking industry (Okolo et al., 2021). This technological innovation and improvement have made the business competition environment in the financial industry very dynamic and continues to experience swift fluctuations and changes that demand microfinances and other financial institutions to conduct their service offerings to their clients electronically.

The development and rapid advancement of computer technology, Information and Communication Technologies (ICT) have made it easier for financial institutions to create customer value in online platforms and digital space as well as enhancing customer experience (Schreieck & Wieshe 2017). Adoption of digital innovation is an important and crucial success factor in any company that would like to create value leading to customer satisfaction (Edu, Agoyi, & Agozie, 2020). Malaquias and Hwang (2019) noted that digital developments have changed the way banks offer financial services and many organizations currently provide various alternative digital banking channels to enhance the consumer experience.

Over the last decade, customers are increasingly using more self-service banking options for convenience and speed of transacting. If there is strong connectivity of internet and the bandwidth is stable, customers are able to operate their bank accounts anytime and from anywhere (Raza et al, 2020). Customers can therefore, without physically visiting banking premises, perform banking transactions through various digital platforms (Malaquias & Hwang, 2019). Digital banking provides a wide variety and offers comprehensive services from which financial clients can choose from, ranging from account opening services, account balance checking, payment of bills enablement, and notifications through mobile phones upon each transaction processing (Mostafa et al., 2020). The continued new innovations and progression of technology contributed to the introduction of digital transformation processes. Digital transformation is seen as the process of using digital technologies to improve business models as well as improve efficiencies (Galazova & Magomaeva, 2019). Digital solutions such

as internet banking, electronic card banking and mobile banking are regarded as the major disruptors in service delivery within the banking sector and researchers continue to examine the long-term effects of these solutions to traditional banking models (Kuyoro & Olanrewaju, 2020).

Customers' increased usage of digital banking channels in financial transactions and their pursuit for a personalized customer experience has driven financial institutions to review their customer service techniques (Kumar, 2014). Considering the 2008 global financial crisis, and economic recession experienced globally, leaders in the financial sector have been forced to improve on customer experience and lower transaction costs while maintaining their market share. To attain this, banks have invested heavily in the ICT infrastructure to offer quality and proximate service to their customers (Nchake & Shuaibu, 2022).

The ability to do transactions while being physically absent from banking premises enhances customer experience and convenience, eases service delivery, and promotes customer loyalty. Digital banking leads to well-connected and linked business operations geographically and industry-wise (Karim et al., 2022). Therefore, banks must regularly survey to understand customers' service delivery requirements and keep on checking all the customer concerns, which affect or influence the acceptance of digital banking as these would push the banking experience to the next frontier (Wilbert et al., 2022).

Key among the driving components for the acceptance and implementation of digital/online banking includes the expectation to reduce costs of banking and grow revenues generated by the banks while making it convenient for customers to always conduct transactions and access banking products from anywhere. That is how exciting the future of banking looks. Perhaps then, it suffices to elucidate the meaning of digital/electronic banking channels.

1.1.1 Digital Banking Channels

Technology has made it possible for banks to come up with new better ways to improve customer experience through making banking services readily available and easy to access. One such method has been through digitization of services. Digitization of services entails use of technological models that create value in revenue and production processes thereby enabling an organization to explore new services and opportunities (Urbach & Röglinger, 2018). During the last three decades, the witnessed rapid innovation in communication technology and emergence of new information in the financial service sector has influenced the manner in which financial institutions serve customers. Digitization of the banking sector and services

has gone a long way to remove barriers of time and place and hence customers are able to obtain services from wherever they are and at any time (Gikand & Bloor, 2010).

Digital banking involves the type of banking system whereby all the banking processes, products and activities are digitized to serve the customers through online channels. Digital banking covers online banking, mobile banking and use of electronic cards (Boon-itt, 2015 & Garzaro et al., 2020), and the three channels formed the independent variables that this study focused on. These three are regarded as the major disruptors in service delivery within the banking sector and researchers continue to examine the long-term effects of these solutions to traditional banking models (Kuyoro & Olanrewaju, 2020). Online banking entails a system where commercial bank customers access the banking features including loan application and money transfers through the website of the bank using a computer (Musyaffi, et al., 2021) or an internet enabled mobile phone. The advent of digital banking has boosted customer satisfaction on banking services and depending on the adequacy and convenience of the digital banking services of a particular commercial bank, customer experience has also been boosted (Musyaffi, et al., 2021). So, what is digital banking?

Digital banking refers to the aspect of self-service banking enablement to customers giving them access to the bank accounts on mobile devices or online with no bank staff interventions (Boon-itt, 2015). M-banking utilizes mobile devices in banking transactions while internet banking performs banking services through web portals of the bank (Sahoo & Pillai, 2017). It refers to conducting the traditional banking services using computers and other digital devices, which allows the access of banking services through electronic forms (Haralayya, 2021; Do, Pham, Thalassinou & Le, 2022).

Digital banking is the ability by banks to enable customers to access the transactional banking facilities through various technologically secured channels that are data secure, mitigated for risks and are regulated (Dimitrova & Öhman, 2021). Digital banking channels offers the ability to customers to perform banking dealings remotely through the internet by use of a financial institution's specific and dedicated application App or website (Raza et al., 2020). It may also refer to the usage of information technology in the provision of financial or banking services (George & Gireeshkumar, 2014). It's an electronic enablement for banks to offer personalized strategies which provide customers different and relevant financial options including interactive tools and informative or educative information in real-time and that are tailored on what customers really want (Gasser et al., 2017). Further, customers get savings reminders on their gadgets, and this keeps them engaged at the right time. Hence, digital banking simply

means replacement of the physical presence of a bank with a guaranteed online presence that is able to offer banking services at any place and time and hence customers do not have to visit a bank physically (Wadesango & Magaya, 2020).

The demand for convenience and ability to access financial products by customers on 24/7 basis has led to massive investments in self-service technologies and digitally facilitated multi-channel strategy where customers are able to serve themselves at the time of their convenience (Carbó-Valverde et al., 2020). For instance, in 2017, the Central Bank of Kenya (CBK), introduced PesaLink to facilitate person-to-person (P2P) transactions. In return, PesaLink has managed to facilitate digital channels like mobile banking, internet banking, Unstructured Supplementary Service Data (USSD) codes and agent networks, and these have greatly improved the customer experience through boosting self-services (World Bank, 2018). Furthermore, these innovations are meant to increase efficiency and quality of the services that are offered to all the customers (Kumar, Mokha, & Pattnaik, 2022).

Digital banking channels emerged in the 1970s with the installation of the first ATM, then in 1980's telephone banking services was developed (Kangwa et al., 2021). The distribution channels were further extended to internet-based banking applications in the 1990s (Hanafizadeh et al., 2014). From year 2010, provision of mobile banking applications by banks has become the norm enabling customers to bank using mobile technologies such as smart phones or mobile phone (Shaikh & Karjaluoto, 2015). Today in Kenya, with mobile penetration now way over 87% and financial inclusion at 83.7% as at 2022, then potentials lie ahead in the banking sector through digital revolutions (FSD Kenya et al, 2022). This has created opportunities for digital banking in Kenya and almost every Kenyan now has access to a digitized banking platform depending on what they need.

Studies on digital banking have operationalized this variable in various ways. For instance, Mbama and Ezepeue (2018) research about Digital banking and customer experience among the UK banks concluded that its channel's user friendliness, efficiency, access, credibility and web interface is a good measurement parameter of its service quality. Research done by Thaichon et al., (2014) about internet banking quality and customer loyalty in Thailand found out that uptake of digital banking by customers is influenced by network quality, the guarantee of customers' privacy, security and information support. Phan and Bui (2019) in a study to determine the factors affecting the uptake of digital banking in Vietnam said that the ease of using the service provided digitally affects customers' experience and their perceptions towards the service's usefulness. Raza et al., (2015) research on internet banking and customer

satisfaction in Pakistan concluded that the quality of the service offered through the digital channels is an antecedent to digital banking measurement. According to Nguyen and Vo (2019) study on factors that affect digital banking uptake among Asian countries concluded that trust of the channels by customers is an element that shows they feel secure while accessing the digital products offered on digital channels without care and much concern regarding the associated risks and cyber-attacks.

Chen, Sun and Xu (2016) study found out that convenience can be a good measure of customer satisfaction and it can be determined by the transaction processing time saved and the procedural errors reduced when services are accessed online. The study further says that improvement of the digital channels means an increase in convenience, which translates to an increase in customer experience. Fortes and Rita (2016) through a study conducted in Portugal that extended the Technology Acceptance Model (TAM) said that trust, risk and convenience are good parameters in determining whether customers would use digital channels. The fear of losing customers' private information and transactions details forms a barrier to digital banking services (Fortes & Rita, 2016). It therefore follows that reducing the customers' perceived risk increases their positive attitude towards the service.

This study leveraged on Ease of use, trust, accessibility, customer privacy, network quality and web interface to measure the effects of digital banking channels. Due to the temporal separation and spatial distancing between the consumers of digital banking products and the bank employees, it was of essence to look at trust and customer privacy since they are required to provide delicate and private information like identification number, telephone number or credit card numbers for them to be able to transact digitally. According to Nilashi et al., (2015), trust, security/privacy and the customers perceived confidentiality in digital payment systems is an important determinant of digital business success. Further, Ming-Yen Teoh et al., (2013) study in Indonesia said that the transactions between the financial institution's systems and customers are enabled by the customers' trust, the systems ease of use and their accessibility when the customer needs the product or the service. On the other hand, internet banking web interface enables customers to conduct financial transactions over the Internet by giving them the podium or the platform to link-up their personal bank accounts with the bank servers (Amin, 2016). This is further facilitated by the quality of the internet hence being important for this study.

1.1.2 Customer Experience

The banking industry has been taking numerous strategies to systematically monitor the behaviour and the emotions of their customers in order to take steps to improve it so that the customers would be happy and can return (Khanna & Martins, 2018). This then means that business organizations must find ways to interact with their customers to have a feel of what they need improved so that they can be served better. Banks being such businesses have not also been left behind. These interactions may entail understanding the journey of the customer on how they interact with the brands and the environment in which the interactions happen (Suvarchala, & Rao, 2018).

In the recent past, customer experience has become vital in the services sector and banking is no different. It refers to the cumulative interactions that a customer receives through the entire customer journey that ranges from onboarding to the day-to-day transactions' performance (Pennington, 2016). Customer experience may also allude to efforts an organization puts to make each client feel important when they are making an interaction with the bank (Torres et al., 2020). Customers expect financial institutions to focus on establishing an experience culture that promotes their wants, natural trust, and personalization and goes beyond their expectations. Improving customer experience is the first goal of all financial service providers (George & Gireeshkumar, 2014).

In the digital banking service experience, customer expectations include the need for convenience, easy accessibility, real time assistance, affordability, personalised services, online interactivity and data security (Klaus & Maklan's, 2013). Foroudi et al., (2014) study found out that the contemporary customer experience is determined by the company's capacity in using technology. In addition, Mishra, (2016) said that customers expect companies to be able to offer product designs that are in accordance with consumer expectations and being capable of creating memorable experience.

According to McLean (2017) study that was conducted in the United Kingdom (UK), a positive customer experience leading to satisfaction happens when the gap between customers' experiences and expectations has been closed. Thus, financial institutions should continuously seek the opinion of their digital banking customers about their digital banking experience in order to improve. According to the Net Promoter Score (NPS) model, customer experience is the sum of the customers' good experience less bad experience realised during consumption of a company's offering (Baquero, 2022). Helkkula et al., (2012) stated that customer experience

is linked to all customer touch points in time (before, during and after the current period), as well as referring to the customer's perception of an exemplary or ideal service-use experience. In the context of mobile banking in particular, if the service is often new and emerging, imaginary experiences and ideas about the upcoming advancements of the service are also important and should be taken into account (Komulainen & Makkonen, 2018).

Robert Ebo Hinson et al., (2018) study in Ghana recommended managers to ensure effective complaint resolutions and strive towards building trustworthiness to be able to retain and satisfy customers. Simon and Thomas (2016) analysis on the way electronic banking has affected customer satisfaction among the commercial banks in Kenya found that its ease of use, ability for customers to personalize their transactions and the assurance of convenience have a positive effect on customer satisfaction. Positive customer experience has been noted to be a significant element driving customer loyalty and retention and which determines their post-purchase behaviour. Customers Journey originating from onboarding stage to off boarding (customer experience) includes all touch points (points of interaction) between the business's staff and customers has become an important area of product promotion hence receiving substantial publications from scholars and also practitioners (Nimako et al., 2013). Nimako et al., (2013) defined product consumption experience as customer's feeling of satisfaction due to pleasure received or disappointment experienced from comparison of a product's outcome on performance with their expectation.

As captured in the NPS model, customer experience can be measured through monitoring customers' loyalty to the company's offerings, customers' referrals through a positive word of mouth, improved or increased customer retention and reduced customer complaints. According to Klaus and Maklan's (2013) research on the better measures of customer experience in UK, six parameters can be utilised including customer retention, convenience, the quality of service, satisfaction, loyalty intentions and risk perception. Jun and Palacios (2016) exploratory study on the key dimensions about mobile banking service quality in the United States of America (USA) concluded convenience to be a key quality measure leading to a positive customer experience. The functionality qualities of online systems mainly its interactivity features are critical in measuring customer experience. This is according to Garg et al., (2014) study that was done in India. According to Monferrer-Tirado et al. (2016) research conducted among the Spanish banks, customer trust, loyalty and satisfaction affects customer experience.

This study operationalized customer experience by use of customer loyalty, customer satisfaction and referrals by use of positive word of mouth. According to Khoo (2020),

customer loyalty refers to assurance and promise by customers that they consumed a specific service or product in a consistent and continued manner over time regardless of what the competitors have floated in the market and their new offerings and would not be compelled to switch. Similarly, it refers to the evidence of recurrent patronage of service providers and customers' recommendation of the specific service provider to other potential customers (Gunawan, 2022). Ningsih and Segoro (2014) said that customer satisfaction is defined as the customers' indication that they are pleased with a service or product. The study utilized these measurement parameters since if customers are happy and satisfied with digital services provided by an institution, they are likely to consume it consistently building loyalty to the service provider and would most likely refer other customers to that particular service provider (Leninkumar, 2017).

1.1.3 Microfinance Sector in Kenya

As defined by Consultative Group to Assist the Poor (CGAP), a microfinance institution refers to an organization in the business of offering financial services to low-income earners mainly in form of credit, savings and insurance products. It also refers to provision of banking services to the poor (Robinson, 2001; Nair, 2001). The main objective of microfinance industry was to help the poor and the vulnerable access financial services (Campion et al., 2008).

The first microfinance bank was licensed in 2009 in Kenya and since then, the number has increased to 14 as of the end of December 2022 (AMFI-K, 2021). Key among the challenges facing the institutions is low visibility compared to commercial banks, the change in demand for customer experience, centricity and the emergence of digital technology which overtime has created new opportunities and new risks that need to be mitigated. Some of these challenges can be solved by adoption of the emerging digital banking solutions.

According to the Central Bank of Kenya (CBK), Kenya's microfinance sector comprises of deposit taking (DTM) and non-deposit taking microfinance institutions. The DTMs are regulated and licensed by the CBK, they can mobilize for deposits from the public and lend (credit products) to their customers. Non-deposit taking microfinance institution do not mobilize for deposits and can only lend their own funds.

Kenya has one of the most fastest growing microfinance industry in Africa (AMFI-K, 2021). The industry is composed of microfinance banks that are regulated by CBK, deposit-taking and wholesale microfinances. By end of 2021, the microfinance industry was estimated to be valued at KES. 250 billion worth of assets. The 14 regulated microfinance banks (MFBs) in Kenya

have 350 branches across Kenya with 176 of the branches situated in the rural areas, 145 in the urban areas and 40 of the branches are in semi-urban areas. As at the end of 2020, the MFBs in Kenya had accumulated portfolio worth KES. 48.776 billion. The total membership of MFBs was 1,614,856 members with 1,181,418 of them being active savers and 433,438 borrowers. There are 34 credit only microfinance institutions with active loans worth KES. 116,399,996 spread across 255 urban, 147 rural and 48 peri-urban branches across Kenya holding a portfolio worth KES. 13.418 billion. On the other hand, there are only 3 wholesale microfinance institutions holding a total of KES. 6.336 billion in loan portfolio (AMFI-K, 2021). This study however, only focused on the regulated microfinance institutions by the Central Bank of Kenya (CBK) and the Association of microfinance institutions in Kenya (AMFI-K).

According to AMFI-K report (2021), the microfinance sector in Kenya has been facing numerous challenges. The sector was greatly affected by the Covid-19 that disrupted the supply and value chains in Kenya leading to closure of many businesses, and majority of savers could not meet their financial obligations to repay loans on time while some savers found it hard to save with reduced incomes. This constrained the sector in terms of reduced working capital and low liquidity levels. The sector has struggled with poor adoption of technology with many players still using outdated technology to provide services to their clients (AMFI-K, 2021). The sector has also been struggling with low membership as a result of the continued growth of other methods of savings like table-banking and self-help groups that have provided many low-income earners with low interest saving platforms that make interests from the microfinance institutions look high and out of reach. However, as indicated by Masanyiwa et al., (2022) in their research on the factors that determine Sustainability of Microfinance Institutions in Zanzibar, digital banking has greatly helped the sector improve on its membership. The sector is also gradually embracing digital payment channels and digitalized services to improve the experience of their customers and improve on growth of their loan and saving portfolios (Bitok et al., 2020; Masanyiwa, 2022).

1.2 Problem Statement

As technology continues to grow, it is expected that the physical contact between customers and financial institutions may reduce as most of the transactions would be automated and the customers are able to serve themselves (Gituku & Kinyura, 2018). Financial institutions have always believed that with the digital capabilities of bringing customers closer to banks it would lead to ease of transaction processing and further enhance their experience (PWC, 2015). However, the findings by Cisco (2014) contradicted the conclusions above by pointing out that

unlike traditional banking, digital banking tends to weaken the customer-bank relationship by distancing them from their banks. It would lead to a failure by banks to meet customers' expectations hence making them disconnected from the bank's service providers. To a greater extent, digital banking leads to minimal customer-bank interactivity a practice that is common with the traditional banks hence the need for a research to establish the effects of digital banking on customer experience.

While past research shows security issues to have affected the usage of automated banking services (Carlos & Tiago, 2016), minimal work has been done on determining its effects on customer satisfaction when accessing digital products. Digital banking has also come with risks of loss of funds and increasing cases of money laundering (Demetis, 2010). Some customers also prefer hard cash because of illiteracy, lack of proper governing regulations governing the e-transactions and inadequate technological infrastructure (Stix, 2013). Even with the introduction of mobile and internet banking, some of the customers of the micro finance institutions are reluctant in utilizing the service (Mano et al., 2020). Other customers opt to visit the banking branches in person every time they want to transact or make financial enquiry (Rotchanakitumnuai & Speece, 2003).

According to Alsayed and Bilgrami (2017), from the time digital banking was introduced, many users discovered in the hard way that their usage of the digital platforms can expose them to financial risk and loss of their private data to unauthorized users. There are many security issues and concerns raised by customers despite the expected benefits of digital banking which discourages majority of the users eliciting many complaints (Razak, 2016). As technology continues to develop, computer hackers on the other hand continues to come up with new and elusive means of stealing digital bankers' funds (Leukfeldt et Al., 2016). As a result of these concerns, adoption of digital banking still remains low. Kenya in particular, has continued to record increased digital customer complains (Kombo, Paulík & Kwarteng, 2016).

According to Kombo et al. (2016), customers still prefer transacting over the counter than through online platforms raising the question why that is the case? Customers have lost funds through online fraudulent authorization of EFTS and RTGS. Other complains raised by users relates to prevalent system failures inconveniencing customers. Considering the above concerns, this study sought to determine the effects of digital banking on customer experience. Although the effect of the above concerns can relate to both the digital customers and banks, the primary focus of this paper was on digital banking customers since the past researches focus was majorly on the financial institutions.

Literature review revealed a number of contextual, methodological and conceptual gaps that necessitated the current study. Jun and Palacios (2016) study on the quality of service derived from m-banking in USA only focused on those customers who have access to smartphone applications leaving out the customers who use Unstructured supplementary service data (USSD) and computers to access the service a gap that this study sought to address.

The respondents in Komulainen and Saraniemi (2019) study in Finland on customers' experience and the value derived from usage of digital services were limited to 20 to 40 years. Since products designed to be offered digitally are normally are intended for mass use (Komulainen & Saraniemi, 2019), this study addressed this gap by being open to all age groups.

As stated by Eshete Sisay (2021) in the study about digital banking experience in Ethiopian banks, the focus of past scholars has been on commercial banks leaving out other sectors of financial institutions providing financial services like microfinances. In addition, past studies show that businesses have paid a lot of attention on revenues and forgotten the experiences that the customers have with not only the business as an organization but with the products being offered digitally (Jun & Palacios, 2016; Amin, 2016). Chauhan et al., (2022), Sharma and Piplani, (2017) studies was based on secondary data only. Mbama et al (2018) study on interviewed senior managers in UK banks. Further, most of the past studies were done in developed economies and the conclusions of the study might be different if done in developing countries (Eshete, 2021 and Nguyen et al., 2022). This study sought to investigate the effect of digital banking channels on the customer experiences with a focus on Kenya's microfinance institutions. This is because as stated by Cull et al., (2014), commercial banks or fully fledged banks normally have higher competitive advantage over microfinance institutions (MFIs) as far as technological infrastructure, access to capital and strong customer brands is concerned. Further, the study found out that MFIs are less efficient in their operations hence the need for this study to focus on them.

1.3 Research Purpose

The aim of the study was to determine the effect of digital banking channels on customer experience, a case of Microfinance Bank institutions in Kenya.

1.4 Specific objectives

- i. To determine the effects of mobile banking on customer experience among Microfinance Bank institutions in Kenya as a case study.

- ii. To establish the effects of internet banking on customer experience among Microfinance Bank institutions in Kenya as a case study.
- iii. To determine the effects of electronic card banking on customer experience in micro finance institutions in Kenya.

1.5 Research questions

- i. To what extent does mobile banking influence customer experience in Microfinance Bank institutions in Kenya?
- ii. To what extent does internet banking influence customer experience at Microfinance Bank institutions in Kenya?
- iii. To what extent does electronic card banking influence customer experience in the micro finance institutions in Kenya?

1.6 Significance of the Study

This study would be useful to policymakers in the microfinance sector who have been working on improving the customer experience through investment in the digital banking channels like internet, mobile banking, banking wallets and electronic card banking channels. Through use of these channels, the customer experiences may have changed in a positive or negative way. Management in these institutions may learn how digital banking channels affects the customer experience and the issues they may need to improve on like security and web interface of these channels.

The government which has been driving financial inclusion through the central bank will also get information on the experiences customers are getting from utilization of the digital channels and may form a basis of formulation of financial frameworks and regulations in the future.

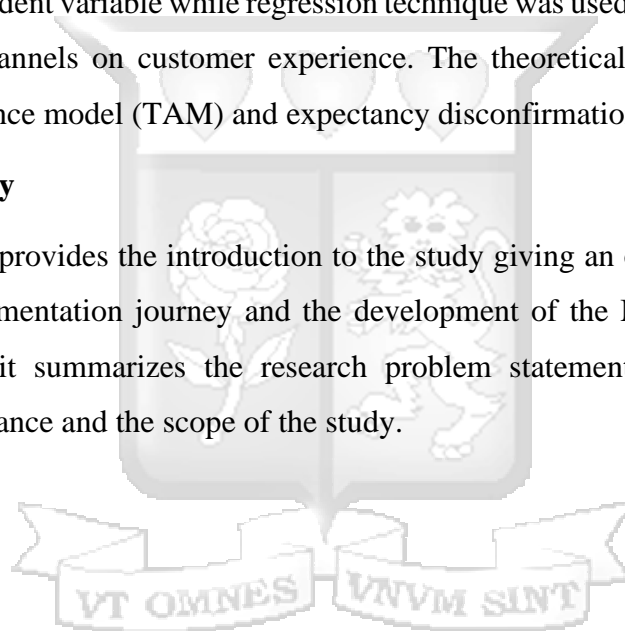
The study also contributed to the existing literature on the role of digitized channels in promoting customer experience in the microfinance sector. Past literature shows that there is a growing trend by many business organizations towards automation of banking and other services to try and centralize service delivery through effective, efficient, fast and real time transactions to ensure that customers are not only served well but they also enjoy the experience (Grzybowski, 2022). This has in return elicited a lot of research around the digital channels and the role they play in making financial institutions serve their customers well and this study hopes to add this growing literature.

1.7 The Scope of the Study

The study sought to establish the extent at which digital banking affects customers' experience focusing specifically on the 14 regulated Microfinance Banks in Kenya. It focused on determining how usage of mobile, internet and electronic card banking affects customer experience and whether it would result to their loyalty and referring others to the microfinance institutions. Convenience sampling was used to obtain primary data which was collected by administering questionnaires to the digital banking customers. Since the study was a purely quantitative study, only quantitative data was considered, descriptive research design was used and Statistical Product and Service Solutions (SPSS) was used to analyze data. Further, Pearson correlation techniques were used to establish the nature of association between the independent variable and the dependent variable while regression technique was used to determine the effect of digital banking channels on customer experience. The theoretical scope was limited to technological acceptance model (TAM) and expectancy disconfirmation theory.

1.8 Chapter summary

In detail, chapter one provides the introduction to the study giving an overview of the digital banking global implementation journey and the development of the Microfinance sector in Kenya. In addition, it summarizes the research problem statement, objectives, research questions, the significance and the scope of the study.



CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The study's literature review begins with a theoretical background grounding and detailed Technology Acceptance Model (TAM) and Expectancy Disconfirmation Theory (EDT) being the two theories which the study is anchored upon. This is followed by a succinct review of empirical literature around the topic of interest and concluded by providing a high-level summary of the main outcomes and findings of the literature review in totality.

2.2 Theoretical Literature Review

This section provides the theoretical underpinnings of this study by providing a review of the main theories that grounded this study and how such theories can be customized to achieve the objectives of this study.

2.2.1 Technology Acceptance Model (TAM)

With the continued growth in technology and its use rapidly increasing, then the main question remains on assessing the willingness of people to accept and use the technology. The behaviour of people on use and application of technology then becomes of interest to organizations to ensure that they get feedback on the experiences of the technology. This remains a serious debate today and TAM has been trying to provide an explanation since its introduction by Fred Davis in 1986. The model provides a succinct explanation of the factors that determine the acceptance or rejection of technological advancement by users (Marangunić & Granić, 2015).

Over the years, this model has tried to provide the nexus between the ease-of-use of technology and the usefulness of the same in a complex web of the characteristics of system and how that system operates. While there are many models and frameworks established to offer detailed clarity on the efficiency and useful use of information technology, TAM has been the most used framework in determining information technology adoption (Legris, Ingham & Collette, 2003). It is a further advancement to Ajzen and Fishbein's Theory of Reasoned Action (TRA) (Priyanka & Kumar, 2013) which was first developed by Fred Davis in 1986 and has over time gone through a series of developments and validations. According to this theory (TAM), the ease of use and the perceived usefulness of a technological application system determines whether it will be adopted by its potential users or not (Davis, 1989).

TAM is a theory of information systems that promulgates the path to be followed in the utilization of new and innovative modern technology to attain information literacy competencies and skills. Perceived usefulness is the subjective or individual perception of the potential users on the likelihood that using certain or some technological applications or systems lead to improved performance whereas perceived ease of use refers to the extent to which potential users of the technologies expect its usage to be effortless (Davis, 1989). According to Venkatesh and Davis (1996), there exists a direct relationship between perceived usefulness and ease of use to the degree of adoption and acceptance of new technology. The security and design of a system stimulate its features, functionalities and capabilities while the perceived ease of use and usefulness are its usage motivators to the users (Lai, 2017).

The model demonstrates the effect of external variables, which includes people's attitudes, beliefs, and intentions. These are factors outside an individual like their technology experience and training received. However, TAM has been criticized despite its wide acceptance. TAM's focus is on the individual user of a technology or computer system bringing out the factors that explain how the user perceives usefulness. It, therefore, fails to factor in the social concepts of information systems enhancement and implementation. It further ignores the social consequences of technology use (Bagozzi 2007). The model overlooks costs and other structural priorities that push people into technology adoption. This study leveraged on the constructs of TAM specifically on the perceived ease of use and usefulness of technology in the context of financial services where digitization of services is rapidly taking roots and customers of financial and non-financial institutions have to contend with either accepting to use the technologies along the digital channels to access the services that they need and the experiences that might emanate in the process. These two tenets were used to determine whether automation of banking services would result to customers' loyalty, satisfaction and compel them make positive reference to their friends regarding digital services.

2.2.2 Expectancy Disconfirmation Theory (EDT)

In today's constant changing and competitive electronic-marketplace, online businesses (e-businesses) that design an effective and strategic thinking about their e-commerce offerings and the related activities which comprises of a fitting, adequately designed website and presentation of quality services would succeed in its appeal to customers and attain a good customer experience and eventually their satisfaction (Elkhani et al., 2013). Expectations-confirmation theory postulates that when customers perceived performance is coupled with expectations, it leads to post-purchase fulfilment and satisfaction. The outcome of this leads to

a negative or positive disconfirmation between performance and the customers' expectations. Post purchase satisfaction only results when a product performance exceeds expectations, which is positive disconfirmation. On the other hand, if the performance of a product is below expectations (negative disconfirmation), dissatisfaction of the customer is likely to occur (Alnaser et al., 2023).

Expectancy Disconfirmation Theory (EDT) is conducted on the foundation of Cognitive Dissonance Theory (CDT) which was authored by Leon Festinger (1957). According to Leon (1957), there is difference between perception of something and its reality. CDT theory further postulate that the perceived dissention results to change of people's idea about their cognition of something and the change has a psychological motive (Bhattacharjee & Premkumar, 2004). This variance between what a person thinks about the quality of a given product and what they experience from the product's actual performance encourages them to change their feeling about cognition (Harmon-Jones, 2007). Expectancy Disconfirmation Theory can be used to measure customers' satisfaction through determining the difference or the gap between what the customer's expected and their actual experience in perceived products or services (Oliver, 1980a, Spreng & Jr., 2003 & Patterson, & Johnson, 1997). This theory consists of four major constructs, which includes expectations, perceived performance, disconfirmation, and satisfaction.

Expectations refers to a person's anticipation in relation to a product or technology. Expectations are postulated to have a direct influence on the perceived performance and disconfirmation. This paper which used loyalty and satisfaction as a measure of customer experience was well grounded by the tenets of this theory which ties expectations to performance and post purchase behavior. Customers' motivation to adopt utilization of a product depends on their already predicted outcomes or the perceived value (Rahman, 2014). Therefore consumers' drive toward satisfaction and loyalty improves when the expected value creation is high. It therefore follows that the customers banking through online channels would be motivated if they trust that their expectancy (perceived values) would result to e-satisfaction, and e-satisfaction would result to customer e-loyalty. Perceived performance shows consumers experience after using products and it can be better or worse than their expectation (Spreng et al., 1996).

Disconfirmation is the difference between customer's original expectation and their actual felt product performance (Bhattacharjee & Premkumar, 2004). If a product outperforms the

customers' initial expectations, the disconfirmation would be positive and it is postulated to lead to increased satisfaction and hence post-purchase satisfaction. If the outcome is underperformance from the initial expectations, the disconfirmation would be negative, and it is posited to decrease post-purchase satisfaction. Satisfaction is the extent to which a person is contented with a product or technology after having gained direct experience. Satisfaction therefore becomes an affective customer condition, which comes as a result of overall assessment of all the features that sum up to the customer connection or relationship (Anderson & Sullivan, 1993). EDT postulates that self-actualization from a service or product is the principal incentive for its continued use or continuance (Oliver, 1980). This study leveraged on the constructs of EDT to evaluate the services that customers need from financial institutions and the experiences that might emanate in the process.

2.3 Empirical Literature Review

This section provides a review of the past studies done by researchers around each of the variable of interest for this study.

2.3.1 Mobile banking and Customer Experience

Mobile banking commonly known as M-banking refers to a product or services offered by the financial institutions through portable technology (Tam & Oliveira, 2017). The continued investment in the use of mobile banking in the microfinance sector is geared towards ensuring that customers are able to get real-time services. This has been possible through continued improvement in such applications and innovations to ensure that the expectations of their customers and their experiences are improved. Mobile banking has emerged to be among the key priorities by financial institutions in provision of banking services (Sahoo & Pillai, 2017).

In Bangladesh, Islam et al (2018) undertook a research to establish the factors that affect customer experience in mobile banking based on a survey of 231 mobile customers picked across 9 private commercial banks. The study used descriptive and inferential statistics resulting from both the regression and Structural Equation Modelling (SEM) analyses and the findings showed that mobile banking customers valued convenience of the services and services that responded to their needs. The customers also looked at their security anytime they visit an ATM and how easy or difficult it was to use the technologies designed to provide the banking services. These factors were then found to significantly affect the customer experiences in using mobile banking.

Komulainen and Saraniemi (2019) investigated how customer value can be improved by use of mobile banking as the sole source of improving profitability and the overall financial performance of banking institutions in Finland. The researchers found that it was critically important that the financial institutions considers the centrality of the customers and the desired experiences while designing mobile banking services. This study was in agreement with Laukkanen, and Lauronen (2005) who found that the financial institutions can equally add value to their customers through mobile banking services by ensuring that mobile-banking products not only improve the experiences of the customers but also add value to them through saving them from the trouble of long-distances to the banking halls and queuing for services and wasting time.

In the United States of America (USA), Jun and Palacios, (2016) conducted an exploratory study to examine the main dimensions of mobile banking service quality based on m-banking customers' perception, and to further identify the critical satisfiers or dissatisfiers within the identified dimensions. With 900 respondents drawn from the 13 biggest financial institutions in USA, a total of 17 dimensions of m-banking service were revealed which were divided into: (i) mobile banking application quality (content, accuracy, ease of use, speed, aesthetics, security, diverse mobile application service features, and mobile convenience), and (ii) mobile banking customer service quality (reliability, responsiveness, competence, courtesy, credibility, access, communication, understanding the customer, and continuous improvement). From the 17 aspects studied, the key causes of customer satisfaction/dissatisfaction were found to be the convenience associated with m-banking, its accuracy, diverse and distinct mobile application service features, ease of use (usage with minimal effort), and continuous improvement.

Chemingui and Lallouna's (2013) study that utilized SPSS with 579 respondents in Northern Jordan aiming at determining the factors motivating customers to adopt M-banking in Jordan found out that the critical features include customers' effort expectancy (ease of use), trust and performance expectancy. These findings were similar to the research that was done in Sweden by Arvidsson (2014) who examined the attitude of customers towards adoption and embracing mobile payment services and concluded that the channel's ease of use was the most important feature to motivate customers. Additional factors from the study were trust, low perceived or supposed security risk and age of the customers, which have positive influence towards usage of the digital products and service.

Hanafizadeh et al. (2014) research on the factors influencing customers' acceptance of mobile banking in Iran through incorporation of 361 bank service consumers in the country examined eight (8) latent factors which includes the seeming usefulness, supposed ease of use, customers' desire for interaction, customer's perceived risk, perceived cost, compatibility of the customers' lifestyle, perceived credibility and trust. Of the 8 variables, it was found that the significant ones explaining mobile banking adaptation were trust and adaptation or compatibility with lifestyle. The researchers utilized Structural equation modelling (SEM) to analyze data.

In Kenya, Simon et al (2016) investigated the nexus between electronic banking and customer satisfaction among 262511 customers that were picked through stratified sampling from 5 first-tier banks in Nairobi City County. Through a descriptive design, the study found that the flexibility of mobile banking greatly influenced customer experience and the more flexible it was, then the more it was used by customers. In addition, the research also identified that the reason customers use mobile banking is because it was very easy and user-friendly. This was in agreement with a similar study by Chepkulei and Shibairo (2015) that mobile banking was vital for Kenyans due to its ease of access and user-friendliness.

Some of the options available to customers through mobile banking are mobile app, USSD or SMS to access financial services. Mobile phones have contributed to the development of new strategies on digital customer experience and engagement in the banking field. The most important feature of a mobile phone is its portability (Dehnert & Schumann, 2022). Through M-banking, customers no longer need to visit banking branches every time they want to access their accounts. Portability of mobile phones has allowed customers to access banking services anywhere and anytime (Burki et al., 2000). Through the introduction of an internet-based portal, customers with mobile phones can carry out different services of banking including payment of various bills, electronic funds transfer, airtime purchase without having to travel to a nearby branch. It entails a system where the commercial bank customers assess the banking features such as money transfers, bill payments using mobile apps installed in their mobile phones (Jana et al., 2021). Mobile banking is a disruptive tool, which provides the customers with round the clock access to banking services which is convenient, quick, easy and hassle-free experience. The model is considered useful especially in provision of accessibility and efficiency of banking services since it abolishes location and time related barriers (Mortimer et al., 2015). This enables time saving, customers get information in real time and a feeling of convenience and the pride of being in control of bank account activities.

Study by Hassan et al., (2022) on the effect of electronic banking on customer satisfaction found out that customer experience was positively and significant improved by mobile banking, use of ATMs and the POS. Their research used random sampling and interviewed 174 customers across the main banks in Kenyan banks, namely Equity Bank, ABSA Bank Kenya, Kenya Commercial Bank (KCB), Co-operative Bank, and Standard Chartered Bank and analyzed their results by a descriptive research design.

According to Kurweil (2005), all walks of human life have been impacted by technology, and as a result gradual improvement in the quality of life has been noted. The way in which businesses are carried out has changed with technology, which has contributed to convenience and low cost of transactions (Leung & Matanda, 2013). The diverse benefits that emanate from these advancements have left banks with no option but to embraced technology leading to shifts to digital banking from branch banking due to the development of self-service technologies (SSTs).

The first form of mobile banking in history was performed in 1990's using SMS. This was followed by introduction of the smartphones which had wireless access protocol (WAP) and the mobile web in 1999. After 2010, M-banking has gone through technological revolution leading to development of iOS by Apple and Android which was developed by Google. Web based technology emerged which enabled mobile banking applications.

From customers' point of view, mobile banking means provision of all banking services through smart phones, which translates to bank account access and transacting through banking applications. Key among the reasons why it has become very popular is (i) it is user friendly (Alalwan et al., 2015), (ii) convenience, (iii) penetration of smartphones, (iv) anywhere, anytime access (Lee & Chung, 2009). According to RBI (2014), mobile banking enables customers do funds transfer, payment of bills, bank account balance enquiry, run account statements all the time during day and night (Baptista & Oliveira, 2016). Despite the mobile banking benefits to customers and banks and the accessibility of technology, customers adoption of the channel is still low and at its initial stages (Mullan et al., 2017) and hence the need for more research. The focus of most of the studies done on mobile banking has been on its adoption by consumers (Shaikh & Karialuoto, 2015, Tam & Oliveira, 2017) which has been criticized by recent literature suggesting that the critical concern for financial services is the customer experience derived from m-banking services which affects continuance of its usage (Tam & Oliveira, 2017, Thakur, 2014). With the limited focus on customer experience while

using m-banking, this study shed light on it which would provide important insights to banks on how to engage customers and have them continuously use their digital channels.

2.3.2 Internet Banking and Customer Experience

According to George and Kumar (2014), financial institutions are making use of the innovation by development of different distribution and financial payment channels to win the loyalty of tech-savvy consumers. The key element contributing to development of internet banking to a greater extent is the internet service integration. Internet banking which is also referred to as online banking refers to an automated banking system which enables financial service consumers transact online through a website operated by the financial institution. Instead of customers physically visiting branches or using their telephone, they manage all their financial services on the internet. This is done through the customers' home computer or through their smartphones. Advancements in technology led to emergence of completely new means by which companies reach out to customers. Due to this innovation, the banking industry is facing massive revolution in its financial service delivery to customers. This has in return elicited a lot of empirical studies trying to understand how internet banking has affected the customer experiences.

The world retail banking report (2020) estimated that 57% of the banking customers chose to use internet banking during the last COVID-19 pandemic as compared to 49% before the pandemic. The report also indicated that 30% of the customers were willing to shift to other internet-banking platforms if they experienced unsatisfactory services and experiences. The Accenture banking report (2020) estimated that 30% of customers changed their banks in search for better survives, high-quality support, and competitive banking rates, 61% of the customers saying that they expected to have an online access of their banks so that they can get their queries addressed in real-time and get services all the time they needed them, and 31% of the customers were willing to pay more for better customer experience. This highlights how important it is for financial institutions to pay close attention to customer experience through internet or online banking.

Deraz and Iddris (2019) did a systematic review on the effect that internet banking had on the satisfaction of customers using 44 articles published in this area of study. They noted that Asia had the highest number of studies that had tried to determine how internet banking affected customer satisfaction. Their review showed that the main factors that customers consider when using internet banking included the quality of the services, the quality of the information they

get, and the quality of the product that is offered through internet banking. This was in agreement with Mbama et al (2018) who found in the United Kingdom, the quality of the services, the perceived value, the customization of services, the speed at which the services are offered, the employer-employee relationship, the trust on the brand/or business, the nature of digital-banking innovation, security considerations and justifications, and perceived ease of use of the digital platform were the key determinants of customer experience and satisfaction with digital banking.

To enhance customer service and reduce cost of operations, majority of banks have adopted internet banking which according to Wang et al., (2017), it's the highest profit generation electronic commerce (e-commerce) application. Online banking not only satisfies customers but also benefits the financial institutions (Shahzad et al., 2017; Rahi & Ghani 2016). This is because it enables customers access banking operations and activities from wherever and at all the time at low cost (Yoon & Steege, 2013). Despite the increase in the number of internet banking users, the level of its uptake is low which could be due the low quality of its services (Li-hua, 2012). Banking customers give different views regarding the quality of service delivered through internet banking. Even through its users appreciate its competitive advancements, it is noted that alone it cannot guarantee quality relationship between consumers and banks. Therefore, consumer experience is a key factor in developing strong relationship (Chen 2013; Dahlstrom et al., 2014). Several studies have been done on the quality of internet service regarding online shopping (Carlson, 2012) and also in financial sector but there is little evidence as to whether electronic customer experience has been assessed (George & Kumar, 2014; Shankar & Jebarajakirthy, 2019; Hammoud et al., 2018; Rahi & Ghani, 2019). This study filled in this gap.

2.3.3 Electronic Card Banking and Customer Experience

Electronic cards (debt and credit card) gives customers the ability to make card purchases either online or in person and enables the card holders to walk with virtual money linked to their bank accounts (Maison & Maison, 2019). An empirical analysis was conducted by Aslam et al. (2019) on the effect of ATM service quality on customer satisfaction and customer loyalty. The data was collected from 360 ATM users in Karachi, Pakistan, using a structured questionnaire. The results indicated that fulfilment is the most essential determining factor of customer satisfaction for ATM service quality. Reliability was also found to be an important contributor of customer satisfaction of ATM services. Security and privacy was another significant dimension of ATM service quality in predicting customer satisfaction. Installation of CCTV

cameras and the presence of security guards on on-site ATMs have increased the trust factor in customers during transactions. Customer satisfaction had a strong influence on customer loyalty. Responsiveness had an insignificant effect on customer satisfaction. Convenience has a positive insignificant impact on customer satisfaction. The study was however conducted in Pakistan whereas the current study was conducted among the micro finance institutions in Kenya presenting and contextual gap.

Quan (2014) did carry out a study on customer satisfaction level towards credit card. The findings of the study pointed out that the use of credit card plays a very important role in online purchasing and contributes significantly to the economy of one nation. Due to the under-developed infrastructure and purchasing habit, credit card transaction still takes a very small proportion and promises a very large space to develop. Responsiveness is an area where customers show the lowest satisfaction and assurance earns the highest concern from customers in terms of credit card usage. The study was conducted among the commercial banks in Ho Chi Minh City, Vietnam presenting both conceptual and contextual gaps as the current study focuses on the micro finance institutions in Kenya.

A research study was conducted by Nigatu et al. (2023) on the effects of automated teller machine service quality on customer satisfaction among the commercial banks of Ethiopia. cross-sectional data was collected through a questionnaire from a sample of three hundred forty-six (346) ATM users selected from Semera-logia City, Asyaita, and Awash Town. The findings indicate that convenience, reliability, ease of use, fulfilment, and security/privacy of ATM service quality dimensions are positively and significantly associated with customer satisfaction. Contextual, conceptual and methodological gaps were however notable from the study.

Research conducted by Mwangi (2014) in Kenya on the factors influencing consumer satisfaction with credit cards in NIC which sampled over 10,000 credit card holders concluded that credit card interest rate was competitive compared to other offerings in the market and the related penalties were lower than those of competing products. However, the results also indicated that the organization did not provide enough information to enable the customers use credit cards wisely. The conclusion of the research further said that customer service was the basis for business expansion because of the stiff competition prevalent in the banking industry. Whereas this study was focused on NIC bank in Kenya, the current study focused on micro finance institutions in Kenya presenting a contextual gap.

2.4 Summary of knowledge Gaps

Literature review highlights that technology is the main driver of the increased use of digital channels in the financial sector. With growing technologies, banks and microfinance institutions have been forced to leverage on digital channels such as mobile-banking, internet/online banking, use electronic card banking, text messages for passing messages, mobile money wallets and use of AI, in order to serve their customers easily and efficiently so as to increase their experiences. Literature shows that empirical studies on the nexus between digital banking channels and customer experiences has mainly focused on commercial banks and little attention has been paid to other sectors offering financial services including microfinance institutions. Moreover, the existing empirical literature has focused on using either quantitative or qualitative data in standalone studies and the findings have been mix eliciting to so much debate in this area. This study therefore focused on microfinance institutions to close on this gap.

In addition, there seems to lack consensus on the impact of digital banking channels on customer experience from the different scholars. While some scholars' conclusions are that digital capabilities help financial institutions in bringing customers closer to banks and lead to ease of transaction processing and further enhance their experience, other researchers found out that this believe is not always the case. Part of the literature shows that unlike traditional banking practices, digital banking tends to weaken the customer-bank relationship by distancing them from their banks while most customers still hold the view that a good relationship is on face-to-face basis. Accordingly, most of the digital banking customers interviewed in previous studies in this area felt disconnected from the bank's service providers. These different conclusions by different researchers opens a need to determine how digital banking which is associated with minimal face to face business interactions affects customer experience and especially in Kenya which is a developing country. Therefore, this study added into the body of knowledge in this area.

Further, some scholars focus was on utilization of only mobile or internet banking Apps which are only accessed using smart phones. This locked out the views and experiences from all other customers whose digital banking transactions are done through other mobile platforms like Unstructured Supplementary Service Data (USSD), Short Message Service (SMS) and Interactive Voice Response (IVR). Age groups have also limited some scholars work with some focusing on 20 to 40 years' age group which is a representative of majorly the customers who are digitally knowledgeable and can easily navigate well through the digital platforms and

hence their views could mostly provide reliable data and positive user experience. Also, most of the studies done in the past have focused on the extent of adoption of digital banking; some have studied factors affecting continued usage of digital banking, service quality, impact of digital banking on the financial institutions financial performance giving minimal attention on the effects it has on customer experience. To close on these gaps, this study sampled digital banking users in all age groups and from all digital platforms to determine how their experience is while using the digital channels.

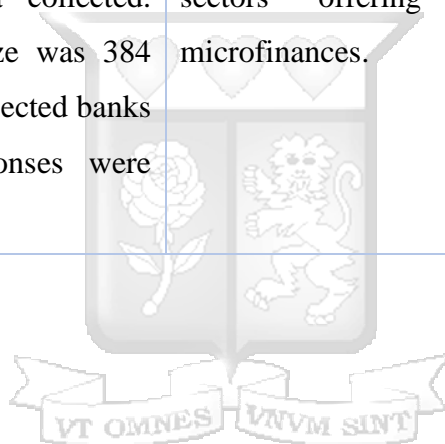
In addition, most of the studies have been done in the developed countries which already have an established digital infrastructure hence the conclusions could be different from a developing country. These are some of the gaps that this study leveraged on in the Kenyan context.



Table 2.1: Summary of Knowledge gaps

Author/Source	Aim of study	Methodology	Research Gap	Findings
Jun and Palacios (2016)	To examine the key dimensions of m-banking service quality.	Critical incident technique (CIT) - a qualitative analysis technique was used. Data collected from 900 customers among the 13 biggest US banks. QSR International N-Vivo 10 software was used for data analysis and coding.	Respondents were only picked from those customers with access to smartphone applications leaving out the experiences from other channels of m-banking like Unstructured Supplementary Service Data (USSD), Short Message Service (SMS) and Interactive Voice Response (IVR) channels were not considered. Further, USA is a developed economy compared to Kenya where this study was carried out.	Mobile convenience, ease of use, accuracy, diverse mobile application service features, and continuous improvement lead to customer satisfaction and hence positive experience.
Komulainen and Saraniemi (2019)	To increase the understanding on how banks can increase customer value in digital banking service.	The research was a qualitative case study. Data was collected using 2 methods i.e theme interviews and diaries analysed using a content analysis method. There	The interviewees age group was only limited to age 20 to 40 years which is considered to be proficient in modern technology use leaving out all other age groups. Since digital applications are normally designed for mass use, this study took responses from all age groups to fill in this gap.	Digital banking creates value for customers.

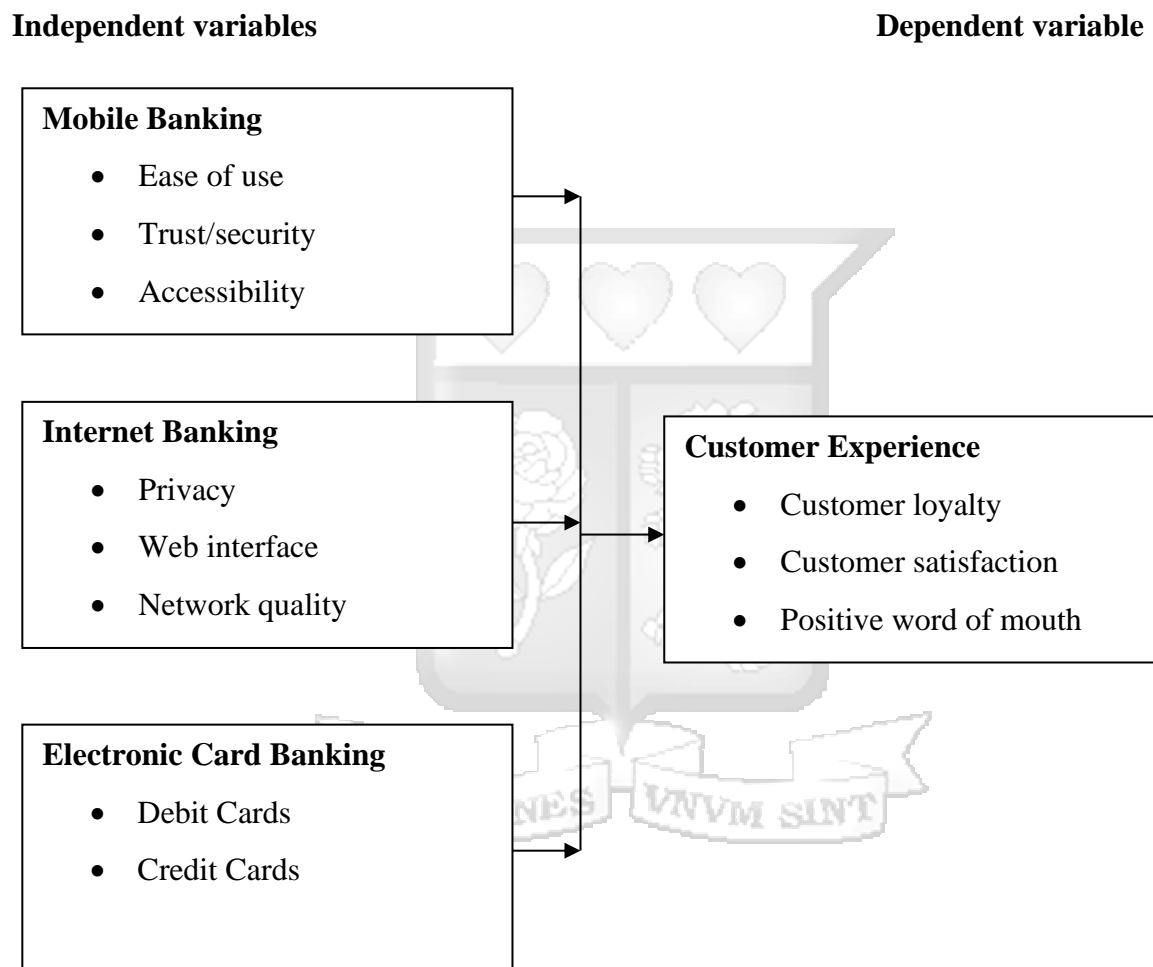
		were 14 participants who were interviewed.		
Eshete Sisay (2021)	To examine effect of digital banking on customer experience among the commercial banks in Addis Ababa, Ethiopia.	Quantitative approach was used and employed both descriptive and explanatory designs and primary and secondary data collected. The sample size was 384 customers in selected banks and 372 responses were received.	The study only considered customers of commercial banks leaving out other sectors in financial sector. It further gave a recommendation for future studies to consider incorporating other sectors offering financial services like microfinances.	Digital banking affects customer experience significantly and in a positively way.



2.5 Conceptual framework

The conceptual framework as indicated in Figure 2.1 is a representation of the relationship between the variables considered in this research work. The independent variables are mobile banking, internet banking and electronic card banking. The dependent variable is customer experience.

Figure 2.1: Conceptual Framework



Source: Researcher, 2024

2.6 Operationalization of study variable

Variable	Type of Variable	Indicators	Data Collection Method	Measurement (Likert Scale)	Data analysis	Supporting literature
Mobile banking	Independent	<ul style="list-style-type: none"> Ease of use Lower transaction charges Saves time 	Questionnaire	1=strongly disagree, 2=disagree, 3=somewhat agree 4=agree, 5=strongly agree	Quantitative analysis (Descriptive)	Fortes & Rita (2016); Davis (1993), Muluka et al., (2015)
Internet banking	Independent	<ul style="list-style-type: none"> Convenience Security Privacy 	Questionnaire	1=strongly disagree, 2=disagree, 3=somewhat agree 4=agree, 5=strongly agree	Quantitative analysis (Descriptive)	Fortes & Rita (2016); Muluka et al., (2015)
Electronic card banking	Independent	<ul style="list-style-type: none"> Debit cards Credit cards ATMs 	Questionnaire	1=strongly disagree, 2=disagree, 3=somewhat agree 4=agree, 5=strongly agree	Quantitative analysis (Descriptive)	Aslam et al. (2019); Quan, V. D. H. (2014)
Customer experience	Dependent	<ul style="list-style-type: none"> Customer loyalty Customer satisfaction Positive word of mouth 	Questionnaire	1=strongly disagree, 2=disagree, 3=somewhat agree 4=agree, 5=strongly agree	Quantitative analysis (Descriptive)	Klaus (2013) Alalwan et al., (2016) Mbama and Ezepue (2018)

2.7 Chapter summary

This chapter outlined a detailed review of the appropriate literature concerning the effects of digital banking channels on customer experience. It also comprises the theoretical framework which outlines in details 2 appropriate theories upon which the study was anchored. In addition, it summarizes the existing study gaps, conceptual framework and a conceptualization of the independent and dependent variables.



CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter describes the research methods and techniques that the research utilized to gather data and conduct the analysis of the same. It outlines the location of the study, the sample size, the sampling methods, the research design and the data collection procedures.

3.2 Research Philosophy

According to Collis and Hussey (2014), research philosophy refers to the framework that gives guidelines on how research should be conducted built on concepts about realism and the nature of facts and knowledge. Further, it contains the important assumptions that the researcher holds while conducting his/her study (Creswell & Clark, 2017). This research work was underpinned by the Positivism research philosophy and carefully measured and analyzed numerical data to determine the effects of digital banking channels on customer experience among the microfinance institutions in Kenya. The advocates of this philosophy believe with certainty that information can be collected by use of objective measurements and observations (Xie, 2016). With positivist research philosophy, large samples are used and the hypothesis testing is scientifically done. The results are then analyzed scientifically to give logical results (Collis & Hussey, 2014). As per the philosophy, only factual information gained through observation can be trusted. In addition, the philosophy supports testing the research hypothesis by use of quantitative approach (Yilmaz, 2013).

3.3 Research Design

A research design entails the procedures used by a researcher in collecting data, analyzing the data, interpreting it and reporting the results in research studies. It sets the procedure on kind of data required, the methods to be adopted in the collection and analysis of data as well as answering research questions (Boru, 2018). This study adopted a descriptive cross sectional research design that systematically and accurately defines a population, or the situation being analyzed. Its aim and focus is on the analysis and final report on the data collected and analyzed (Mugenda & Mugenda, 2003). The research design was selected because the respondent's response can include their opinions, practices and attitude about a particular issue (Nardi, 2018). Yin (2013) said that descriptive research design allows the researcher to make adequate and effective conclusions on large data. According to Gravetter and Forzano (2012), this type of design focuses on practices, opinions held by different people, relationships, observable

trends and practices. This study by use of this research design established and outlined the influence of digital banking channels on the customer experience in microfinance institutions in Kenya.

3.4 Population and sampling

Population in research work is described as the entire collection of elements that possess similar traits upon which a researcher wanted to draw conclusions from (Marczyk, DeMatteo, & Festinger, 2010). There were 14 licensed microfinance banks in Kenya and a total population of 1,614,856 customers as of the end of December 2022 (AMFI-K, 2021). This formed the population for this study.

3.4.1 Target Population

The target population is the entire group of units the researcher wants to make an analysis on and base his conclusion upon (Lavrakas, 2008). The unit of analysis was the micro finance institutions in Kenya. The target population therefore comprised the digital banking customers of the regulated microfinance institutions. The study was based on digital banking customers' particularly mobile banking, electronic card banking and internet banking customers in the microfinance regulated sector in Kenya.

Table 3.1 Target Population

Target respondents	Population
Customers in the regulated microfinance sector in Kenya	1,614,856

Source: (AMFI-K, 2021)

3.4.2 Sampling Technique

As described by Jha (2014), a sample in research refers to a unit of the entire population upon which the researcher has chosen to base his/her study on, and the results can be generalized or applied to the entire population. A sample should be a good representative bearing all the characteristics of the whole population and the process of obtaining a sample is referred to as sampling and it saves research time, energy and money. The study adopted convenience sampling to select respondents from the 14 licensed microfinance banks in Kenya. Depending on the size of the institution which was determined by considering the number of branches per each microfinance (Table 3.2), questionnaires were given to the microfinance institution

customers by use of convenience sampling in the 14 regulated microfinance institutions in Kenya (appendix 1).

3.4.3 Sample Size Calculation

To determine the sample size for this research work, Yamane (1967) technique was used which utilizes the formula;

$$n = \frac{N}{1+N(e^2)}$$

Where;

n = the sample size

N = population size

e = error of 5%

By applying the formula, the sample size was;

$$n = \frac{1,614,856}{1 + 1,614,856 (0.05^2)}$$

n = 400.

The researcher therefore conveniently sampled 400 digital banking customers of microfinance institutions in Kenya. Table 3.2 shows the sample size per each microfinance institution.

Table 3.2 Sample size per each microfinance institution

Microfinance institution	Number of branches	Sample size
1) Faulu microfinance bank limited	39	143
2) Kenya women microfinance bank plc	31	114
3) Rafiki microfinance bank limited	17	62
4) SMEP microfinance bank limited	7	25
5) Sumac microfinance bank limited	3	11
6) Caritas microfinance bank limited	2	7
7) Branch microfinance bank limited	2	7

8) LOLC Kenya microfinance bank plc	2	7
9) Choice microfinance bank limited	1	4
10) Daraja microfinance bank limited	1	4
11) U & I microfinance bank limited	1	4
12) Salaam microfinance bank limited	1	4
13) Maisha microfinance bank limited	1	4
14) Muungano microfinance bank plc	1	4
Total	109	400

Source: (AMFI-K, 2021)

3.5 Data Collection Instruments

Salkind (2010) describes data collection as an orderly process of gathering information upon which different variables in the study was measured to enable the researcher draw conclusions and answer appropriately the research questions. This study relied on primary data that was collected using structured questionnaires. According to Patten (2017), a questionnaire refers to a set of written questions with a selection of replies developed for purposes of statistical analysis or study (Chakrabarty, 2013). The usage of questionnaire forms in the process of data collection is an appropriate tool of survey since it allows the respondent the freedom to express their independent views, opinion and suggestions and provide well-thought responses, which facilitates efficiency especially when working on large samples. The questionnaires were administered to the respondents through drop and pick later method to allow the respondents ample time to fill the questionnaires. The questionnaires were issued to the random customers who were found in each of the microfinance institutions at the time of visiting the institution based on the sample of each (Table 3.2). The researcher visited the sampled microfinance offices in person with the assistance of data enumerators to meet the customers. The questionnaire (Appendix 4) comprised of two sections. These are respondents' demographic information, sections on mobile banking, internet banking and customer experience. The questionnaire contained close-ended questions for the demographic information and Likert scale items where respondents were requested to show their levels of agreement on a 1-5 scale (strongly disagree to strongly agree).

3.6 Data Collection Procedures

All ethical matters pertaining research work was carefully taken into consideration as the researcher together with the enumerators administered data collection instruments and keenly explained to the customers the objectives of the study. The branch managers of the respective microfinance institutions were adequately briefed on the purpose of the study in advance. The customers who visited the banking branches of the microfinance institutions on the dates of carrying out the data collection exercise were approached in person and requested to participate in the study. The questionnaires were collected immediately from the respondents after filling. In case the respondents needed assistance on the information in the questionnaires, clarity was provided.

3.7 Quality of Research

3.7.1 Validity

The practice of using various measures of constructs in a study to produce sufficient proof of the effects and connection of various research variables is called validity. It also refers to the ability of the research conclusions arrived at by using study samples being a good representative of a similar population outside the study sample. Validity of the research instrument was measured using both content and construct validity. For content validity, the research supervisor was consulted widely on the contents of the instrument and whether the goal of the study could be achieved using the instrument. In addition, the views and improvements of the respondents with regards to the instrument were incorporated before the actual data collection exercise. For construct validity, KMO tests was used.

3.7.2 Reliability

As highlighted by Kothari (2017), reliability of research work refers to the extent and ability of the study instruments to consistently yield the same results even on multiple trials. The research instrument's reliability in this study was tested by testing and retest method. Therefore, the researcher administered the research instruments and re-administer them again after a short duration (2 weeks) to determine the relationship between the results obtained to be able to determine their reliability. Further, Cronbach's alpha statistical instrument was used for consistency of questionnaires. The nearer the Cronbach's alpha coefficient is to 1.0, the greater the consistency of the items in the scale where alpha value is $> 0.9 =$ Excellent, $> 0.8 =$ Good, $> 0.7 =$ Acceptable, $> 0.6 =$ Questionable, $> 0.5 =$ Poor, and $> 0.5 =$ Unacceptable" (Joseph

& Rosemary R., 2003). The threshold for this study was 0.7. The reliability test results are outlined in Table 3.3.

Table 3.3: Reliability Test Results

	Cronbach's Alpha
Customer Experience	0.754
Mobile Banking	0.751
Internet Banking	0.766
Electronic Card Banking	0.767

From the results, the Cronbach's Alpha values for all the variables are >0.7 ($0.754 > 0.7$, $0.751 > 0.7$, $0.766 > 0.7$ and $0.767 > 0.7$) indicating the values were within the acceptable limits.

3.7.3 Piloting

Piloting can be referred to as a feasibility study and it involves a small-scale preliminary testing, which is done before the main research (Crossman, 2019). It assists the researcher to effectively design the research protocols and methods. According to Crossman (2019, piloting involves selection of few items representing the whole population and applying the study tests on them. Therefore, with a sample size of 400 respondents, piloting in this study was done on 42 respondents, equivalent of 10% of the sample size as per Mugenda and Mugenda (2003) recommendation. The piloting work was conducted in Nairobi County since all the regulated microfinance institutions have offices or branches in the county. This helped pretest the study instruments before starting the actual study and helped inform the researcher to spot any possible ambiguity and do the necessary adjustments. To achieve this, 42 questionnaires (3 in each of the 14 regulated microfinance banks) was distributed to the selected microfinances to test relevance, accuracy and reliability of the design and questions in the questionnaire. During the pilot test phase, the researcher approached randomly the first 3 customers who physically visited the 14 microfinance institutions.

3.8 Data Analysis

A quantitative approach was used to analyze the data collected and used the Statistical Product and Service Solutions (SPSS). Further, to be able to offer a description of the primary attributes of the data that was collected, descriptive statistics was calculated. This enabled in simplification of the data and the research variables (Sekaran & Bougie, 2016).

The study applied the Pearson correlation techniques to determine the effects and nature of the relationship between digital banking and customer experience. In addition, regression analysis was used in evaluating the significance of the relationship between the independent and dependent variables. The regression model was:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

Y = customer experience among digital banking customers of microfinance institutions in Kenya, β_0 is the constant or intercept term, β_1 , β_2 and β_3 is the slope coefficients, X_1 = mobile banking, X_2 = internet banking, X_3 = electronic banking cards and ε = error term.

Descriptive statistics were used to describe the results of this research, which was presented in form of percentages and frequency tables. Then a spearman's correlation was applied in assessment of the relationship between the study variables.

3.7 Ethical Issues in Research

According to Coopers and Schindler (2014), ethics in research requires the author to observe honesty and not misrepresent or falsify information, avoid bias when interpreting data, not to plagiarize, give references where quotes are obtained from prior work and obtain consent from sampled respondents and ensure confidentiality of the data received. During this research, respondents were informed in advance of their participation rights or withdrawal freedom from participating. The researcher obtained an introductory letter from Strathmore school of business which was always disclosed to the respondents. In addition, approval from National Commission for Science, Technology and Innovation (NACOSTI) was obtained before beginning the collection of data and ethical approval from Strathmore University ethical committee. The study also ensured no plagiarism through paraphrasing of work and acknowledgment of other scholars through citations.

3.8 Chapter summary

The chapter presented the research methodology that the study adopted. It outlined the research design, research philosophy, the target population and the sampling methods that were employed. Additionally, the chapter detailed the data collection methods and research quality that involved checking the instrument validity, reliability as well as the data analysis techniques. The chapter ended by outlining the ethical issues that were observed during the research.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.1 Introduction

The chapter outlines the analysis of data as well as presentation of the results. Primary data was utilized in the study. Data was collected using a structured questionnaire. The objective of the study was to determine the effect of digital banking channels on customer experience, a case of Microfinance Bank institutions in Kenya. Specifically, the study sought to explore the effect of mobile banking, internet-banking and electronic card banking on customer experience among the licensed Microfinance Bank institutions in Kenya. The analysis results were presented in the form of descriptive and inferential statistics while the descriptive results were presented in the form of percentages, means and standard deviation. Inferential statistics were presented in the form of correlation and regression results.

4.2 Response Rate

Response rate is composed of the total number research questionnaires that were appropriately filled and returned to the researcher by the respondents. The sample size for the study was 400 digital customers who formed the respondents. However, since 42 respondents took part in the pilot phase, they were not included in the main study. Thus, a total of 358 questionnaires were administered in the study out of which 267 questionnaires were duly filled and received back representing a response rate of 74.6 percent (74.6%). Fincham (2008) pointed out that a response rate of approximately 60 percent is sufficient for research work. Thus, the study response rate was sufficient and the results are tabulated in Table 4.1.

Table 4.1: Response Rate

	Frequency	Percentage (%)
Response	267	74.6%
Non-Response	91	25.4%
Total	358	100%

Source: Primary data 2024

4.3 Demographic Characteristics

The study analyzed the demographic characteristics of the respondents which included their age, their level of education, gender and the number of years they had been using digital banking channels.

4.3.1 Gender

The study sought to determine the gender classification of the respondents. The results are outlined in Table 4.2.

Table 4.2: Gender of the Respondents

	Frequency	Percentage (%)
Male	137	51.3%
Female	130	48.7%
Total	267	100%

Source: Primary data 2024

From the results, the responses received from male gender were 51.3 percent while the female respondents total was 48.7 percent. This implies that both male and female have bank accounts and have adopted digital banking operations at the various microfinance institutions in Kenya. The results are consistent with the findings of Lee et al. (2022) who indicated in their study that despite the large difference between female and male migrants in income and education, training led to positive impacts on mobile banking use by both female and male migrants substantially narrowing the gender gap. However, the increases in adoption did not lead to similar patterns in usage.

4.3.2 Age

The study sought to determine the age classification of the respondents. The results are as shown in Table 4.3 below.

Table 4.3: Age Bracket of the Respondents

	Frequency	Percentage (%)
18-30	35	13.1%
31-40	182	68.2%
41-50	35	13.1%
Above 50	15	5.6%
Total	267	100%

Source: Primary data 2024

From the results, majority of the digital customers who responded to this study were within the age of 31 to 40 years forming 68.2 percent. In addition, 13.1 percent of the respondents were aged between 18 and 30 years and between 41 and 50 years. Finally, 5.6 percent of the participants in the study were aged above 50 years. This is an indication that majority of the participants in the study were youthful population, a tech savvy age bracket and which can

effortlessly navigate through the digital platforms. Therefore, their views mostly provided reliable data for this study.

4.3.3 Education Level

The study sought to determine the highest education levels attained by the respondents. The results are outlined in Table 4.4 below:

Table 4.4: Level of Education of the Respondents

	Frequency	Percentage (%)
Secondary	38	14.2%
Diploma	55	20.6%
Degree and above	174	65.2%
Total	267	100%

Source: Primary data 2024

It can be observed from the results that majority of the respondents (65.2 percent) had attained a degree and above as their highest level of education as at the time of study. Further, 20.6 percent of the respondents had diploma and 14.2 percent had secondary education as their highest level of education at the time of study. These results imply that majority of the respondents were literate and able to proficiently use digital banking channels and their responses could be relied upon for purposes of the study.

4.3.4 Years of Digital Banking Channels Usage

The study sought to determine the number of years the respondents had been using the various digital banking channels. The results are outlined in Table 4.5.

Table 4.5: Years of Digital Banking Channels Usage

	Frequency	Percentage (%)
Less than 2 years	37	13.9%
2-5 years	60	22.5%
6-10 years	97	36.3%
Over 10 years	73	27.3%
Total	267	100%

Source: Primary data 2024

As can be noted from the results, 36.3 percent of the respondents had indicated that they had been using digital banking channels for a period between 6 and 10 years. However, 27.3 percent of the respondents had been using the digital banking channels for over 10 years, 22.5 percent for a period of 2 to 5 years and finally 13.9 percent for less than 2 years. The number of years

of usage of digital banking channels affect the level of awareness and the perceived usefulness of the digital banking customers and therefore there being 63.6% (36.3% and 27.3) of the responses having used digital banking for over 6 years, there responses were from practical and actual experiences and could give accurate views for this study. Hossain (2023) study indicated that acceptance of digital banking is affected by the level of awareness, perceived usability, privacy, cost of transactions and web features.

4.4 Descriptive Analysis

Descriptive statistics in the study were provided in the form of percentages, mean and standard deviations. The study utilized primary data that was collected using a structured questionnaire. The responses were measured using a Likert Scale ranging from the values 1 to 5 with value 1 implying that the response was in strong disagreement and value 5 indicating that the respondent was strongly in agreement. The study further computed the means with a mean of 1 indicating that the average response was in strong disagreement, mean of 2 implying disagreement, mean of 3 implying moderately in agreement, mean of 4 implying an agreement on average and finally a mean of 5 implying a strong agreement on average.

4.4.1 Mobile Banking

A summary of the responses on the questions on mobile banking are tabulated in Table 4.6

Table 4.6: Descriptive Statistics for Mobile Banking

	M	S. Dev
It is always very simple doing banking via mobile applications i.e App and USSD code.	3.8	1.0
It's easy to navigate through mobile banking options and find the information that you need	3.9	1.0
The user menus are clearly categorized and are well laid for the customer to choose.	3.8	1.0
The organization and structure of m-banking content is easy to follow	3.8	0.9
You feel secure conducting banking transaction via mobile channel	3.8	0.9
You feel self-assured and confident while using mobile banking method to access money from your bank account.	3.9	0.9
Your mobile banking is error free.	3.9	1.1
You can conduct your mobile banking transaction any time and from anywhere around the clock.	4.0	0.9
It ensures that your banking information is always at your figure tips	3.8	1.0
Mobile banking offers you the convenience you require	4.0	0.9
Aggregate Mean and Standard Deviation	3.9	0.96

Source: Primary data 2024

The mean and standard deviation of the statement on whether it is always very simple doing banking via mobile applications i.e App and USSD code were 3.8 and 1.0 respectively implying that the responses were in agreement on average. The question on whether it is easy to navigate through mobile banking options and find the information that one need had a mean and standard deviation of 3.9 and 1.0 respectively. The mean of the statement, the user menus are clearly categorized and are well laid for the customer to choose was 3.8 and its standard deviation was 1.0. The organization and structure of m-banking content is easy to follow had a mean of 3.8 and a standard deviation of 0.9. The statement on whether customers feel secure conducting banking transaction via mobile channel had a mean of 3.8 and a standard deviation of 0.9.

You feel self-assured and confident while using mobile banking method to access money from your bank account had a line mean and standard deviation of 3.9 and 0.9 respectively. The statement, your mobile banking is error free had a mean of 3.9 and a standard deviation of 1.1. Furthermore, the statement that one can conduct mobile banking transaction at any time and from anywhere around the clock had a mean of 4.0 and a standard deviation of 0.9. Mobile banking ensures that your banking information is always at your figure tips had a mean and standard deviation of 3.8 and 1.0 respectively. Finally, the statement, mobile banking offers the convenience required had a line mean and standard deviation of 4.0 and 0.9 in that order. The aggregate mean and standard deviation for the statements on mobile banking were 3.9 and 0.96 respectively implying that on average, the respondents were in agreement with the statements about m-banking.

4.4.2 Internet Banking

A summary of the responses on the questions on internet banking are tabulated in Table 4.7

Table 4.7: Descriptive Statistics for Internet Banking

	M	S Dev
Your privacy is protected on your bank's website	3.9	1.0
There are enhanced security features while using internet banking like use of passwords, biometric or facial recognition.	3.9	1.0
The bank has ensured real-time notifications and updates you on suspicious transactions in your account, allowing you have peace of mind.	3.8	1.0
You are protected from identity theft that can happen through cyber-crimes.	3.8	0.9
No frequent and prolonged system downtimes	3.7	1.0

The banking links provided are problem free, accurate and the pages download easily.	3.7	1.0
I am always able to get on the site quickly	3.8	0.9
The bank's website offers all relevant information about its products and services.	3.8	0.9
The website design is aesthetically attractive	3.8	1.0
The login process of your online bank is secure	3.8	1.0
The information presented on your online bank's website is clear and understandable	3.8	1.0
Aggregate Mean and Standard Deviation	3.8	0.97

Source: Primary data 2024

From the results, the statement your privacy is protected on your bank's website recorded a line mean and standard deviation of 3.9 and 1.0 respectively implying the responses were in tandem on average. The question, there are enhanced security features while using internet banking like use of passwords, biometric or facial recognition had a mean and standard deviation of 3.9 and 1.0 respectively. The statement, the bank has ensured real-time notifications and updates you on suspicious transactions in your account, allowing you to have peace of mind, received a mean of 3.8 and its standard deviation was 1.0. You are protected from identity theft that can happen through cyber-crimes had a mean of 3.8 and an SD of 0.9. Furthermore, the statement, there are no frequent and prolonged system downtimes had a mean of 3.7 and a standard deviation of 1.0.

The banking links provided are problem free, accurate and the pages download easily, recorded a mean and standard deviation of 3.7 and 1.0 respectively. The statement, I am always able to get on the site quickly recorded a mean of 3.8 and an SD of 0.9. Furthermore, the statement, the bank's website offers all relevant information about its products and services recorded a mean of 3.8 and a standard deviation of 0.9. The website design is aesthetically attractive got a mean and standard deviation of 3.8 and 1.0 respectively. Finally, the statement on whether the login process of the online bank is secure had a mean and standard deviation of 3.8 and 1.0 respectively. The aggregate mean and standard deviation for the statements on internet banking were 3.9 and 0.97 respectively implying that on average, the respondents were in agreement with the statements .

4.4.3 Electronic Card Banking

A summary of the responses on the questions on electronic card banking are tabulated in Table 4.8

Table 4.8: Descriptive Statistics for Electronic Card Banking

	M	S Dev
With debit cards, customers are able to make purchases and withdraws anytime without visiting the bank	3.9	0.9
The utilization of debit cards is less costly and safe	3.8	0.9
With availability of ATMs, bank services can always be accessed even outside the bank operating hours	3.7	1.0
Credit cards offers customers easy accessibility of bank credit services	3.7	0.9
Credit cards are convenient as it allows customers to make purchases on credit	3.9	0.9
Credit cards are convenient and reliable to use	3.8	1.0
Aggregate Mean and Standard Deviation	3.8	0.93

Source: Primary data 2024

From the results, the question with debit cards, customers are able to make purchases and withdraws anytime without visiting the bank recorded a mean and standard deviation of 3.9 and 0.9 in that order indicating the responses were in tandem on average. The question, the utilization of debit cards is less costly and safe had a mean and a standard deviation of 3.8 and 0.9 respectively. Furthermore, the statement, with availability of ATMs, bank services can always be accessed even outside the bank operating hours recorded a mean of 3.7 and a standard deviation of 1.0. In addition, the statement, credit cards offer customers easy accessibility of bank credit services had a mean of 3.7 and a standard deviation of 0.9. Credit cards are convenient as it allows customers to make purchases on credit had a mean of 3.9 and a SD of 0.9. Credit cards are convenient and reliable to use attracted a mean and standard deviation of 3.8 and 1.0 respectively. The aggregate mean and standard deviation for the statements on electronic card banking were 3.9 and 0.93 respectively implying that on average, the respondents were in agreement with the statements.

4.4.4 Customer Experience

A summary of the responses to the questions on customer experience are tabulated in Table 4.9

Table 4.9: Descriptive Statistics for Customer Experience

	M	S Dev
I would continue using digital banking products in the future.	3.8	1.0
Digital banking services would be my first choice when I need to use banking services.	3.8	0.9

Are you willing to recommend digital banking services to your friends or colleagues?	3.8	1.0
Digital banking saves your time	3.9	0.9
You are honestly happy with your bank providing digital banking services	3.8	0.9
The bank gives prompt responses to my requests by e-mail or other means	3.7	1.0
The bank quickly resolves problems I encounter with my online transactions	3.7	1.0
Your concerns and complains are timely resolved digitally.	3.8	1.0
I would say positive things about digital banking services when I talk to my friends or relatives	3.9	1.0
I would recommend digital banking to my friends or relatives when they need the related information	3.9	1.0
I would encourage my good friends or relatives to use digital banking services.	3.8	0.9
Aggregate Mean and Standard Deviation	3.8	0.96

Source: Primary data 2024

From the outcomes, the question, I would continue using digital banking products in the future recorded a mean and standard deviation of 3.8 and 1.0 respectively implying the responses were in tandem on average. The question, digital banking services would be my first choice when I need to use banking services had a mean and standard deviation of 3.8 and 0.9 respectively. Furthermore, the statement, we are willing to recommend digital banking services to our friends or colleagues recorded a mean of 3.8 and its standard deviation was 1.0. Digital banking saves your time had a mean of 3.9 and a standard deviation of 0.9. Furthermore, the statement, you are honestly happy with your bank providing digital banking services recorded a mean of 3.8 and a standard deviation of 0.9.

The bank gives prompt responses to my requests by e-mail or other means attracted a mean and standard deviation of 3.7 and 1.0 respectively. The statement, the bank quickly resolves problems I encounter with my online transactions had a mean of 3.7 and a standard deviation of 1.0. Furthermore, the statement, your concerns and complaints are timely resolved digitally recorded a mean of 3.8 and a standard deviation of 1.0. I would say positive things about digital banking services when I talk to my friends or relatives attracted a mean and standard deviation of 3.9 and 1.0 respectively. In addition, the statement, I would recommend digital banking to my friends or relatives when they need the related information recorded a mean of 3.9 and a standard deviation of 1.0. I would encourage my good friends or relatives to use digital banking services had a mean of 3.7 and a standard deviation of 0.9. The aggregate mean and standard deviation for the statements on customer experience were 3.9 and 0.96 respectively implying that on average, the respondents were in agreement with the statements.

4.5 Inferential Analysis

The inferential statistics of the study involved both correlation and regression analysis. Correlation analysis serves to determine the strength and direction of relationship between the digital banking channels and customer experience. Regression analysis serves to determine the linear relationship between the dependent and the independent variables in the study. The dependent variable was customer experience while the independent variables were mobile banking, internet banking and electronic card banking.

4.5.1 Correlation Analysis

Correlation analysis serves to determine the strength and direction of relationship between the digital banking channels and customer experience of microfinance institutions in Kenya. Correlation results are outlined in Table 4.10

Table 4.10: Correlation Results

		Customer Experience	Mobile Banking	Internet Banking	Electronic Card Banking
Customer Experience	Pearson Correlation	1	.569**	.531**	.555**
	Sig. (2-tailed)		0.000	0.000	0.000
	N	267	267	267	267
Mobile Banking	Pearson Correlation	.569**	1	.532**	.501**
	Sig. (2-tailed)	0.000		0.000	0.000
	N	267	267	267	267
Internet Banking	Pearson Correlation	.531**	.532**	1	.483**
	Sig. (2-tailed)	0.000	0.000		0.000
	N	267	267	267	267
Electronic Card Banking	Pearson Correlation	.555**	.501**	.483**	1
	Sig. (2-tailed)	0.000	0.000	0.000	
	N	267	267	267	267

** Correlation is significant at the 0.01 level (2-tailed).

Source: Primary data 2024

As can be observed in Table 4.10, mobile banking had a positive and statistically significant relationship with customer experience among the digital banking customers of microfinance

institutions in Kenya ($r=0.569$, $p=000<0.05$). The correlation between internet banking and customer experience among the digital banking customers of microfinance institutions in Kenya was both positive and statistically significant ($r=0.531$, $p=000<0.05$). The correlation between electronic card banking and customer experience among the digital banking customers of microfinance institutions in Kenya was both positive and statistically significant ($r=0.555$, $p=000<0.05$).

4.5.2 Linear Regression Analysis

Regression analysis serves to determine the linear relationship between the dependent and the independent variable in the study.

Mobile Banking and Customer Experience

The section outlined the linear regression analysis for mobile banking and customer experience.

Table 4.11: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.569a	0.324	0.321	0.44343

a Predictors: (Constant), Mobile Banking

Source: Primary data 2024

It can be observed from the results in Table 4.11 that the estimated model explains to a tune of 32.4% of the total variations in customer experience of microfinance institutions in Kenya. This is supported by the R Squared value of 0.324 in the estimated model. This implies that mobile banking is significant in explaining customer experience of microfinance institutions in Kenya.

Table 4.12: ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	24.975	1	24.975	127.017	.000b
Residual	52.107	265	0.197		
Total	77.083	266			

a Dependent Variable: Customer Experience

b Predictors: (Constant), Mobile Banking

Source: Primary data 2024

The results outlined in Table 4.12 points out the statistical significance of the estimated model. This is supported by the estimated P value in the model ($0.000<0.05$) as well as the estimated F value (127.017) less than the F critical 2.08380 from the F tables.

Table 4.13: Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.33	0.142		16.383	0.000
Mobile Banking	0.411	0.036	0.569	11.27	0.000

a Dependent Variable: Customer Experience

Source: Primary data 2024

From the results, the coefficient of mobile banking was positive (0.411) and statistically significant ($p=0.000<0.05$). This implies that a unit improvement in mobile banking by the microfinance institutions in Kenya would yield a significant 0.411 units' improvement in customer experience among digital banking customers of microfinance institutions in Kenya. Thus, the study concludes that mobile banking in the microfinance institutions is a significant determinant of the customer experience among digital banking customers of microfinance institutions in Kenya.

Internet Banking and Customer Experience

The section outlined the linear regression analysis for internet banking and customer experience.

Table 4.14: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.531a	0.282	0.279	0.45714

a Predictors: (Constant), Internet Banking

Source: Primary data 2024

It can be observed from the results that the estimated model explains to a tune of 28.2% of the total variations in customer experience of microfinance institutions in Kenya. This is supported by the R Squared value of 0.282 in the estimated model. This implies that internet banking is significant in explaining customer experience of microfinance institutions in Kenya.

Table 4.15: ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	21.703	1	21.703	103.85	.000b
Residual	55.38	265	0.209		
Total	77.083	266			

a Dependent Variable: Customer Experience

b Predictors: (Constant), Internet Banking

Source: Primary data 2024

The results outlined in Table 4.15 points out the statistical significance of the estimated model. This is supported by the estimated P value in the model ($0.000 < 0.05$) as well as the estimated F value (103.85) less than the F critical 2.08380 from the F tables.

Table 4.16: Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.549	0.136		18.763	0.000
Internet Banking	0.367	0.036	0.531	10.191	0.000

a Dependent Variable: Customer Experience

Source: Primary data 2024

The coefficient of the variable internet banking was positive (0.367) and statistically significant ($p=0.000 < 0.05$). This implies that a unit improvement in internet banking by the microfinance institutions in Kenya would result in a significant 0.367 units improvement in customer experience among digital banking customers of microfinance institutions in Kenya. Thus, the study concludes that internet banking is a significant determinant of the customer experience among digital banking customers of microfinance institutions in Kenya.

Electronic Card Banking and Customer Experience

The section outlines the linear regression analysis for electronic card banking and customer experience.

Table 4.17: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.555a	0.308	0.306	0.44858

a Predictors: (Constant), Electronic Card Banking

Source: Primary data 2024

It can be observed from the results that the estimated model explains to a tune of 30.8% of the total variations in customer experience of microfinance institutions in Kenya. This is supported by the R Squared value of 0.30.8 in the estimated model. This implies that electronic card banking is significant in explaining customer experience of microfinance institutions in Kenya.

Table 4.18: ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	23.759	1	23.759	118.074	.000b
Residual	53.324	265	0.201		
Total	77.083	266			

a Dependent Variable: Customer Experience

b Predictors: (Constant), Electronic Card Banking

Source: Primary data 2024

The results outlined points out the statistical significance of the estimated model. This is supported by the estimated P value in the model ($0.000 < 0.05$) as well as the estimated F value (118.074) less than the F critical 2.08380 from the F tables.

Table 4.19: Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.337	0.147		15.919	0.000
Electronic Card Banking	0.414	0.038	0.555	10.866	0.000

a Dependent Variable: Customer Experience

Source: Primary data 2024

The coefficient of electronic card banking was positive (0.414) and statistically significant ($p=0.000 < 0.05$). This implies that a unit improvement in electronic card banking by the microfinance institutions in Kenya would yield a significant 0.414 units improvement in customer experience among digital banking customers of microfinance institutions in Kenya. Thus, the study concludes that electronic card banking is a significant determinant of customer experience among digital banking customers of microfinance institutions in Kenya.

4.5.3 Multiple Regression Analysis

Regression analysis serves to determine the linear relationship between the dependent and the independent variables in the study. The dependent variable was customer experience while the independent variables were mobile banking, internet banking and electronic card banking. The regression results are outlined in the following sections.

Table 4.20: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
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.675a	0.456	0.45	0.3994
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a Predictors: (Constant), Electronic Card Banking, Internet Banking, Mobile Banking

Source: Primary data 2024

It can be observed from the results in Table 4.20 that the estimated model explains to a tune of 45.6% of the total variations in customer experience of microfinance institutions in Kenya. This is supported by the R Squared value of 0.456 in the estimated model. This implies that the independent variables under study including electronic card banking, internet banking and mobile banking are significant in explaining customer experience of microfinance institutions in Kenya.

Table 4.21: ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	35.128	3	11.709	73.402	.000b
Residual	41.955	263	0.16		
Total	77.083	266			

a Dependent Variable: Customer Experience

b Predictors: (Constant), Electronic Card Banking, Internet Banking, Mobile Banking

Source: Primary data 2024

The results outlined in Table 4.21 points out the statistical significance of the estimated model. This is supported by the estimated P value in the model ($0.000 < 0.05$) as well as the estimated F value (73.402) less than the F critical 2.08380 from the F tables. The estimated results can therefore be used for further analysis to give reliable inference.

Table 4.22: Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.659	0.153		4.307	0.000
Mobile Banking	0.217	0.041	0.3	5.278	0.000
Internet Banking	0.158	0.039	0.229	4.068	0.000
Electronic Card Banking	0.22	0.041	0.294	5.353	0.000

a Dependent Variable: Customer Experience

Source: Primary data 2024

The regression model estimated was:

$$Y = .659 + .217X_1 + .158X_2 + .22X_3$$

Where:

Y = customer experience among digital banking customers of microfinance institutions in Kenya, X_1 = mobile banking, X_2 = internet banking and X_3 is the electronic card banking

From the results, the coefficient of the variable mobile banking was positive (0.217) and statistically significant ($p=0.000<0.05$). This implies that a unit improvement in mobile banking by the microfinance institutions in Kenya would yield a significant 0.217 units improvement in customer experience among digital banking customers. Thus, the study concludes that mobile banking in the microfinance institutions in Kenya is a significant determinant of the customer experience among digital banking customers.

The coefficient of the variable internet banking was positive (0.158) and statistically significant ($p=0.000<0.05$). This implies that a unit improvement in internet banking by the microfinance institutions in Kenya would result in a significant 0.158 units improvement in customer experience among the users. Thus, the study concludes that internet banking is a significant determinant of the customer experience among digital banking customers of microfinance institutions in Kenya.

The coefficient of electronic card banking was positive (0.22) and statistically significant ($p=0.000<0.05$). This implies that a unit improvement in electronic card banking by the microfinance institutions in Kenya would yield a significant 0.22 units improvement in customer experience among digital banking customers of microfinance institutions in Kenya. Thus, the study concludes that electronic card banking is a significant determinant of the customer experience among digital banking customers of microfinance institutions in Kenya.

4.6 Chapter summary

The chapter presented the response rate of the study, the analysis of the demographic information of the respondents as well as descriptive analysis as per the objectives of the study. Furthermore, the chapter outlined the inferential analysis results including correlation and regression analysis results.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

Based on the objectives of this study, this chapter outlines the findings, summary of the conclusions and makes recommendations for future studies based as per the study limitations.

5.2 Discussion

5.2.1 Mobile Banking and Customer Experience

The objective of this study was to determine the effects of mobile banking on customer experience among Microfinance Bank institutions in Kenya. The study sought to establish the effect of mobile banking's ease of use, security and accessibility that is associated with the channel on customer experience. The study found out that m-banking is easy to use by customers, it's accessible, secure, saves time compared to the traditional banking means and its less costly. From the results, the correlation results pointed out that mobile banking had a positive and statistically significant relationship with customer experience among the digital banking customers of microfinance institutions in Kenya. The regression results pointed out that the coefficient of the variable mobile banking was positive and statistically significant. Therefore, a unit improvement in mobile banking by the microfinance institutions in Kenya would yield a significant improvement in customer experience. Thus, the study concluded that mobile banking in the microfinance institutions is a significant determinant of customer experience among digital banking customers of microfinance institutions in Kenya. This means that mobile banking is both easy to use and useful and therefore the study confirms the tenets of TAM which postulates that customers perceived usefulness and ease of use determines their technology acceptance.

The results are consistent with the findings of Hassan et al (2022) who found that customer experience was positively and significantly improved by mobile banking. As per Ayo et al., (2016) research, the design of M-banking channel of providing financial services was made to ensure customers convenience. The implication of this is that mobile banking users exercise control over activities/transactions of their accounts even without necessarily the need to physically visit banking branches.

Carlos and Tiago (2016) findings on the other hand was that the M-banking users experience has great effect on their subsequent satisfaction. According to the researcher, some of the users

mobile devices lack quality interfaces resulting to poor customer experience. These interfaces include but not limited to poor and worn-out phone keypads, some phones have very small screens while other customers are constraint by poor communication bandwidth (Carlos & Tiago, 2016). While in agreement to these findings, Ayo, Oni, Adewoye and Eweoya (2016) study concluded that prior customer experience leads to formation of perceptions which affects future experiences. As a result, Minjoon and Sergio (2016) said that mobile banking service consumers require easy to use devices. Further, by mere fact that a service is readily available throughout does not directly imply that its consumers are satisfied with it. Therefore, to increase digital proficiency, financial institutions need to continually train its digital service consumers (Carlos & Tiago, 2016). The author further said that consumers with the capability of transacting through m-banking channel with minimal efforts (ease of use) are happy, feels digitally proficient and proud due to mastery of the digital channel. Booth (2014) while in support of training of mobile banking users said that in the event that customers are not aware or are not able to comprehend and navigate through the digital channel, they are likely not to use it.

Lähtenmäki and Nätti, (2013) research findings further contents with this study's conclusion by saying that even with continued development and introduction of new and modern ways of banking including mobile banking, customers are yet to attain complete satisfaction and further feels not to be achieving the expected value from these new channels. According to the researcher, the main cause of this feeling by customers is that the proponents and designers of the digital channels and new applications mainly focus on the provider requirements and customers are viewed as the target marketing field by the banks (Heinonen et al., 2013). Therefore, customer needs, pain points and their everyday business activities and practices are not fully considered in the design of the channel (Lähtenmäki and Nätti, 2013). These sentiments were advanced further by Medberg and Heinonen, (2014) who said that when banks are designing the mobile applications, it's important to have full understanding of their customers including their personal life happenings to be able to create value which would result to loyalty and satisfaction.

In addition, Mullan et al. (2017) underscored that despite the mobile banking benefits to customers and banks and the accessibility of technology, M-banking is still at its initial stages of adoption.

5.2.2 Internet Banking and Customer Experience

The study's objective was to determine the effects of internet banking on customer experience among Microfinance Bank institutions in Kenya. It sought to establish the effect of internet banking's privacy, web interface, convenience and security on customer experience. The study found internet banking to be convenient, to have security features and assures customers of their privacy while transacting leading to a positive customer experience. From the results, the correlation between internet banking and customer experience among the digital banking customers was both positive and statistically significant. The regression results pointed out that the coefficient of the variable internet banking was positive and statistically significant. This implies that a unit improvement in internet banking by the microfinance institutions in Kenya would result in a significant improvement in customer experience. Thus, the study concluded that internet banking is a significant determinant of customer experience among digital banking customers of microfinance institutions in Kenya. Internet banking refers to an automated banking system which enables financial service consumers to transact online through a website operated by the financial institution. The respondents having confirmed to be happy with digital channels and would be ready to refer their friends to similar banking practices, alludes to a positive disconfirmation which is an indication of performance exceeding expectation as outlined by Expectancy Disconfirmation Theory.

Deraz and Iddris (2019) showed that the main factors that customers consider when using internet banking included the quality of the services, the quality of the information they get, and the quality of the product that is offered through internet banking. Mbama et al (2018) research found that the service quality, its perceived worth or value as advanced by Technology Acceptance Model, the customization of service, the speed at which the services are offered, the employer-employee relationship, the trust on the brand/or business, the nature of digital-banking innovation, security considerations and justifications, and perceived ease of use of the digital platform were the key determinants of customer experience and satisfaction with digital banking.

The findings of this research work are supported by the findings of Sahoo and Pillai (2017) which indicated that the financial institutions have been making continuous investments in internet banking to ensure that the expectations of their customers and their experiences are improved. Internet banking has emerged to be among the key priorities by financial institutions in provision of banking services. According to Wang et al., (2017) most of financial institutions have adopted internet banking as a move to enhance customer service and reduce cost of

operations which is termed as the highest revenue and profit generation electronic commerce (e-commerce) application. Online banking not only satisfies customers but also benefits the financial institutions. This is because it enables customers access banking operations and activities from wherever and at all the time at low cost.

Research by Yoon and Steege (2013) found out that online banking has exclusive features that customers miss in traditional mode of banking. Customers have a choice from wide range of options from internet banking services which can be accessed with no time limit or place barriers and at low transactional cost. Fonseca (2014) research was in agreement with the findings of this study by concluding that online banking is critically important for customers to enjoy reduced fixed costs and operations charges and that it further helps banks strengthen its good relationship with its customers. However, the key limitation to usage of online banking is customer skills in operating computers which affects their attitude towards the digital channel. Customer experience is further impacted by the associated security issues and concerns (Hasim and Salman, 2010). According to Harrison et al., (2014), there is still limited awareness of the advantages of internet banking among banking customers and majority misses out due to minimal opt in.

5.2.3 Electronic Card Banking and Customer Experience

The study's objective was to determine the effects of electronic card banking channels on customer experience among Microfinance Bank institutions in Kenya. It sought to establish the effects of debit and credit cards on customer experience. The study found out that with debit cards customers have the capability of making online purchases and move with virtual money without the need of visiting branches to withdraw. Credit cards gives customers accessibility of credit products. From the results, the correlation between electronic card banking and customer experience among the digital banking customers of microfinance institutions in Kenya was both positive and statistically significant. The regression results pointed out that the coefficient of electronic card banking was positive and statistically significant. This implies that a unit improvement in electronic card banking by the microfinance institutions in Kenya would yield a significant improvement in customer experience among digital banking customers of microfinance institutions in Kenya. Thus, this study concludes that electronic card banking is a significant determinant of the customer experience among digital banking customers of microfinance institutions in Kenya.

The results concur with the findings of Aslam et al. (2019) who indicated that fulfilment and reliability is the most essential determining factor of customer satisfaction for ATM service quality. Holders of debit cards are not charged any annual fees (Lustsik, 2004). According to Mwatsika (2016), debit cards reduces the related transaction paper work both for the customer and the financial institution hence eliminating transaction processing delays and related costs. Quan, (2014) however indicated that due to the under-developed infrastructure and purchasing habit, credit card have not been fully adopted by customers and still have a long way to go. Responsiveness is an area where customers show the lowest satisfaction and assurance earns the highest concern from customers in terms of credit card usage. Nigatu et al. (2023) indicated that convenience, reliability, ease of use, fulfilment, and security/privacy of ATM service quality dimensions are positively and significantly associated with customer satisfaction. Mwangi (2014) indicated that credit card interest rate was competitive compared to other offerings in the market but that the penalties were lower than those of competing products. Results also indicated that the organization did not provide enough information to enable the customers to use credit cards wisely.

5.3 Conclusion

5.3.1 Mobile Banking and Customer Experience

According to the findings, the study concluded that m-banking's ease of use, its security and its capability to be free from errors, reduced downtimes and accessibility around the clock improves customer satisfaction. For the application to achieve this and be error free, mobile banking channel need to be designed in a manner that would allow its users to confirm and cross check transactions before approving their processing. Digital customers therefore prefer banking channels that are easy to use, able to be trusted and accessible at any time and from anywhere.

5.3.2 Internet Banking and Customer Experience

The study concludes that internet banking's privacy feature on the specific bank's website, ability for the channel to notify customers on every transaction, network quality reducing downtimes and web interface offering customers all required information improves customer experience.

5.3.3 Electronic card Banking and Customer Experience

The study concluded that the ability of customers to make online purchases by use of debit cards and being able to access credit using credit cards without having to physically visit banking branches enhances customer experience. Further, credit card interest rate is competitive compared to other offerings in the market and has lower penalties than those of competing products a feature that increases customer satisfaction.

5.4 Recommendations

The study recommends that the microfinance institutions in Kenya tap on the benefits of the digital banking channels including mobile banking, internet banking and electronic card banking to enhance the experience of their customers. This is because, through the adoption of these channels, the expected benefits would include improved quality of their services, the perceived value, customization of services, the speed at which the services are offered would increase which to a greater extent leads to improved trust on the brand/or business by customers. Furthermore, the advantages of digital banking coupled with security considerations and justifications, and perceived ease of use. However, the adoption of digital channels comes with its package of challenges including cyber-attacks. Therefore, as these institutions adopt technology, they should also ensure that their systems are well protected to avoid loss of customer funds and information through online platforms.

5.5 Limitations of the Study

Key among the limitations of the study was getting responses from the respondents because most of them were concerned about security of their accounts and their financial information. However, the researcher explained to them that the requested information was to be used for academic purposes only and was to be always kept confidential. The research permits were also resourceful in convincing the respondents. The other limitation of the study was that most of the respondents had limited time in the microfinance banks and hence believed that they could take longer time to fill the questionnaire. However, the researcher sent them google form questionnaires through email and WhatsApp to be able to fill and sent back on time.

5.6 Suggestions for Further Research

The financial sector in Kenya is wide covering different sectors, which includes commercial banks, credit unions, Microfinance institutions, Savings and Credit Cooperatives (SACCOS), insurance companies among others. This study was limited to determining how digital banking channels affects customer experience within microfinance institutions, which is one among

many other financial sectors. Therefore, the study recommended that further studies be conducted on other financial sectors. Further, commercial banks in Kenya enjoy a larger customer base as compared to the microfinance institutions and considering the increasing cases of cybercrime occasioned by the advent of technology, more studies on how digital banking which is dependent on technology affects customer experience need to be done in future.

5.7 Chapter Summary

The chapter presented the discussion of the results of the study according to the objectives of the study. It further outlined the conclusion based on the findings of the. The chapter finally made suggestions for further research as well as the limitations of the study.



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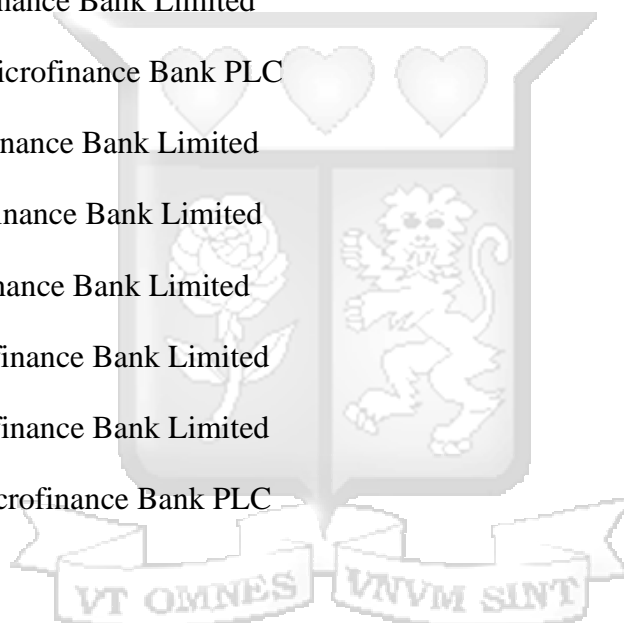
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APPENDICES

APPENDIX I: LIST OF LICENCED MICROFINANCE BANKS

1. Caritas Microfinance Bank Limited
2. Branch Microfinance Bank Limited
3. Choice Microfinance Bank Limited
4. Daraja Microfinance Bank Limited
5. Faulu Microfinance Bank Limited
6. Kenya Women Microfinance Bank PLC
7. Rafiki Microfinance Bank Limited
8. Lolc Kenya Microfinance Bank PLC
9. SMEP Microfinance Bank Limited
10. Sumac Microfinance Bank Limited
11. U & I Microfinance Bank Limited
12. Salaam Microfinance Bank Limited
13. Maisha Microfinance Bank Limited
14. Muungano Microfinance Bank PLC



Source: (AMFI-K, 2021)

APPENDIX II: COVER LETTER

Address.....

Dear Respondent,

RE: DATA COLLECTION

My name is Francis Mulili. I am currently undertaking a research project in partial fulfilment for degree award in Master of Commerce at Strathmore University. The topic of my study is “the effects of digital banking channels on customer experience within microfinance institutions in Kenya. Having been selected as one of my research respondents, please note that the information sought through the survey questionnaire is intended for academic work purposes only and therefore, the highest level of confidentiality will be observed. I request that you cooperate and please share the data required with all honesty and in voluntarily manner. Note that you have the freedom to withdraw from participating at any time and you will not be obliged to give reasons for your decision. Thank you.

Yours sincerely

Signature Date.....

Stamp.....

APPENDIX III: LETTER OF INFORMED CONSENT

SECTION 1: INFORMATION SHEET

Researcher: Francis Mutua Mulili

University affiliation: Strathmore Business School (SBS)

Research Topic: **THE EFFECTS OF DIGITAL BANKING CHANNELS ON CUSTOMER EXPERIENCE WITHIN MICROFINANCE INSTITUTIONS IN KENYA**

Initials of Participant:

Gender:

Place of Residence:

Contact Address:

Interview Location:

SECTION 2: INFORMATION SHEET

2.1: The reason why the study is being conducted

To assess the effects of digital banking channels on customer experience among the microfinance institutions in Kenya.

2.2: Is it optional to participate in the research?

Yes. giving response in this survey is totally optional and you are not compelled to participate. In the event that you choose to participate, you will be requested to fill and complete a questionnaire for the researcher to obtain information on the effects of digital banking channels on customer experience among the microfinance institutions in Kenya. In case you are not in a position to respond to all the questions successfully during the first time of attempt, you may be requested to find time on a later date and to answer the questions a second time. Please note that you have the freedom to decline and withdraw from participating in the study at any time without giving any reasons for your choice.

2.3: Eligibility to participate in the survey

Digital banking customers only

2.4: What will taking part in this study involve for me?

You will be approached by the researcher with a request to participate. You will only sign the letter of informed consent if you are pleased that you fully understand the objective of the study. The researcher will then take you through the questionnaire and how it should be completed.

2.5: Is there any risk in participating in the study?

The information shared will be treated with the highest level of confidentiality it requires and will be used only for purposes of this study. Therefore, no risk in participating and giving your honest responses.

2.6: Are there any benefits of taking part in this study?

The information provided will be used to improve research work on the effects of digital banking channels on customer experience and inform future policy makers, scholars and other stakeholders in the area of study.

2.7: Who will have access to the information shared?

All the data collected during this study will be kept confidential and in locked cabinets. If the need for keeping it in a digital manner arises, it will be encrypted and under strong password protection. Only those closely involved in the study will have access.

2.10: In case of any need for further clarification, who can I contact?

Get in touch with the researcher, Francis Mulili, at Strathmore Business School (SBS), through e-mail francis.mulili@strathmore.edu. You can also use phone. 0729359990. Feel free also to get clarifications from my supervisor, Dr. Stella Nyongesa, at the SBS, or by e-mail snyongesa@strathmore.edu

For independent clarifications other than from those directly involved in the research, you can contact: The Secretary, Strathmore University Institutional Ethics Review Board, of P. O. BOX 59857, Nairobi, email ethicsreview@strathmore.edu or through Tel number: +254 703 034 375

I _____ confirm that the objectives of the study were clearly explained to me. I understand all what is require of me, am not compelled to participate and that I have the freedom to change my mind at any stage.

Kindly tick on the below boxes appropriately as may apply;

	I AGREE to participate
	I DO NOT AGREE to participate

Participants signature.....Date.....

I, Francis Mulili certify that SOP requirements have been followed in this study, I have clearly explained to the respondent the study information required, and that s/he has understood the purpose of the study and voluntarily consents to take part in the study.

Researcher's name.....Date.....

Researcher's signature.....Date.....

APPENDIX IV: QUESTIONNAIRE

STRATHMORE UNIVERSITY
SCHOOL OF BUSINESS
MASTERS OF COMMERCE

This questionnaire should be filled by digital banking customers

Dear survey respondent,

My name is Francis Mulili, MCOM student at Strathmore University. I am conducting a research project entitled the Effect of Digital banking channels on customer experience among the microfinance institutions in Kenya. Your genuine responses will be highly appreciated and contribute to a great extent on the validity of this research. I therefore assure you that the information you share will be kept confidential and used for this academic work only and not for any other purpose.

Survey instructions:

- a) You do not need to write your name.
- b) Use the (✓) mark to indicate your response in the boxes provided.
- c) Kindly, return back the completed questionnaire on time.

For any clarification, concern or suggestion, please get in touch with the researcher through:
Phone: +254 729 359 990 or on email: francis.mulili@strathmore.edu

Thank you for taking time to respond.

Section I: General information

1. Gender

	Tick (√) in the box below		Tick (√) in the box below
Male		Female	

2. Age (years):

	Tick (√) in the box below		Tick (√) in the box below
18-30		31-40	
41-50		Above 50	

3. Educational level:

	Tick (√) in the box below		Tick (√) in the box below
Primary		Secondary	
Diploma		Degree and above	

4. How long have you been using the digital banking channel with the microfinance?

	Tick (√) in the box below		Tick (√) in the box below
Less than 2 years		2-5 years	
6-10 years		Over 10 years	

Section 2: Attitude developed from digital banking usage

This section of survey is intended to measure your experience from usage of digital banking channels using five points likert scale (1=strongly disagree, 5=strongly agree). Kindly indicate your level of agreement by using a tick mark on the choice of your experience. 1=strongly disagree, 2= disagree, 3 = somewhat agree, 4= agree, 5= strongly agree

Mobile banking		1	2	3	4	5
Ease of Use	It is always very simple doing banking via mobile applications i.e App and USSD.					
	It's easy to navigate through mobile banking options and find the information that you need					
	The user menus are clearly categorized and are well laid for the customer to choose.					
	The organization and structure of m-banking content is easy to follow					
		1	2	3	4	5
Trust	You feel secure conducting banking transaction via mobile channel					
	You feel self-assured and confident while using mobile banking method to access money from your bank account.					
	Your mobile banking is error free.					

Accessibility	You can conduct your mobile banking transaction any time and from anywhere around the clock.					
	It ensures that your banking information is always at your figure tips					
	Mobile banking offers you the convenience you require					
	Internet banking	1	2	3	4	5
Customer privacy	Your privacy is protected on your bank's website					
	There are enhanced security features while using internet banking like use of passwords, biometric or facial recognition.					
	The bank has ensured real-time notifications and updates you on suspicious transactions in your account, allowing you have peace of mind.					
	You are protected from identity theft that can happen through cyber-crimes.					
Network quality	No frequent and prolonged system downtimes					
	The banking links provided are problem free, accurate and the pages download easily.					

	I am always able to get on the site quickly					
		1	2	3	4	5
Web interface	The bank's website offers all relevant information about its products and services.					
	The website design is aesthetically attractive					
	The login process of your online bank is secure					
	The information presented on your online bank's website is clear and understandable					
	Electronic Card banking	1	2	3	4	5
Debit Card	With debit cards, customers are able to make purchases and withdraws anytime without visiting the bank					
	The utilization of debit cards is less costly and safe					
	With availability of ATMs, bank services can always be accessed even outside the bank operating hours					
Credit Card	Credit cards offers customers easy accessibility of bank credit services					

	Credit cards are convenient as it allows customers to make purchases on credit					
	Credit cards are convenient and reliable to use					
Customer experience						
		1	2	3	4	5
Customer loyalty	I will continue using digital banking products in the future.					
	Digital banking services will be my first choice when I need to use banking services.					
	Are you willing to recommend digital banking services to your friends or colleagues?					
Customer satisfaction						
Customer satisfaction	Digital banking saves your time					
	You are honestly happy with your bank providing digital banking services					
	The bank gives prompt responses to my requests by e-mail or other means					
	The bank quickly resolves problems I encounter with my online transactions					
	Your concerns and complains are timely resolved digitally.					

		1	2	3	4	5
Positive word of mouth	I will say positive things about digital banking services when I talk to my friends or relatives					
	I will recommend digital banking to my friends or relatives when they need the related information					
	I will encourage my good friends or relatives to use digital banking services.					

*******End*******

Thank you for your response and participation in this study.



APPENDIX V: ESTIMATED RESEARCH BUDGET

Activity	Description of the activity	Cost (Kes)
Pilot testing	2 research assistants (data enumerators) at Kes 500 per day for 2 days	2,000
Printing and photocopying of questionnaires	400 respondents	5,000
Field data collection	10,000 for each of the 2 research assistants.	20,000
Data sorting and input	2000 for each of the 2 research assistants.	4,000
Printing and binding of the final thesis report	2 copies of 70 pages at Kes 5 per page and binding at 200 per copy.	1,100
Travelling cost	Data collection travelling cost for the 2 research assistants at Kes 10,000 each	20,000
Emergency cost budget		5,000
		57,100

APPENDIX VI: WORK PLAN AND TIMELINE

Activity	Budgeted timeline
Thesis (Chapter 1 -3)	15/01/2024
Ethical clearance	20/01/2024
Data collection	28/02/2024
Data analysis	7/3/2024
Final research paper	15/3/2024



APPENDIX VII: INSTITUTION ETHICAL APPROVAL



25th January 2024

Mr Mulili Francis,
frankmulili@gmail.com

Dear Mr Mulili,

RE: The Effects of Digital Banking Channels on Customer Experience within Microfinance Institutions in Kenya

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU-masters** research proposal. Your application reference number is **SU-ISERC1960/24**. The approval period is from **25th January 2024 to 24th January 2025**.

This approval is subject to compliance with the following requirements:

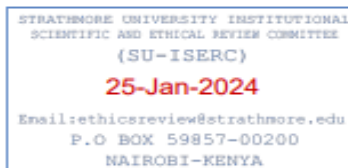
- i. Only approved documents including (informed consents, study instruments, MTA) will be used.
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC.
- iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-ISERC within 72 hours of notification.
- iv. Any changes anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-ISERC within 72 hours.
- v. Clearance for the export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days of completion of the study to SU-ISERC.

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

Yours sincerely,

A handwritten signature in blue ink, appearing to read "Ambrose Rachier".

Mr Ambrose Rachier,
Chairperson; SU-ISERC



THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013 (Rev. 2014)
Legal Notice No. 108: The Science, Technology and Innovation (Research Licensing) Regulations, 2014

The National Commission for Science, Technology and Innovation, hereafter referred to as the Commission, was established under the Science, Technology and Innovation Act 2013 (Revised 2014) herein after referred to as the Act. The objective of the Commission shall be to regulate and assure quality in the science, technology and innovation sector and advise the Government in matters related thereto.

CONDITIONS OF THE RESEARCH LICENSE

1. The License is granted subject to provisions of the Constitution of Kenya, the Science, Technology and Innovation Act, and other relevant laws, policies and regulations. Accordingly, the licensee shall adhere to such procedures, standards, code of ethics and guidelines as may be prescribed by regulations made under the Act, or prescribed by provisions of International treaties of which Kenya is a signatory to
2. The research and its related activities as well as outcomes shall be beneficial to the country and shall not in any way;
 - i. Endanger national security
 - ii. Adversely affect the lives of Kenyans
 - iii. Be in contravention of Kenya's international obligations including Biological Weapons Convention (BWC), Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), Chemical, Biological, Radiological and Nuclear (CBRN).
 - iv. Result in exploitation of intellectual property rights of communities in Kenya
 - v. Adversely affect the environment
 - vi. Adversely affect the rights of communities
 - vii. Endanger public safety and national cohesion
 - viii. Plagiarize someone else's work
3. The License is valid for the proposed research, location and specified period.
4. The license any rights thereunder are non-transferable
5. The Commission reserves the right to cancel the research at any time during the research period if in the opinion of the Commission the research is not implemented in conformity with the provisions of the Act or any other written law.
6. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research.
7. Excavation, filming, movement, and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
8. The License does not give authority to transfer research materials.
9. The Commission may monitor and evaluate the licensed research project for the purpose of assessing and evaluating compliance with the conditions of the License.
10. The Licensee shall submit one hard copy, and upload a soft copy of their final report (thesis) onto a platform designated by the Commission within one year of completion of the research.
11. The Commission reserves the right to modify the conditions of the License including cancellation without prior notice.
12. Research, findings and information regarding research systems shall be stored or disseminated, utilized or applied in such a manner as may be prescribed by the Commission from time to time.
13. The Licensee shall disclose to the Commission, the relevant Institutional Scientific and Ethical Review Committee, and the relevant national agencies any inventions and discoveries that are of National strategic importance.
14. The Commission shall have powers to acquire from any person the right in, or to, any scientific innovation, invention or patent of strategic importance to the country.
15. Relevant Institutional Scientific and Ethical Review Committee shall monitor and evaluate the research periodically, and make a report of its findings to the Commission for necessary action.

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Innovation(NACOSTI),
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