

**EFFECTS OF DIGITAL LENDING PRACTICES ON UPTAKE OF LOANS A
CASE OF M-SHWARI OF NCBA BANK KENYA PLC IN MERU COUNTY**

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Partial Fulfillment of the Requirements for the Conferment of
the Degree of Master in Business Administration Strategic
Management Option**

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DECLARATION AND RECOMMENDATION

Declaration

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

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Recommendation

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DEDICATION

I dedicate this thesis to my dear parents, Mr. and Mrs. Linus Mutegi, Christopher Munyendo and my children, Jewel and Nicholas Chibata, for their support.

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ABSTRACT

In the last decade, Kenya has witnessed a remarkable growth in digital lending products and platforms. However, the effect of these digital lending products on uptake of loans remains under researched. The purpose of the study was to determine the effects of M-Shwari digital lending practices on uptake of loans from NCBA Bank Kenya PLC in Meru County with a view to recommend on how the bank can leverage and/or capitalize on M-Shwari to grow its loan book. Specifically, the study sought to establish the effects of M-Shwari's loan amounts accessible, M-Shwari's loan repayment period, M-Shwari's loan pricing and M-Shwari's default consequences on uptake of bank loans among selected NCBA Bank Kenya PLC customers in Meru County. The theories that guided this study are the financial intermediation theory and the information asymmetry theory. The study adopted a descriptive survey research design. The target population was 38,000 NCBA Bank Kenya PLC Meru Branch customers who utilize the banks M-Shwari digital credit. A simple random sampling procedure was used to choose the 380 respondents who made up the sample size. The study's data were gathered via a self-administered questionnaire. Statistics, both descriptive and inferential, were used to examine quantitative data. Conceptual content analysis was used to thematically evaluate qualitative data. The study discovered that M-loan Shwari's amounts and payback terms have a favorable and significant impact on clients of NCBA Bank Kenya PLC in Meru County taking out bank loans. The study also found that M-Shwari's loan pricing, and M-Shwari's default consequences have a negative and significant effect on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. The study concluded that most customers loan limits was not changing despite regular borrowing in NCBA. The study also concluded that increase in loan amounts accessible was helpful to customers. The study further concluded that M-Shwari's loan repayment period has a positive and significant effect on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. The study concluded that the grace period of Mshwari loan repayment was insufficient to the customers since it was too small. The study therefore recommends that NCBA Bank Kenya PLC should provide enough loans to their customers especially the loyal customers. NCBA Bank Kenya PLC management should increase the loan limits of their customers who borrow regularly. The customers on the other hand should also work to grow their loan limits. In addition, NCBA Bank Kenya PLC management should look at the grace period for customers to repay loans and make it longer so that customers are able to pay.

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ABBREVIATIONS AND ACRONYMS

CBK	Central Bank of Kenya
CGAP	Consultative Group to Assist the Poor
CRB	Credit Reference Bureaus
DFS	Digital Financial Services
GDP	Gross Domestic Product
IFC	International Finance Corporation
KBA	Kenya Bankers Association
KCB	Kenya Commercial Bank
KeMU	Kenya Methodist University
MNOs	Multi - National Organizations
MoF	Ministry of Finance
NACOSTI	National Commission for Science, Technology and Innovation
OLS	Ordinary Least Square
ROA	Return on Assets
ROC	Return on Capital
ROE	Return on Equity
SME	Small and Medium Sized Enterprises

SPSS	Statistical Package for Social Science
US	United States
USD	United States Dollar
VIF	Variance Inflation Factor

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The current highly dynamic and competitive banking environment has led to the need for improved strategies, organizational changes and enhanced operations for the banking firms to grow and survive. Consequently, all forms of businesses, banks included, are constantly being pressured to rapidly and continuously improve their management strategies (Muriithi & Louw, 2017). One of the most important areas that banks need to improve on is the financial operations where they are expected to ensure the development and implementation of sound financial strategies and operations that would help them manage their business risks and improve their organizational performance (Románova & Kudinska, 2016). Financial intermediation remains the core function of banks to which lending is a critical arm (Murunga, 2017).

Uptake of bank loans refers to the amounts of funds loaned out to individual bank customers (Akande, 2019). According to Moussa and Chedia (2016), the main indicators of uptake of bank loan are availability of loan funds for lending on the part of the banks and bank customers capacity/ability to repay advanced loans. Four attributes characterise the uptake of bank loans. These include loan amounts accessible which denotes the maximum amount of loan funds that a borrower is eligible for as determined by the loan provider (Alkhazaleh, 2017) and loan pricing which denotes the cost of credit offered by a financial institution or loan provider (Alkhazaleh, 2017). It also includes loan repayment period which is the time period allowed to the borrower for complete repayment of loan amount taken (Moussa &

Chedia, 2016) and loan default consequences which refers to courses of action(s) taken by a loan provider when a borrower fails to repay borrowed funds within the allowed time period (Cheston & Allison, 2016).

In the past decade, Kenya is one of the global countries that has undergone remarkable changes in financial inclusion. These changes can be attributed to the use of mobile money that has improved access to financial services and also has led to more uses of the financial institutions by citizens. There has also been the rise of digital services such as mobile lending and one such product that provides this service is M-Shwari among others that have emerged as revolutionary tools of driving uptake of bank loans, particularly to the underserved members of the population in Kenya (Ndagijimana, 2017). This study seeks to make a contribution to the body of knowledge on the effects of these revolutionary digital lending products on uptake of bank loans in the country.

1.1.1 Global Status of Loan Uptake from Commercial Banks

The global banking system continues its positive streak on the recovery path in the post 2008 financial crisis era. This is as evidenced by improvements on the average Return on Capital (ROC) which rose to 13.7 percent in 2018 as compared to 13.5 percent in 2017; average return on assets (ROA) which rose to 1.5 percent in 2018 as compared to 1.2 percent in 2017 and total assets remaining steady in the face of systemic and structural growth challenges (World Bank, 2019). While there are several forces behind this positive global banking system outlook, the single most significant factor that has contributed to this positive performance trajectory is increased uptake of bank loans powered by revolutionary digital lending products and services (Björkegren & Grissen, 2018). There is evidence across the globe that a majority of the banks that have reported remarkable growth in their

profitability attribute it to growth in interest income, which has been driven by increased uptake of loans by their clients (Hwang & Tellez, 2016).

In the US, the uptake of bank loans has remained on a positive trend with the total value of loans advanced growing by 7.5% to reach US\$1.8 trillion in 2018 from US\$1.67 trillion in 2017 (World Bank, 2019; International Finance Corporation [IFC], 2019). Similarly, Canadian banks also reported remarkable growth in their total assets as this increase was at 11.2 percent for a number of years to US\$4.7 trillion in 2018. This was mainly driven by increased uptake of mortgages and regular loans to enterprises and individuals. As reported by the country's banking industry regulator, the average uptake of loans by businesses grew by 9% while the average uptake of loans by individuals grew by 14% between 2017 and 2018 (Canadian National Reserve Bank, 2019).

However, unlike this reported growth in the US and other highlighted countries, banks in Europe are still busy rationalizing their operations and are trying hard to achieve growth that is similar to other regions. Statistics, for instance, indicate that on average, uptake of bank loans were up by 5% in 2018 compared to 2017, the banks ROC stood at 10.2 percent in the year 2018 that remained stagnant for a number of years. This was as a result of challenges that included the high number of banks in countries such as Germany; reduced Net Interest Margin (NIM) due to the fragmentation of markets in areas such as Europe and the almost zero and negative bank interest rates in most of the EU countries (World Bank, 2019).

In Asia, there is variance in uptake of bank loans outlook among the different countries, with banks in countries such as China, South Korea and Singapore continuing to report growth in the uptake of loans. In fact, the top four banks globally with the largest year on year growth in uptake of bank loans in 2018 and 2019 were Chinese. On average, banks in China and

South Korea saw uptake of loans grow by 15 - 20 percent in 2019. This was largely a result of increased demand for funds occasioned by significant growths in these countries manufacturing, agricultural and construction sectors of their economies. In contrast, uptake of bank loans was on a negative trajectory in Japan and India decreasing by 5.8 percent in Japan and by 3.6% in India between 2018 and 2019 attributed to decreased activity in the manufacturing and agricultural sectors respectively. Meanwhile, uptake of bank loans in Russia has remained largely unchanged over the past 3 years (World Bank, 2019; IFC, 2019).

1.1.2 Regional Status of Loan Uptake from Commercial Banks

As is the case elsewhere across the globe, the regional African banking system also continues to show positive strides as it recovers from the post 2008 financial crisis era (Muriuki, 2017). The emerging revolutionary digital lending platforms have had a profound effect on uptake of bank loans across the African continent with banks that were early adopters of the new digital credit delivery channels raking in huge profits from increased uptake of their loans (Dermine, 2017). Across Africa, banks in the Sub-Saharan region have led the way in the race to build and adopt exceptional digital credit experiences and this has helped them significantly increase uptake of their loans (Carlson, 2017). The bright light of these forces now implies that all banks in Africa must come to terms with the new reality on changing ways of delivering loan products to their clients and the need to take necessary steps to adapting new bank loan dispensation models (Ndemo & Weiss, 2016).

A survey on African banking status done by the World Bank in collaboration with McKinsey and Company in 2018 reported that in South Africa, Angola and Botswana uptake of bank loans among the under-banked categories had rose by 40 — 60 percent, in the

period 2015 - 2017, following adoption of mobile phone-based lending platforms by the countries banks. The survey observed that banks in countries where digital lending had taken root such as Kenya, Tanzania, Ghana, Nigeria and South Africa reported better performances, attributable to increased uptake of loans on the digital platforms, compared to banks in countries lagging behind in adoption of digital lending such as Chad, Cameroon, CAR, Mozambique and Malawi (World Bank, 2019). The International Finance Corporation observes that while Africa's sub-Saharan region has done remarkably well in adoption of digital credit innovations and banks are beginning to enjoy the fruits of improving profitability and asset quality, the gains will only accrue to those banks that will be quick to shift from the conventional lending approaches to digital lending practices (IFC, 2019).

To handle these dynamic changes in their environment, banking institutions will have to implement dynamic changes that are a bit different from past transformations, and that are focused on renewal, reorientation and resilience (Cheston & Allison, 2016). These transformations should be viable to ensure they protect the banks financial resources, regulations, customer needs and their balance sheet. The transformations emphasis should be to reorient their model of operations to the needs of their customers and the new digital changes to ensure that bank embraces digital and data processes and analytics (Totolo, 2018).

1.1.3 Local Status of Loan Uptake from Commercial Banks

Kenya's banking sector continues to exhibit dynamic changes despite many challenges in the banking sectors. The resilience observed in the banking sector is due to the uptake of technological advancements by banks for efficiency in their operations while also allowing them to take up new opportunities and manage risks brought by this technology as well as by the continued implementation of post-global financial crisis reforms (Central Bank of

Kenya [CBK], 2018). The growth in advances and gross credit, which climbed by 3.07 percent from Ksh.2.41 trillion in December 2017 to Ksh.2.49 trillion in December 2018, demonstrates the resiliency of Kenya's banking sector performance. Overall, the banking industry is still stable and resilient, and it is anticipated that it will continue to be resilient in the upcoming interim period between 2019 and 2022. Disruptive technologies are predicted to continue forcing Kenyan banks to reevaluate their operational strategies. It is expected that the banks will continue to experience increased uptake of loans powered by their continued adoption and enhancement of their digital lending platforms (CBK, 2018).

Latest statistics from the NCBA Bank Kenya PLC indicates that Kenyans borrowed nearly Kshs. 1.2 billion every day on M-Shwari mobile loans in 2020 signaling a deepening dependence on short-term debts. This was attributed to the year's massive job losses due to the Covid-19 pandemic. The bank further notes that mobile lending service M-Shwari has disbursed at least Kshs. 430.5 billion in the past seven years with customer deposits in M-Shwari hitting Kshs. 18.7 billion. Latest figures from the bank indicate that M-Shwari mobile loans accounted for 62% of the bank's net loan book that stood at Kshs. 248.5 billion by close of 2020 (NCBA Bank Kenya PLC Group, 2021).

1.1.4 Overview of the Digital Credit Market

1.1.4.1 Global Status of Digital Credit Market

There has been notable emergence of digital financial services (DFS) in different parts of the world. This is still an untapped market that provides an innovative way for customers to access money. The difference between the digital credit facilities and the traditional ones is that the former use smart mobile phones technology or online technologies to allow

customers to register and get credit while allowing the banking institutions to approve and distribute credit to their customers (Dermine, 2017). According to a report by the Consultative Group to Assist the Poor (CGAP), the digital credit facilities can be distinguished from the conventional forms of accessing credit using three features: It is possible to remotely apply, approve and disburse loans using digital credit services; Approval of loans is automatic in the case of digital credit which reduces the steps and the time customers have to spend getting their loans, registered, approved and disbursed; and loans are approved instantly when it comes to digital loans which often takes 72 hours or lower time. The digital loans also obtain data from traditional sources such as bank information and credit scores to determine if the customer is fit to get a loan (Consultative Group to Assist the Poor [CGAP], 2019).

Allied Market Research came up with a paper titled, Digital Lending Platform Market. This paper highlighted that in 2018, the digital credit market was valued at \$4.79 billion and this value is expected to rise to \$19.88 billion by 2026. The growth rate for the market according to the projected figures was noted to be at a CAGR of 19.6%. The largest market share according to the paper was from the Northern American countries as they had taken more than a third of the market in 2018. This was because of the growing Fintech investment in these countries and the well-established BFSI sector among the Northern American countries. But the paper noted that the fastest growing market when it comes to digital loans is the Asian-Pacific market as it was projected to grow fastest with a CAGR of 21.2% by 2026. The reason given for this was that the market was experiencing a growing digital lending platform, increased government support and a rise in the number of start-ups in this region (Allied Market Research, 2019).

The growth in digital lending which has been observed in different global regions is

attributed to more government support and initiatives in digital credit and the increased need to reduce the time spent in accessing loans by customers. Although these factors have boosted the growth in digital lending services, there has also been a rise in security challenges in this market (Francis et al., 2017). There is hope, nonetheless, that the growth of internet based lending platforms and the advancements in technologies are going to lead to discovery of more solutions for the security challenges in this market (Dapp et al., 2015). Additionally, there is the expectation that the cloud-based lending market is bound to grow due to the shift in conventional lending methods and the increased demand for reduced loan management and disbursement time among borrowers. Smartphone proliferation and rising internet usage are further factors anticipated to fuel market expansion (Dermine, 2017). Over the course of the forecast period, it is anticipated that the market will be driven by financial institutions' increased focus on providing their clients with a more enriched and customized experience (Francis et al., 2017).

1.1.4.2 Regional Status of Digital Credit Market

In the African countries, the growth of digital technologies, increased use of mobile phones and the rise in urbanization has led to the growth of the internet lending landscape (Ndemo & Weiss, 2016). IFC and McKinsey and Company (2017) noted that in the Sub-Saharan region, there is the possibility for borrowers who would otherwise not access loans using the traditional forms of lending to get such loans with the help of digital lending platforms. This would see the unbanked and the borrowers with little income access credit (Björkegren & Grissen, 2018). According to IFC (2017), the online lending platforms improves access to credit by reducing the time and travel needed to acquire loans from physical lending firms, it also broadens the customers data available for credit lending and also provides more

opportunities for borrowers to access credit by different consumers (Totolo, 2018).

Allied Market Research came up with a report in 2019 noting that the value of African lending landscape was at \$1.53 billion in 2018. This value was projected to increase at a CAGR of 17.4% in the period between 2019 and 2026 since Fintech companies are expected to grow while online credit provision by companies is expected to enter this lucrative market. There is going to be an accelerated growth in the African online lending market between 2019 and 2025. This growth will be encouraged by the enhanced internet penetration, the increased use of smartphones and the use of digital services by customers in the African region. There is also an increased demand by customers for banking institutions to reduce their costs of capital. This is forcing financial institutions to reduce their operational costs by streamlining their operations in all their platforms, which is expected to drive the adoption of online lending services (Allied Market Research, 2019). The financial institutions are also embracing digital lending operations, as they want to modernize their operations as they reduce their operating costs while also meeting the needs of their customers who are seeking for easier to use and convenient digital services (Totolo, 2018).

1.1.4.3 Local Status of Digital Credit Market

The first digital lending service, M-Shwari - a short term mobile loans product, was introduced in Kenya in 2012. Since then, the availability of digital lending services has risen in response to the growing need for financial inclusion. Some of these services include KCB M-pesa and Fuliza product among others. Further, in the last two years, the provision of digital loans has doubled. In the year 2016-2018, 86% of the credit services offered to borrowers in Kenya were digital (Totolo, 2018). This has seen more banks embracing digital services, which makes for approximately half of all the loans provided by banks (Gubbins &

Totolo, 2018).

Moreover, the digital loans in the country have risen by 1.9 times between 2016 and 2018. Despite many Fintech companies entering the digital lending market, most of the digital credit is provided by multi-national organizations (MNOs) and banks as they currently provide 97% of the digital loans (Totolo, 2018). Among the digital loans customers, 2.2 million have non-performing digital loans that they took between 2016 and 2018. Of the digital loan borrowers, 49% of them have outstanding loans that are lower than \$10. In addition, non-performing loans are higher among digital lenders being reported to be three times higher, at 16% as compared to 5% of conventional loans. Thus, digital lending has been characterized by an increase in non-performing loans among the digital loan providers (Gubbins & Totolo, 2018).

The growth in the digital loans landscape is evidenced by the rise in the providers of these loans and the rise in loans supplied. M-Shwari which is offered by the NCBA Bank Kenya PLC (NCBA) was the first digital lending service, for short term loans, to be offered in Kenya. The service provided 20 million loans to 2.6 million borrowers in its first two years of operation. The bank only had 13,000 borrowers before it started its digital lending service in the years between 2013 and 2015. Once it started M-Shwari, the bank loan borrowers more than doubled as it provided more than 27,400 loan accounts daily to borrowers. This changed the bank from one that serviced corporate clients only to a mass market bank (Kenya Bankers Association [KBA], 2019). Again, the Kenyan Commercial Bank had 200,000 loan accounts in 2015. This was before it opened its digital lending service KCB-M-PESA. Upon starting digital loan lending, the loans disbursed by KCB increased 20 times to about 4 million. According to Central Bank of Kenya (CBK, 2018) statistics, the number

of loan accounts and deposits among the commercial banking institutions have risen from 1.67 and 11.9 million in the year 2010 to 8.51 and 34.6 million in 2016 (KBA, 2019). This would not have been possible if the banks had continued operating using traditional means of lending.

Due to how fast the digital loan services have grown in Kenya, there has been extensive research in this area. It's very beneficial for low income borrowers to be able to access credit even when they are first time borrowers without a credit history. There are many benefits when such borrowers' access instant and accessible credit as it helps them manage their small income and absorb financial shocks that they experience. However, considering that the increasing in borrowing can harm the economy and borrowers, there is need for extensive research to be done in this area (Kinyanzui et al., 2018). Having identified this gap in knowledge, this study will examine the effects of M- Shwari digital lending practices on uptake of bank loans using a case of selected customers from NCBA Bank Kenya PLC in Meru County, Kenya.

1.1.4.4 The NCBA

An East and West African financial services conglomerate is NCBA Bank Kenya PLC. The third-largest bank in East Africa was created by the merger of National Industrial Credit (NIC) Bank, a company with a long history in retail banking, and Commercial Bank of Africa (CBA) Bank, a pioneer in banking innovation. On September 29, 1959, Standard Bank of South Africa and Mercantile Credit Limited of the United Kingdom jointly created National Industrial Credit (NIC) in Kenya with the intention of offering hire purchase and installment credit finance facilities in East Africa. CBA Bank is a private bank that served the East Africa community and the largest having been in operation since 1962. Its first

location was in Tanzania and later expanded to Uganda and Kenya. This bank was a division of Societe Financiere pour les Pays D'Outre Mer (SFOM), a consortium bank with its headquarters in Switzerland. Dresdner Bank (now Commerzbank), Bank of America, Banque National de Paris, and Bank Bruxelles Lambert were the other participants in this partnership. The Bank of America in 1980 bought the other SFOM partners and restructured the bank so that it operated and offered services that were similar to the Bank of America, but later the majority shares of this bank were sold to investors. NCBA Bank Kenya PLC upon coming into existence in October 2019, has evolved as a go-to bank that provides services to individuals, corporations, NGOs and diplomatic missions. NCBA Bank Kenya PLC has over 48 branches in Kenya and it serves many clients in the country (NCBA, 2020).

NCBA Bank began an innovative restructuring of its operations in 2011. This led to the discovery and use of new products to cater for its customers. The bank was the first to come up with digital banking services. It was also the first bank to set up a digital lending platform, the first US dollar credit card services, the first to offer mortgage in foreign currency and the first to offer mortgage at 105%. It has been noted to be a first-class financial services provider with a range of innovative products that meet the demand in the local and international market (NCBA, 2020). At branch level, NCBA Bank Kenya PLC Meru Branch ranks as one of the leading NCBA Bank Kenya PLC branches to adopt digital lending. Over 50% of its loan book is digital credit (NCBA Bank Kenya PLC Meru Branch, 2020). As such, digital loans form a key component of NCBA Bank Kenya PLC Meru Branch's loan book. However, there has not been a review to examine the effects of M-Shwari digital lending practices on uptake of loans at the branch.

1.2 Statement of the Problem

The CBK, through the annual bank supervision reports, indicates that the Kenyan banking sector remains stable, resilient and robust. As of December 2018, the gross loans in this sector and its advances totaled Ksh. 2.49 trillion. This represented 52.1% of the country's real GDP (CBK, 2019). Despite such a remarkable contribution to the economy, a closer review of the uptake of these loans and advances reveal worrying trends. The CBK's 2018 Bank Supervision Annual Report showed that the bulk (about 75%) of the gross loans in this sector and its advances were to the government and large corporations. The report further points that, though over the last 5 years the gross loans in this sector and its advances increased by 32.4% from Ksh.1.88 trillion in 2014 to Ksh. 2.49 trillion in 2018, the uptake by individual borrowers declined from 32.6% in 2014 to 14.8% in 2018 (CBK, 2019). Similarly, a survey by the World Bank in 2018 showed that over 80% of Kenya's bank's loan portfolio was to the government and other large corporations, denoting low uptake of bank loans among individual borrowers (World Bank, 2018). This clearly illustrates gaps in uptake of loans, which warrants further investigation.

While digital lending platforms, such as M-Shwari from NCBA, represent a tremendous step forward in driving uptake of bank loans, the uptake of bank loans in the country, especially among the low income groups is likely to remain suboptimal due to lack of knowledge about the products particularly with respect to basic terms and conditions such as loan pricing, amount accessible, repayment period and consequences of default (World Bank, 2018). Further, most of the local studies have focused on the effect of mobile lending services on the Kenyan commercial banks financial performance (Abongo, 2016; Ndagijimana, 2017; Omollo, 2018; Mohamed, 2019). There is paucity of empirical

information as to the effects of these revolutionary digital lending platforms on uptake of bank loans in the country. To address this research gap, this research sought to determine the effect of M-Shwari digital lending practices on uptake of bank loans in the NCBA Bank Kenya PLC.

1.3 Purpose of the Study

This study aimed to determine the effect of M-Shwari digital lending practices on uptake of loans from NCBA Bank Kenya PLC in Meru County with a view to recommend on how the bank can leverage and/or capitalize on M-Shwari to grow its loan book.

1.4 Research Objectives

- i. To assess the effect of M-Shwari's loan amounts accessible on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County.
- ii. To examine the effect of M-Shwari's loan repayment period on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County.
- iii. To establish the effect of M-Shwari's loan pricing on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County.
- iv. To determine the effect of M-Shwari's default consequences on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County.

1.5 Research Hypotheses

The null hypotheses were tested included;

H₀₁. M-Shwari's loan amounts accessible have no significant effect on uptake of bank loans

among NCBA Bank Kenya PLC customers in Meru County.

H02. M-Shwari's loan repayment period has no significant effect on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County.

H03. M-Shwari's loan pricing has no significant effect on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County.

H04. M-Shwari's default consequences have no significant effect on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County.

1.6 Significance of the Study

This study is of benefit to the following;

1.6.1 NCBA's Management

NCBA Bank Kenya PLC will find the findings of the study relevant in that it will gain an appreciation of the effect of the banks digital lending product (M-Shwari) on uptake of loans by the banks customers. This may in turn inform the management's decisions on how to leverage and/or capitalize on M-Shwari to grow the banks loan book. In addition, the findings of this study may inform the management's efforts of ensuring that M-Shwari better meets the needs of the banks clients.

1.6.2 Policy Makers on Mobile Lending

The research results will benefit the CBK, as the regulator of the banking industry, by providing insights as to how revolutionary digital based banking products such as M-Shwari affect uptake of bank loans in the country. This may in turn inform the development of an

effective national policy aimed at governing the use of these digital lending platforms to enhance the growth of the country's banking industry and to foster financial inclusion. In addition, the findings of this study may inform formulation of regulation aimed at spurring digital lending practices / operations in the country.

1.6.3 Managements of other Banks and Fintechs in Kenya

NCBA Bank Kenya PLC is not the only bank in Kenya offering digital lending services. As such, the managements of other banks and Fintech companies in Kenya will gain an appreciation of the effects of digital lending products on uptake of loans by their customers. This will result in the development of firm related policies and strategies required to grow the loan book through better use of the digital lending platforms/products.

1.6.4 Importance of M-Shwari and its Contribution to the Economy

The significance of M-Shwari lies in its ability to increase access to bank credit particularly to the under-banked and under-served groups in the Kenyan society with ease, at their convenience and instantly. It thus provides increased opportunities for access to credit by borrowers particularly those who would otherwise have not accessed the loans using the traditional forms and avenues of borrowing. To the Kenyan economy, M-Shwari and other similar digital lending platforms, if effectively applied, will foster financial inclusion, will spur savings and investment and will also enhance the growth and performance of the local banking industry.

1.6.5 Researchers and Scholars

This study will be an addition to the available body of knowledge on the effects of digital

lending platforms on uptake of bank loans. It is expected to contribute new knowledge in digital lending and financial inclusion. It will give scholars and researchers with a strong base to conduct studies in this subject area.

1.7 Scope of the Study

The research assessed effects of M-Shwari digital lending practices on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. NCBA Bank Kenya PLC Meru Branch was the study area of this research with the unit of observation being the banks customers who use M-Shwari. The time scope of the study was between July 2020 and May 2021. Specifically, the study focus was on the effects of M-Shwari's loan amounts accessible, loan repayment period, loan pricing and default consequences on uptake of bank loans among selected NCBA Bank Kenya PLC customers in Meru County. However, key drivers of digital credit usage, loan appraisal and disbursement procedures and data privacy and protection was not covered in this study.

M-Shwari is purposefully chosen for study for 2 reasons. First, it was the first digital lending product/service to be launched in the country following a partnership between NCBA Bank Kenya PLC and Safaricom and secondly it leads in the digital credit market share in the country at 35% and hence offers a viable platform for investigating the effects of digital lending practices on uptake of loans in the country. NCBA Bank Kenya PLC is chosen as the study unit as it is the one that offers the M-Shwari product.

1.8 Limitations of the Study

The research methodology used in the study was a questionnaire that was distributed to customers of NCBA Bank Kenya PLC in Meru County. The researcher lacked the means to

verify the respondents' sincerity in their answers. In order to reduce the possibility of limitations, the researcher asked the participants to answer the research instrument honestly and informed them that the data they supplied would be handled privately and used exclusively for the purposes of the study. Due to variances in size, geography, institutional structure, and operational requirements of their digital credit products/platforms, the study's use of NCBA Bank Kenya PLC's Meru Branch as the study unit prevented generalization of the findings to all other banks in the nation. The researcher suggested a larger study on the research issue involving other banks in the nation to overcome this constraint and enable broader comparison and generalization of the study findings.

The questionnaires may contain some instances of missing or partial data. Before doing the final analysis, the researcher cleaned the data to confirm the accuracy of the information obtained from the questionnaires in order to overcome this restriction.

1.9 Assumptions of the Study

This research assumed that the participants provided responses to the questions, willingly and honestly. Another assumption made by this study that data given by the participants was reliable and accurate.

1.10 Operational Definition of Terms

M-Shwari: A revolutionary digital banking platform offering a combination of savings and loans created through a partnership between NCBA Bank Kenya PLC and Safaricom (Musha, 2018).

Loans uptake: Refers to the amounts of funds loaned out to individual bank customers (Akande, 2019).

Digital credit: These are loans that are digitally and instantly accessed through mobile phones (Singh & Sharma, 2018).

Loan amounts accessible: Refers to the maximum amount of loan funds that a borrower is eligible for as determined by the loan provider (Alkhazaleh, 2017).

Loan repayment period: Refers to the time period allowed before a loan amount becomes due (Moussa & Chedia, 2016).

Loan pricing: Refers to the cost of credit offered by a financial institution or loan

provider (Alkhazaleh, 2017).

Loan default consequences: Refers to courses of action(s) taken by a loan provider when a borrower fails to repay borrowed funds within the allowed time period (Cheston & Allison, 2016).

Commercial bank: Any firm that intends to perform or intends to perform banking operations in a given jurisdiction and is licensed, supervised and regulated in accordance to laid out laws and regulations applicable in the jurisdiction (Ewert et al., 2016).

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter provided empirical literature review, summary of research gap, and theoretical, conceptual and operational frameworks. The empirical literature review section explores studies done on the key constructs of the study while summary of research gaps points to the need for the current study. The theoretical review describes the theories that guided the study; conceptual framework is a graphic display of the linkage between key variables in the study while operational framework indicates the measures and indicators of the study variables. The section that follows presents a review of past studies on loan amounts accessible, loan repayment period, loan pricing as well as loan default consequences and their effect on uptake of bank loans.

2.2 Uptake of Loans from Commercial Banks

Loan uptake denotes the amounts of funds loaned out to individual bank customers. It represents the amount of money that bank customers take from banks as loans (Cheston & Allison, 2016). Given that lending services comprise the core business for banks, uptake of bank loans is thus a critical measure of this banks core function. In most settings, the frequency of customers borrowing and repaying the bank loans forms the key measure of loan uptake (Ahmad & Rasool, 2017). This section provides a highlight of empirical literature on uptake of bank loans.

In Nigeria, Agwu (2019) evaluated uptake of bank loans in Nigeria and revealed that loan

amounts sizes and frequency of borrowing and repaying were the main indicators of loan uptake. In the study, uptake of bank loans was positively associated with individual borrowers income level, possession of assets/collateral and longer repayment periods. Similar observations were made by Akande (2019) who in a study done in the same country identified borrowing and repayment frequency as a key indicator of loan uptake among surveyed borrowers. Formal occupations, increasing income levels, possession of collateral and longer loan terms were affirmed in this study as determinants of uptake of bank loans.

According to studies by Moussa and Chedia (2016), Ewert et al. (2016) and Lore (2019), the main indicators of uptake of bank loan are availability of loan funds for lending on the part of the banks and bank customers capacity/ability to repay advanced loans. Studies by Moreno and Estrada (2019), Alkhazaleh (2017) and Rababah (2015) identified four attributes characterise the uptake of bank loans. These include loan amounts accessible which denotes the maximum amount of loan funds that a borrower is eligible for as determined by the loan provider and loan pricing which denotes the cost of credit offered by a financial institution or loan provider. Loan repayment period which is the time period given to a borrower for full resettlement of loan amount taken as agreed in the loan contract as identified in the study by (Moussa & Chedia, 2016). Loan default consequences which refer to courses of action(s) taken by a loan provider when a borrower fails to repay borrowed funds within the allowed time period as cited in the study by (Cheston & Allison, 2016).

The Central Bank of Kenya, in its latest bank supervision report of 2019, observes that the Kenyan banking sector remains stable and resilient and is projected to remain resilient in the intermediate period between 2019 and 2022. Kenyan banks are also expected to continue the

adoption and enhancement of their digital lending platforms to grow their loan books (CBK, 2018). This is as evidenced by NCBA's M-Shwari mobile loans which have topped at least Kshs. 430.5 billion in the past seven years, and which currently account for about 62% of NNCBA's net loan book that stood at Kshs. 248.5 billion by end of 2020 (NNCBA Bank Kenya PLC Group, 2021).

2.3 Loan Amounts Accessible and Uptake of Loans

In finance, loan amount refers to the money or funds that are lend out to an individual(s), organization(s) or group(s) by a financial provider or lender (Agwu, 2019). The loan amount is usually given out according to the terms agreed between the borrower and the lender as set out in the loan contract. As such, a loan is the money given out to another party with the agreement that this party will pay for the principle amount and some agreed interest (Tomak, 2018). Loan amounts accessible refer to the maximum amount of loan funds that a borrower is eligible for as determined by the loan provider (Alkhazaleh, 2017). Loan amounts accessible must not be confused with loan amounts needed with the latter denoting the total amount of funds that a borrower has applied for as a loan from a given lender. When awarding the loan, financial lenders restrict the loan amount needed/applied for to the borrower's loan amounts accessible as that is what the lender considers as the much that the borrower is able to repay based on consideration of a number of factors (Moreno & Estrada, 2019).

Ordinarily, the loan amount accessible is determined by a loan provider based on a combination of various factors (Akande, 2019). In the underwriting period, lenders check the debt-to-income ratio of the borrower to assess the ability of the borrower to pay the loan and to decide on the amount of credit to give the borrower. The debt-to- income ratio of the

borrower is an indication of the amount of loan the borrower has in relation to the income made monthly. Lenders prefer borrowers whose debt-to-income ratio is low (Ewert et al., 2016). Another factor considered by lenders when they are giving out loans is the risks they will face which makes it possible for the loaned amount given to the borrower to be based on the lenders risk diversification (Ahmad & Rasool, 2017).

An important consideration is that a borrower is able to repay their loan without hitches within the terms provided. For this, a borrower is required to show evidence of a stable source of income. The capacity to pay the loan is also determined by the number and amounts of loans the borrower has which are outstanding and this is compared to their revenue or income they get monthly (Musha, 2018). Further, the income-to-debt ratio also considers other factors such as the borrower's credit history and score so as to come up with the maximum loan amount the borrower can get (Ewert et al., 2016). Thus loan amounts accessible is an important feature of bank loan products that influence uptake of bank loans as it reflects the much that a borrower can take as a loan as at a particular period (Moussa & Chedia, 2016).

Studies on loaning and accessible loans have been conducted across the globe considering different aspects and contexts. Ewert et al. (2016) for example, studied the factors determining the performance of German bank lending rates for the period 1992- 1998. The study aimed at evaluating how loan amounts granted affected uptake of bank loans in the country for the said period. The study used panel data that was analyzed using random effects model in order to eliminate time and borrowers effects. The loan amounts accessible as a variable was measured on the basis of adequacy of the loans amounts granted. The highlight of the findings was that uptake of bank loans increased with rise in loan amounts

accessible. The study established that uptake of bank loans was higher among banks that provided what was considered as adequate loan amounts compared with banks that issued what was considered as inadequate loan amounts. The conclusion was that increasing loan amounts granted could help drive uptake of loan banks in the country. The current study intends to use a different approach where cross-sectional data as opposed to panel data will be used. Furthermore, the focus will be on digital credit rather than conventional credit.

On their part, Makttoof and Khalid (2018) studied mobile credit use factors by Iraqi banks customers. The descriptive study sampled 125 respondents that were drawn from the capitals three major banks. The study sample was selected using purposive sampling. The study established that loan amounts accessible were one of the leading attributes of mobile credit that influenced uptake of digital credit from the selected banks. The uptake of bank loans was positively correlated with the amounts of loans that the customers accessed. The study recommended that the banks should strive to avail adequate loan amounts to qualifying borrowers. The study's use of purposive sampling technique was problematic due to challenges in the generalization of the findings. This study will seek to validate the findings by relating them to the local context since the said study was done in a foreign country.

Similarly, a study done in Jordan, which is termed as a developing country, evaluated factors that drove the country's commercial banks' lending. The study aim was to determine how some of the banking lending factors affected the banks. For this study, the data was sought from commercial banks financial reports focusing on thirteen Jordanian banks. The data was for the period between 2010 and 2016. The study adopted the ordinary least square model (OLS) to test its various hypotheses. According to the reported findings, there was a statistically significant favorable association between loan amounts granted and uptake of

banks loans in the country. Also noted was that, an increase in loanable funds by one unit increased uptake of bank loans by 0.64 units. Given the positive effect of loanable funds on uptake of bank loans, a recommendation was made that banks in Jordan should redouble their efforts of matching loan amounts accessible to existing demand for loanable funds as this would positively effect their loan book (Alkhazaleh, 2017). The difference between the aforementioned study and the current one is that it focused on conventional bank lending while the current study dwells on digital bank lending. Hence, the need to validate its findings, in the context of digital credit, as the two banking modes utilizes different loan delivery channels. Further, while use of the banks financial reports as the data source boosted objectivity, any missing data on the reports could have compromised the integrity of the study.

A study carried out in Malawi by Chipeta and Kanyumbu (2018) investigated the determinants of access to banking services by bank customers residing in rural areas. It utilized household-level data on demand for financial services from the FinScope survey of 2012 to 2016. Regression analysis and cross-tabulation were used to analyze the study's data. According to the research, access to bank loans increased from rural to peri-urban to urban locations in an ascending manner. Higher degrees of access to bank loans were reported among salaried employees, business owners, and people with rental income, indicating that access to bank loan services grew along with income. Conversely, the rate of access to bank loans was low among individuals who received irregular or low incomes and casual workers. However, across all categories of participants, uptake of bank loans linearly related with loan amounts accessible implying that an increase in loan amounts accessible positively correlated with uptake of loans. However, this study failed to answer whether the association between loan amounts accessible and loan uptake was significant or not. This

gap will be addressed by the current study.

In a study conducted in Zimbabwe, Sakuhuni (2017) performed an analysis of factors resulting in low uptake of digital credit among customers of CBZ Bank. A notable research objective was to evaluate how loans amounts accessible affected customers uptake of digital credit offered by the bank. The study adopted a descriptive research design and targeted varied groups of the banks customers from 13 selected regions. The sample for this study was made up of 155 participants who were chosen using stratified random sampling. The study gathered raw and secondary data and this data analyzed using SPSS version 17. According to the findings, the digital loan amounts accessed were very low with a majority of the respondents considering them as inadequate. According to the study findings, only less than 10% of the respondents were able to access loan amounts that they considered adequate for their needs at the moment. This study is very informative to the current study due to its valuable insights regarding the role of loans amounts accessible in uptake of loans by banks customers. While this study identified loan amounts accessible as a factor affecting uptake of bank loans by customers, the study did not test the nature of the association between the two variables; a gap that the current study will address.

Locally, Musha (2018) investigated the factors affecting the use of credit by Kenyan Youth. This study sampled 381 youths from Nairobi County who were aged between 18 and 35 years. The sample was taken from the Westland, Nairobi East, Nairobi North and Nairobi West districts. Data was gathered with a structured questionnaires administered by the principal researcher. Analysis of the gathered data used quantitative methods using descriptive statistics. The results indicated that, with all the other factors held constant, loans awareness among the youths, skills in entrepreneurship and terms of credit were responsible

for 82.3% of the variability in credit amounts given to youths. There was an inverse association between credit terms and the youths credit uptake. The study did not, however, look at the link between uptake of loans and individual distinct credit terms features such as loan amounts. The study also excluded views from anybody who is outside the youth bracket.

Similarly, Siabei et al. (2019) studied the influence of mobile-based lending on the microfinance banks financial performance. The study focused on the MFIs in Nairobi County in Kenya with special attention to factors such as convenience, terms of credit repayment, the credit appraisal process and the loan disbursement process that were associated with digital lending and how these factors effected the MFIs financial performance. The study population comprised of 130 employees working in finance departments of 13 selected microfinance banks in Kenya. Data was gathered using questionnaires and analyzed both descriptively and inferentially. The study reported that the relationship between loan appraisal process, loan disbursement, loan repayment terms as well as convenience associated with mobile-based lending with the MFIs financial performance was favorable and significant. The study recommended that the MFIs should focus more on mobile lending as this was bound to effect their performance positively. The study, however, did not address the question of the relationship between loan appraisal attributes such as loan amounts accessible and loan pricing and loans uptake, which forms the focus of the current study.

2.4 Loan Repayment Period and Uptake of Loans

Loan repayment period refers to the time allowed to pay the borrowed money before loan amount becomes due (Moussa & Chedia, 2016). Loan repayment period, according to

Sindhuja (2019), can also be referred to as the time limit within which a loan should be repaid. Thus, the time it takes a borrower to fully settle a loan is the loan term or loan repayment period in accordance with the loaning policy (Lore, 2019). Loans may be categorized as short-term or long-term. Short-term loans usually have a loan repayment period or what is also referred to as maturity period of less than one year. Long-term loans are loans with a repayment period that exceeds one year (Muriuki, 2017).

In most cases, loans, especially those from financial institutions, have fixed terms; meaning, they are repayable within a defined time period, agreed upon between the borrower and the lender. However, in some instances, some loans may have variable loan terms, meaning, there is no clearly defined time period within which they are repayable. However, this is a rarity rather than normality (Moussa & Chedia, 2016). Ordinarily, the loan repayment period will depend on the needs of the borrower and conditions of a loan product. As such, if the borrower is need of funds to meet short-term obligations, he/she is likely to apply for a short term loan. However, if the borrower is in need of funds for a capital/long-term project, then he/she is likely to apply for a long-term loan (Cheston & Allison, 2016). As such, there are no standard limits to loan terms. Loan terms are subject to an agreement between the lender and the borrower and are unique to the borrowers' situation at the time of seeking the loan funds. Loan terms could also be subject to review if the loan contract so allows (Lore, 2019). However, it is worth noting that loan repayment period does not depend of modes of application, that is, it does not matter whether the loan is digital or conventional (Tomak, 2018).

The loan repayment period for a given loan has an effect on the monthly payments and total interest costs (Tomak, 2018). A longer-term repayment period means that the borrower will

deal with lower payments monthly. Thus more borrowers prefer to take up loans that are for the long term. For instance, 80-month loan may be preferred by a borrower than a 52-month loan since the payments for the borrower will be lower. But, what most borrowers don't know is that such long term loans have higher interest charges compared to the short loans. As such, the borrower should consider the implications of a longer repayment period on the total interest costs of the loan (Ahmad & Rasool, 2017). Shorter-term loans have higher monthly payments although the interest rates are lower while longer-term loans have higher interest rates although their monthly payments are low. Borrowers should therefore be conscious of this fact and take it into consideration while choosing their desired loan terms (Singh & Sharma, 2018). The borrowers should also be cognizant of the fact that restructuring of the loan repayment periods has implications not only on the supposed regular monthly payments but also on the total cost of the loan in the long-run. Due diligence is thus required, on the part of the borrower, when making decisions on loan terms (Sakuhuni, 2017).

This section provides review of empirical literature on the influence of loan repayment periods on uptake of loans. A study carried out in Jordan evaluated factors affecting uptake of bank credit among the country's commercial banks with an aim to examine how loan repayment period affected uptake of loans from listed bank. The study was based on secondary data which was gathered by the use of a document analysis checklist for the period between 2006 and 2013. Descriptive statistics were employed to describe trends on uptake of loans and loan repayment periods while multiple regression analysis was performed for purposes of establishing the association between the variables of the study. The findings indicated the association between loan repayment periods and uptake of loans

was positive and statistically significant. An increase in loan repayment periods corresponded with an increase in uptake of the bank loans. The study concluded that loan repayment periods positively affected the uptake of bank credit in Jordan with increasing loan repayment periods leading to an increase in bank credit taken (Rababah, 2015). This study is valuable to the current study given its insights on the effect of loan repayment periods on uptake of loans from the said banks. There was over-reliance on secondary data in this study, while the current study will combine primary and secondary data. The study did not, however, provide a distinction as to whether the bank credit offered was digital or conventional, a distinction that will be made in the current study with its focus on digital credit.

Similarly, an empirical investigation done in Colombia examined the level of bank credit utilization and its determinants, with loan repayment period being one of the variables evaluated. The findings of the study showed that the level of bank credit utilization was low among the regular bank customers with much of the bank credit utilization being held by institutional/corporate clients. The study further reported that there was a favorable and significant association between loan repayment periods and uptake of bank credit (Moreno & Estrada, 2019). This study will want to validate these findings and also aspire to expand the scope of the mentioned study with the use of additional variables, namely, loan amounts accessible and loan default consequences, not covered in Moreno and Estrada's study.

Similarly, in Tunisia, Moussa and Chedia (2016) investigated the determinants of uptake of bank credit among banks customers. The study aimed to examine the influence of loan interest rates and loan repayment periods on uptake of bank loans. The study targeted individual borrowers and loan customers who operated small businesses and sought to get

their opinion on whether loan interest rates and loan repayment periods affected their uptake of loans. The study was descriptive in nature and the sample was made up of 120 respondents. The findings showed that both the individual borrowers and the small-scale business owners faced many challenges in obtaining bank loans with high interest rates, cumbersome loan application procedures and inadequate loan repayment periods cited as some of the core problems experienced. The respondents were unanimous that the loan interest rates were too high yet the time allowed for repayment of amounts taken was largely inadequate or too short. This in turn adversely affected their uptake of the bank loans. The study, however, did not empirically test the relationship nature between loan repayment period and loan uptake and whether it was significant or not - a gap that will be closed by the current study.

Akande (2019) performed an empirical analysis of determinants of bank loans uptake in Nigeria. The study examined the effect of loan repayment periods on the loans provided by 10 commercial banks in Nigeria. The correlational study covered a 10-year period between 2008 and 2017. The study data was analyzed descriptively while panel data regression model was used to ascertain the nature of association for the study variables. From the results, it was established that loan repayment period were positively and significantly related with the total loan amounts given by the chosen institutions. Therefore, the study asserted that banks ought to come up with strategies that are innovative to ensure a rise in loan repayment periods within their lending guidelines. The study concluded that loan repayment period should be considered as an important attribute of any loan product offerings. While this study evaluated the effect of loan repayment periods on loan uptake from the bank's perspective, the current study will evaluate this effect from the customers' perspective. The current study will also adopt a different research design.

A study carried out in Nigeria reviewed the determinants of access to trade credit by SMEs in Nigeria. The study units were selected SMEs in the city of Abuja with the owners of the SMEs being the study respondents. As one of the study objectives, the study examined the influence of loan repayment periods on uptake of loan by the selected SMEs in the said region. From the findings, the SMEs agreed that loan repayment period was one of the considerations they made while applying for loans. SMEs also agreed that loan repayment periods influenced their uptake of loans to a great extent. A statistically significant association between loan repayment period and uptake of loans was established. The study thus asserted that due consideration should be given to loan repayment period as an element of loan product offerings (Olawale & Akinwumi, 2018). While this study's focus was on uptake of trade credit by SMEs, the current study's focus is on uptake of digital bank loans by individual customers and not by business entities.

Ngugi (2017) looked at Kenyan commercial banks' financial performance and the impact of mobile-based loan management strategies in a local study. The descriptive study focused on commercial banks that provided mobile loan services. The sample was made up of finance and credit risk managers in these banks. The sample was made up of 52 participants. The findings indicated that the loan repayment duration effected favorably the commercial banks financial performance. Other mobile based loan management practices found to significantly effect Kenyan commercial banks performance included credit scoring, default patterns and risk profile. The conclusion made was that the management of mobile loan services affected the banks performance. While this study linked loan repayment period and commercial banks financial performance in Kenya, it did not touch on the effect of loan repayment period on uptake of bank loans, which forms the basis of the current study. In addition, the

study seemed to have approached investigation from lenders management point view and negated views from consumers. The current study will approach the investigation from the consumers' point of view.

Similarly, Ndagijimana (2017) looked into how mobile lending affected Kenyan commercial banks' financial results. According to the study, a variety of mobile lending factors, including as interest rates, capital sufficiency, and liquidity, had a positive impact on the financial performance of Kenyan commercial banks. Additionally, the five predictor variables under investigation—total mobile loan applicants, total mobile loan amount, interest rates, capital adequacy, and liquidity—explained 47.4% of the Kenyan banks' financial performance. Therefore, the study came to the conclusion that mobile lending platforms' adoption had a positive and significant impact on Kenyan banks' financial performance. This study did not include loan repayment period as a component of mobile lending, which is why its important to focus on this gap. In addition, while this study's dependent variable was the banks financial performance, the current study's dependent variable is uptake of bank loans.

2.5 Loan Pricing and Uptake of Loans

Loan pricing refers to the cost of credit offered by a financial institution or loan provider (Alkhazaleh, 2017). Loan pricing, according to Singh (2018), entails determination of the cost at which funds will be loaned out. In essence, it relates to the determination of a loans interest rate (Amondo, 2019). In their intermediation role, banks and other financial institutions provide financial resources from the units with surplus resources to the ones whose resources are in deficit. This is however done at a cost. The financial institutions include a charge on the loaned funds and this charge is commonly referred to as interest rate

which denotes the cost of the credit (Moussa & Chedia, 2016). Loan pricing is one of the important features of bank loan products. The significance of loan pricing in bank lending activities arises from the fact that it is through loan pricing that banks, and lenders in general, make their money (Carlson, 2017). Interest rates, therefore, represent the price that a borrower has to pay to acquire much needed financial resources from the financial providers. Through loan pricing, lenders are able to determine the interest rate chargeable on their loan products. In most instances, the interest rates are expressed as annual percentage rates (APR) though they can also be expressed in monthly or weekly rates (Moreno & Estrada, 2019).

When it comes to the provision of credit facilities, loan pricing is considered one of the critical activities (Lore, 2019). Given that a rise in access to finances or loans can help reduce poverty and enhance development as the poor will be able to smoothen out shocks that may be due to diseases, adverse weather conditions or a rise in the prices of food. They can also help grow businesses, increase the household income and help cope with emerging risks, it is critical that credit facilities are appropriately priced (Cheston & Allison, 2016). High costs of credit are known to adversely affect uptake of bank loans particularly among the low income and the underserved groups which in turn slows poverty eradication and economic growth, as individuals and businesses lack much needed funds to meet their personal and business needs (Björkegren & Grissen, 2018).

In loan pricing, interest rates provide the level of premium lenders will charge you on the loan for a given duration. If the interest rate is high, the loan is expensive and the opposite is also true (Hwang & Tellez, 2016). Loans interest can be varied or fixed. The latter is one that remains constant (or unchanged) over the entire duration of the loan while a variable interest

rate is one that fluctuates or changes during the course of the loan repayment period mainly due to changes in the micro or macro-economic environment (Amondo, 2019). Ordinarily, lending rates are a core determinant of bad or nonperforming loans. A rise in the interest rates makes the loan payment ability weak which leads to a higher risk of the borrower increasing the risk of a borrower defaulting on repayment therefore occasioning a rise in non-performing loans and bad loans. As such, loan interest rates positively correlate to non-performing loans (Olawale & Akinwumi, 2018). There are several reasons that could occasion high interest rates. These could be classified as either supply side or demand side factors. Supply side factors include poor competition, market risks, regulatory controls, high transportation cost because of costly telecommunications, high fixed and operating expenses, and diseconomies of scale because of small markets. The demand side factors (borrower related factors) include borrowers' lack of consistent income, lack of collateral, poor credit score, poor credit history, among others (Njoroge, 2017).

This section provides a review of empirical literature on loan pricing and its effect on uptake of loans. In an empirical study conducted in India, Singh (2018) assessed bank credit uptake in rural areas. The focus of the study was to evaluate loan utilization in rural India and validate the associated factors. The study targeted a population of 65,500 residents of a rural township in Southern India. Stratified random sampling method helped in choosing the final sample of 314 respondents. In this study, all the respondents concurred that loan pricing as measured using loan interest rates affected their uptake of bank credits to a great extent. The respondents were unanimous that loan interest rate was the single most important determinant that affected their bank credit uptake. In addition, a statistically significant unfavorable association between interest rates level and demand for bank credit was established. The research concluded that interest rates were a significant predictor of bank

credit demand and uptake in rural India. The current study seeks to validate these findings based on a local population. However, while the afore-mentioned study dwelt with bank loans delivered through conventional means, the current study focuses on bank loans offered on digital lending platforms.

Equally, studies by Tomak (2018) and Sindhuja (2019) evaluated determinants of commercial banks credit uptake in Turkey and India respectively. The two studies collected views of selected bank customers regarding various factors that affected their uptake of credit from commercial banks. One of the factors explored in the two studies in detail was loan pricing denoted by loan interest rates. The findings showed that most of the participants were unanimous that the level of interest rate was a critical factor that influenced their uptake of bank loans. Majority of the respondents also lamented over high bank loan interest rates and cited them as an impediment to their uptake of the bank loans. The studies concluded that loan pricing, was one of the bank lending aspects, that required due consideration, if uptake of bank credit was to improve. While these two studies identified loan pricing as one of the factors that influenced uptake of bank credit in Turkey and India, the studies did not go to the extent of empirically testing the nature of influence that loan pricing had on the uptake of bank credit and whether it was significant or not, a research gap that will be addressed by the current study.

Regionally, Yunus (2019) undertook a descriptive study that investigated factors that influenced credit demand among 65 small-scale business operators in Accra Ghana. The study established that high interest rates led to low demand for bank credit with a majority of the respondents complaining that their businesses suffered from lack of access to adequate capital owing to their inability to take up loans due to their high cost. The study

further deduced that commercial banks interest rates could not be predicted and this adversely affected the businesses loans demand. The study also discovered a detrimental and statistically significant correlation between the cost of credit and loan demand. Therefore, it is clear from this study that the cost of credit was a key predictor of bank loan acceptance, with increasing interest rates being associated with decreasing loan uptake. The current study will not only seek to validate these findings, but will also expand the target population to all other bank customers and focus on digital credit, unlike the study by Yunus that focused on conventional credit and SMEs operators only as respondents.

Amondo (2019) did research on the effect of interest rates on uptake of bank credit in Uganda. The research aimed to determine the association between interest rates and the demand for credit among individual credit users in rural Uganda. The study units were two rural districts in Northern Uganda with a sample of 260 respondents involved in the study. The results indicated that most of the individual borrowers had difficulties applying for bank credit due to high interest rates. Majority of the respondents shared the view that bank credit was inaccessible owing to the high interest rates charged. The study also showed that a negative relationship existed between interest rates and the uptake of bank credit in rural Uganda. There was evidence that bank credit uptake increased with reducing interest rates. As such, the study called for regulation of loan interest rates. This study seeks to expand the scope of the highlighted study by considering the effect of other digital credit attributes, in addition to loan pricing, on uptake of bank loans in a local context.

From a local perspective, Musha (2018) studied factors affecting the demand of loan by the Kenyan youth as in the county of Nairobi, with credit terms, awareness of credit facilities and entrepreneurial skills being the variables under study. The study targeted 381 youths,

aged between 18 and 35 years, and who were drawn from the districts studied, that is, Westlands, Nairobi East, Nairobi West, and Nairobi North. The regression results showed that while other factors were held constant, the awareness among the young people, terms of credit and entrepreneurial skills were responsible for 82.3% in the variability of the credit uptake among the young people in Nairobi. There was an inverse association between credit terms and the youths credit uptake was also established. However, this study did not disaggregate the various components of credit terms, such as loan pricing and others, in its investigation, something that the current study will do.

Another local study examined the effect of supply traits on the demand of Kenyan commercial banks loans. This correlational study targeted a population of 43 Kenyan commercial banks where the sample was made up of 11 chosen commercial banks. According to the findings, lending rates were found to be a key contributor to demand for credit as increasing lending rates were found to negatively affect demand for credit demand in the sampled banks (Njoroge, 2017). The study was utilized documentary analysis methods, which use data that is easily verifiable. The difference between the highlighted and current research is that the latter will be based on primary data; it will be cross-sectional in nature and will focus on the demand for digital loans and not bank loans offered through conventional means. In addition, the current study will seek to understand the effect of loan pricing on uptake of bank loans from the borrowers perspective rather than from the banks perspective.

Similarly, the study by Muriuki (2017) sought to determine the influences of loan supply among Kenyan commercial banks. The factors studied included competition, the sharing of loan information, interest rates and loan policies. The study examined the loan amounts

disbursement of the 11 listed banks for the period 2003 to 2012 and used a multiple regression model to estimate the association between interest rates and the banks loan book growth. The study's main finding was that there was a statistically significant inverse correlation between interest rates and the expansion of the commercial banks' loan book. The study concluded that interest rates had a significant negative effect on uptake of loans among Kenya's commercial banks, and hence recommended for the implementation of policies to ensure loan interest rates were within affordable range. Unlike the aforementioned study, the current study covers the period 2012 onwards and will focus on uptake of bank loans offered through digital lending platforms.

2.6 Loan Default Consequences and Uptake of Loans

Loan default consequences refer to courses of action(s) taken by a loan provider (lender) when a borrower fails to repay borrowed funds within the allowed time period (Cheston & Allison, 2016). Whenever a borrower takes a loan from a given lender, the terms of the repayment of the loan are agreed upon between the two parties and documented in a loan contract. In case of default, on the part of the borrower, to make the agreed upon regular repayments to the lender, the borrower is said to be in default and the lender could put into action measures aimed at safeguarding against breach of the loan contract by the borrower (Yunus, 2019). As such, loan default consequences are the courses of action(s) that the loan provider resorts to when the borrower defaults on meeting his/her obligations relating to repayment of the loaned funds (Singh, 2018). As argued by Agwu (2019) loan default consequences can therefore, simply be viewed as measures, undertaken or put in place by a lender, to safeguard against non-payment of loans by the borrowers.

One of the major consequences of loan default is increase in credit risk (Singh, 2018).

Credit risk is the possibility of a borrower defaulting on their loan by not paying their expected payments. This risk is higher for the lender as they will; lose their principal and interest amounts in case a payment is not made. It also leads to an increase in the loan payment expenses and disrupts the lenders cash flow. This loss can completely or partially affect the lender (Sayed & Shusha, 2019). In most cases defaulting on loan obligations arises when there are adverse changes in a borrowers circumstances which impair the borrowers' ability to continue making the required payments though in some instances there could be default on non-justifiable grounds (Dermine, 2017). It is the lenders responsibility to ensure that sound loan recovery mechanisms are in place that safeguard against borrowers' possible default on loan repayment (Rababah, 2015).

The lender will always determine the risk profile of their borrowers so as to decide the amount of credit to give them. This assessment is made by looking at the borrower's digital money transactions, use of airtime and data and the data from credit reference firms such as CRB among other firms. In case there is no available customer data, the lender will give the borrower a small loan or a short-term loan to reduce the default risk. The lender will also increase their fees and the interest rates so as to reduce their risk (Rababah, 2015). Loan default consequences thus form an important feature of loan products as a mitigating measure against bad loans or non-performing loans (Totolo, 2018). Possible loan default consequences could include listings in credit reference bureaus, denial of future loans, loan restructuring, legal action and deteriorating credit scores, among others (Chipeta & Kanyumbu, 2018).

This section provides a review of empirical literature on the effects of loan default on uptake of loans. At the global level, Cheston and Allison (2016) investigated the determinants of

uptake of bank credit in the United States. The goal of the study was to determine how loan default repercussions affected bank customers' borrowing behavior in the Los Angeles municipality. It established that loan defaults were a major area of concern among borrowers in the country. The study observed that knowledge of loan default consequences was instrumental in enhancing loan repayments in the country. It was also established that loan default consequences were an integral element of banks loan management strategies in the country and which effected on uptake of loans in the country. Using chi square statistic, the study established that there was a notable association between loan default consequences and uptake of loans. The study thus concluded that banks must clearly disclose the consequences of loan default to their clients as this effected the client's uptake of loans.

A review of determinants of credit growth among commercial banks in Lebanon by Awdeh (2016) established that most of the borrowers especially on digital lending platforms were not fully aware of the consequences of defaulting on their digital loans. The study noted that more awareness creation was required among digital credit borrowers on the consequences of loan default. Given that borrowers who defaulted on their loans were not allowed to take up new loans before settlement of outstanding loans, it was evident that loan default consequences had an effect on loan uptake. Further, a statistically significant association was found between loan default consequences and uptake of loans in the country (Awdeh, 2016).

Likewise, in Turkey, the determinants of commercial bank credit uptake were reviewed. Establishing the effect of consequences of loan default on bank credit uptake was one of the aims of the study. The feedback was analyzed using chi-square and weighted mean technique helped rank the data in terms of the significance of the various determinants.

From the findings of the study, consequences of loan default emerged as a leading factor that had a major effect on commercial banks credit uptake in the country. The relevance of loan default consequences to uptake of bank credit in Turkey was based on the fact that they acted as a screening mechanism for good and bad borrowers. The study observed that clear knowledge of the consequences of loan default ensured that borrowers were more cautious about failed repayment of their bank credit as this not only affected their ability to secure future loans but it also had an effect on their individual reputation. The study closed by noting that without a comprehensive policy on consequences of loan default, there was a good chance that borrowers would default on their loan repayments (Tomak, 2018).

Sindhuja (2019) recently focused on the determinants of digital credit uptake in India with loan default consequences being one of the predictor variables in review. Bank customers of two leading banks in Mumbai formed the study respondents. The results of the study revealed that loan default consequences were a major factor that affected demand for digital loans in the study area. The respondents were in agreement that the nature of loan default consequences informed their loan uptake decisions with digital credit platforms with less strict loan default consequences experiencing higher uptake of digital credit compared to those with punitive loan default consequences. Consequently, the study called for harmonization of digital credit offering guidelines in the country with sound but fair loan recovery measures.

Equally, an empirical analysis of factors affecting digital credit uptake in Indian banks was performed. The descriptive study targeted bank customers and bank managers as the study respondents. The study utilized questionnaires and interview schedules to gather the opinions of the respondents regarding the factors that affected digital credit uptake in Indian

banks. The results revealed that loan default consequences were an integral element of loan offering that had a significant effect on digital credit uptake in the country. The study observed that loan repayments were low among borrowers who lacked an appreciation of the serious consequences of defaulting on their loans with improvements in loan repayments seen among borrowers who had a better understanding of the consequences of defaulting on their digital credits. The bank managers also cited loan default consequences formed a critical part of their digital credit issuance guidelines. The study concluded that without clearly defining loan default consequences, uptake of digital loans in India may not be optimized (Singh & Sharma, 2018).

From the reviewed literature on the global perspective, it is evident that majority of these studies were conducted in economies with a much more advanced banking system than is the case in Kenya. Differences in institutional set ups, banking industry operating contexts and protocols governing digital lending may imply that their findings may not apply to the Kenyan context. In addition, while these studies acknowledged that loan default consequences had an effect on uptake of bank loans, few identified the nature of the effect (that is, whether positive or negative), a gap the current study will address. In addition, majority of these studies largely focused on the determinants of uptake of bank credit but this research focus will be on the effect of a digital lending platform/product on uptake of bank loans in a local context.

Regionally, Agwu (2019) investigated the determinants of consumers uptake of bank loans in Nigeria. One of the attributes investigated was the effect of loan defaults consequences on consumers uptake of bank loans in Nigeria. One hundred and thirty bank consumers were queried on the factors that influenced their uptake of bank loans together with their relative

importance. According to the findings, significant determinants that effected on consumers uptake of bank loans were related to loan default aspects. According to the study findings, a significant factor that affected the consumers uptake of bank loans was consequences of loan default. In Nigeria, a negative and statistically significant relationship between the effects of loan defaults and bank loan uptake was found. The study concluded that creating awareness regarding loan defaults consequences would progressively aid in enhancing consumers uptake of bank loans in Nigeria. However, while this study's focus was on the determinants of consumers' uptake of bank loans in Nigeria, the current study's aim is to review the effect of digital credit offerings on uptake of bank loans in the Kenyan context.

On their part, Chipeta and Kanyumbu (2018) investigated the determinants of access to banking services by bank customers residing in rural Malawi. Household-level data on demand for financial services from the FinScope survey of 2012 to 2016 was used. The data analysis was done using by cross tabulating the feedback and a multiple regression model. The results indicated that the access level to bank loans rose in ascending order from pre-urban to urban areas. There were higher degrees of access to bank loans among salaried personnel, business people and persons earning rental income compared with those earning low and irregular incomes and casual labourers. Loan amounts accessible and cost of credit were found to influence uptake of bank loans in the country. However, the study did not explore the effect of loan default consequences on uptake of bank loans - a gap the current study will fill.

In a similar way, an empirical study carried out in Nigeria by Akande (2019) evaluated determinants of bank loans uptake. The study employed a correlational research design and collected secondary data on various determinants of bank loans uptake for the period 2008 -

2017. The study data was analyzed descriptively while panel data regression model was used to ascertain the nature of the association between the variables. The study found that loan repayment period and loan amounts accessible positively correlated with uptake of bank loans while interest rates were found to negatively correlate with uptake of bank loans. The study concluded that loan repayment periods, interest rates and loan amounts accessible were important determinants of loan product offerings. This study will use a larger scope of this study by also incorporating loan default consequences as one of the variables under review. In addition, the current study will make use of primary data.

Locally, Siabei et al. (2019) studied the effect mobile lending had on the MFIs financial performance in Kenyan Nairobi County. The study population comprised of 130 employees working in finance departments of 13 selected microfinance banks. According to the study, there is a connection between the MFIs performance and the loan evaluation process, loan disbursement, loan payback conditions, and convenience of digital lending. The recommendation made was that these firms should focus more on mobile lending as this could positively effect their performance. In contrast to this study, the current study, will relate digital lending to bank loans uptake in the country.

Ngugi (2017) examined the impact of mobile-based loan management strategies on the financial performance of Kenyan commercial banks in another local study. The descriptive study focused on Kenyan commercial banks that provided mobile lending. The sample chosen had 52 finance and credit risk managers of Kenyan banks. According to the study, Kenyan commercial banks' financial performance was significantly impacted by several mobile-based loan management strategies, including credit scoring, repayment schedules, default patterns, and risk profiles. This study, however, did not consider the effect of digital

lending attributes such as loan default consequences on uptake of bank loans in the country, the focus of the current study.

These studies had several characteristics, including the use of descriptive study designs, the use of both primary and secondary data, and the descriptive and inferential statistical analysis of the data. These features will also be adopted in the current study. These studies also point to close association between loan amounts, loan repayment periods, loan pricing as well as loan default consequences and uptake of bank loans.

2.7 Summary of Research Gap

The reviewed studies espoused the view that uptake of loans was a leading indicator of bank performance. The studies also espoused the view that various loan management practices that included credit scoring, loan funds accessible, loan repayment periods, loan default patterns and loan risk profile had a significant effect on uptake of loans from banks and hence in turn influenced the banks performance.

Despite the expansive literature on the research subject, it is evident from the afore-discussed empirical literature review most of the studies were not based on uptake of digital credit, as is the current study, but on uptake of conventional bank loans. It is also evident from the empirical literature review that most of the studies did not address all the four elements being looked at in the current study in one study and as such this study made an expansion of previous studies scope. In addition, most of the studies were conducted in other countries denoting that there is dearth of empirical research on the effects of digital lending platforms on uptake of loans in Kenya - a gap this study hopes to fill by exploring the effects of M-Shwari on uptake of loans from the NCBA Bank Kenya PLC in Meru

County.

The identified knowledge gap with respect to loan amounts accessible is lack of clarity as to its effect on uptake of bank loans due to limited studies on the same. The identified knowledge gap with respect to loan repayment periods is difficulties in comparing the studies findings due to variations in loan repayment periods under consideration in the various studies. The identified knowledge gap with respect to loan pricing is lack of clarity as to its effect on uptake of bank loans due to mixed findings reported in the various studies while the identified knowledge gap with respect to loan default consequences is borrowers' limited knowledge/awareness on the same.

2.8 Theoretical Review

The theories that guided this study are the financial intermediation theory and the information asymmetry theory.

2.8.1 Financial Intermediation Theory

The financial intermediation theory was developed by Gurley and Shaw in 1960 (Allen & Santomero, 2017). The theory postulates that the existence of financial intermediaries are necessary as the lower the information asymmetry and the transactions expenses that is often as a result of the information asymmetry between lenders and borrowers. Thus the financial intermediaries allow the financial markets to function more efficiently. This theory, therefore, provides the role played by intermediaries in the financial sector and the economy (Leland & Pyle, 2017). This theory aims to give the reasons for the existence of financial intermediaries. In capitalist countries investors and savers cannot do without intermediaries which make them a crucial part of these economies as they affect how these

economies operate (Pyle, 2011).

Financial intermediaries help in ensuring there is equitable distribution of economic resources by redirecting financial resources from savers (or surplus spending units) to individuals and companies that need the funds for consumption and/or investment. In this sense, financial intermediation is shown as how the financial firms bring together units with deficit depending and those whose spending is in surplus (Levinson, 2018).

This theory is based on two foundations where the first provides that financial intermediaries are important in an economy as they provide liquidity to the banking institutions. According to the second foundation, financial intermediaries are able to change the risk levels of different investments. These two functions of these intermediaries allow for the reduction of transaction costs when intermediaries intervene in the relationship between borrowers and lenders which results in improved allocation of the available resources. Further, it has been noted that the ability of the intermediaries to change the risk levels of assets minimizes the occurrence of market failure and also leads to reduced information asymmetry (Bethune et al., 2019).

This theory uses economic models of complete and perfect markets when it comes to allocation of resources. The basic assumption of the theory is that there is no competitiveness in the market and the market information is accessible to all players in the market and thus there are no transaction expenses in getting this information. But in the real world, things are different since the modern markets are characterized by imperfections including asymmetrical information which results to high transaction expenses and also encourages competition. The role of financial intermediaries in the midst of these imperfections is to get rid of them (Greenbaum et al., 2019). According to Sakuhuni (2017)

and Akande (2019), intermediaries are crucial as they get rid of asymmetrical information monitoring and providing lenders with information they have collected from borrowers and also screening the borrowers using various means to determine their creditworthiness. Further, intermediaries cultivate good relationships with customers as they commit to their customers who eliminate moral hazard and adverse selection challenges (Leland & Pyle, 2017).

The downside of this theory is that although it applauds the role played by intermediaries of getting rid of asymmetrical information and transaction costs, it fails to account for other important dynamics of financial markets such as risk management (Pyle, 2011). It is not necessary to deny the crucial role information plays in the financial intermediation process in order to question whether informational asymmetry is the main explanatory variable of the process. On the other hand, the nature of the financial intermediation process is fast changing due to the significant effect of current communication technologies and the global deregulation of financial services (Leland & Pyle, 2017). Therefore, it would seem that a dynamic approach to the growth of financial intermediation and innovation does not adequately take into account informational asymmetries. Because of this, the theory falls short of developing into a comprehensive and cogent account of what the fundamental role of financial intermediaries in the markets and the economy as a whole is (Scholtens & Van Wensveen, 2015).

The financial intermediation theory is crucial for the current study as it points out the significance of banks financial intermediation on its role in value addition to the economy and the financial sector. The digital credit products such as M-Shwari are innovations aimed at enhancing and facilitating this role. These digital lending platforms provide an alternative

channel for banks to mobilize deposits and to lend these funds to spending units in need of the funds. This way, the banks are able to further their intermediation role. Loan pricing, loan repayment periods and loan default risks are crucial variables in banks intermediation role with higher credit costs being associated with shorter repayment periods and higher default risks while lower credit costs are associated with longer repayment periods and lower default risks. Studies by Akande (2019), Agwu (2019), Cheston and Allison (2016), and Musha (2018), also used this theory in their reviews of uptake of loans. There is no doubt that the banks financial intermediation role is evidenced by uptake of bank loans within the society. The current research sought to determine how utilization of one of these digital lending platforms, which is M-Shwari, by NCBA Bank Kenya PLC has affected uptake of loans by its customers in Meru County.

2.8.2 Information Asymmetry Theory

The information asymmetry theory was developed in the 1970 by George Akerlof, Michael Spence and Joseph Stiglitz. According to this theory the information imbalance between sellers and buyers can result to inefficient markets (Lore, 2019). The theory highlights that a person with more information than another will make a better decision. The information asymmetry highlighted indicates the imbalance when it comes to transactions which can lead to challenges when transacting resulting to market failure in the worst case scenario (Warue et al., 2018). Asymmetrical transactions can be grouped into two moral hazard and adverse selection. The latter ids when a buyer may have information that the seller does not have which results to information asymmetry. The former refers to circumstances where one party is ready to take more risks as the costs of these risks will be borne by the other party (Sayed & Shusha, 2019).

According to the notion of information asymmetry, asymmetric information occurs when one party to a transaction is more informed than the other party. When it comes to financial decisions, asymmetric information research is based on the effect on decision making when there is a difference in the information available between lenders and borrowers (Lore, 2019). Lenders that give loans to borrowers lack information on the borrower's loan repayment as they cannot predict the actions of the borrowers which makes it hard to determine the creditworthiness of the borrowers. Thus, such information asymmetries can lead to moral hazards and adverse selection challenges as noted by Akerlof et al. (1970) in their early research work (Moussa & Chedia, 2016).

When lenders are unable to differentiate between iniquitous and good borrowers, they have no choice but to charge the same interest rates for all the borrowers. The lenders have to be careful as a too high interest rate can cause some good borrowers to exit the market which will lead to a higher interest rate to the poor borrowers. If a perfect market existed, the lenders would know how to charge the different borrowers according to their ability to repay the loan (Rababah, 2015). Thus, adverse selection results to the disqualification of quality borrowers by poor borrowers which in the end leads to a lot of non-performing loans and poor quality of the lenders portfolios (Moussa & Chedia, 2016).

The leading criticism of the information asymmetry theory lies in the argument that the theory only works in situations where there is imbalance of information between transacting parties. However, critics of the theory argue that information asymmetry or failure can be remedied through strategies that seek to increase the supply of, and demand for, information. The introduction of regulations on disclosure requirements, the provision of warranties, guarantees, or service contracts on goods sold, financial intermediation, the use

of collateral, thorough credit checks, the use of insurance, and bottom-up initiatives to inform customers of the quality and reputation of products and sellers are some potential solutions to information asymmetry and its related problems of adverse selection and moral hazards. As such, even in imperfect markets characterized by information failure, the information asymmetry problem could be addressed through application of some of these mechanisms, in turn reducing the potential adverse implications of the information asymmetry problem (Bessler et al., 2011; Leland & Pyle, 2017).

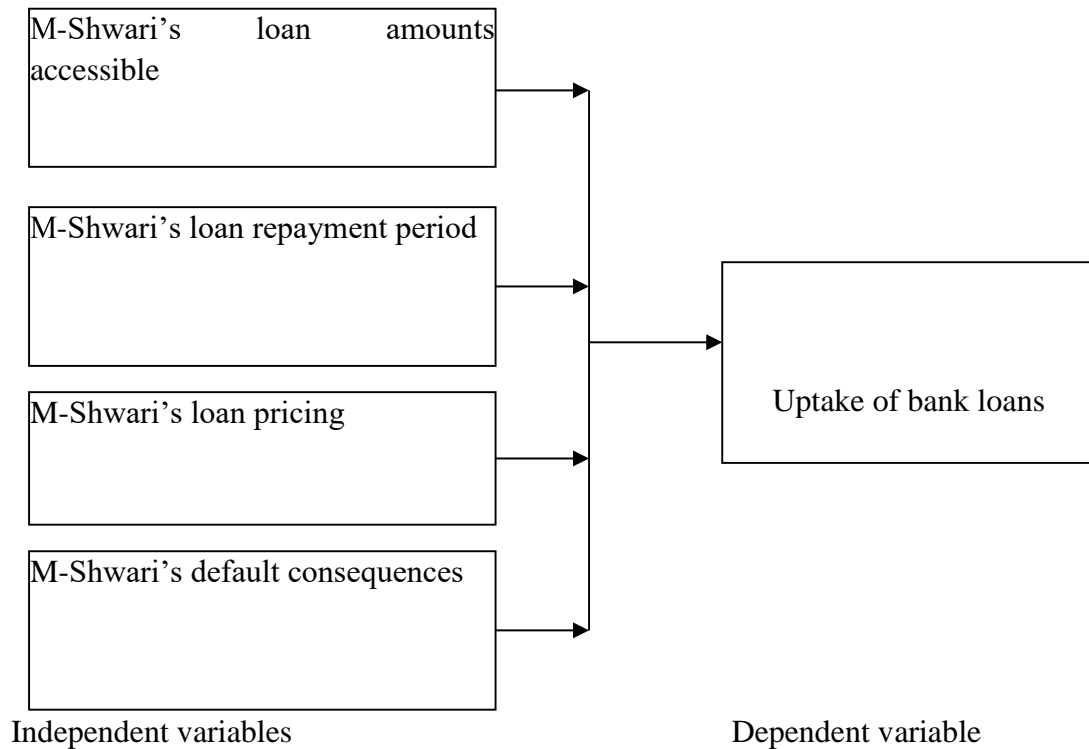
The information asymmetry theory is relevant to the current study given its emphasis on how information asymmetry between lenders and borrowers affects uptake of loans. The current study appreciates the view that when it comes to digital lending there is no doubt that borrowers have access to greater information regarding their loan repayment abilities compared to the lenders. This leads to information asymmetry which affects lenders as they may be unable to determine the creditworthiness of the credit borrowers on these platforms. In the case of this study, it could be argued that due to the asymmetric information between digital credit borrowers and providers of the digital credit relating to the borrowers creditworthiness, the lenders face risks while setting the terms of the digital loans. This asymmetric information scenario no doubt affects the terms relating to loan pricing, repayment period, amounts loanable and default consequences of the digital credit on offer by the various lenders. This view was also espoused in studies by Sakuhuni (2017), Ndagijimana (2017) and Singh (2018) who also used this theory in exploring bank credit uptake in their settings. As such, the information asymmetry theory provides a good basis of looking at how these terms of digital credit, set in light of existence of asymmetric information between lenders and borrowers, affect uptake of bank loans in the country - an area the current study sought to investigate.

2.9 Conceptual Framework

A conceptual framework shows diagrammatically the association between variables. It's an overview of the independent variable plus the dependent variable and can help users of the research understand the association between these two better. The study used a conceptual framework as shown in Figure 2.1.

Figure 2.1

Conceptual Framework



As depicted by the conceptual framework, the independent variables of this study include M-Shwari's loan amounts accessible, loan repayment period, loan pricing and default consequences while the dependent variable is uptake of bank loans. These variables are as described hereafter;

2.9.1 M-Shwari's Loan Amounts Accessible

M-Shwari's loan amounts accessible relate to the maximum amount of loan funds that individual M-Shwari borrowers are eligible for as determined by the loan provider.

According to Totolo (2018), loan amount accessible is one of the critical features of bank loan products that influence the uptake of the bank loans. As the loan limits for individual borrowers grows, due to factors such as regular savings, frequent borrowing and early loan repayment, banks are likely to experience growth in uptake of their loans, and vice versa. This shows that loan amount accessible is a critical predictor of uptake of bank loans (Yunus, 2019). In this study, this variable will be measured by loan sizes, loan limits and number of loans.

2.9.2 M-Shwari's Loan Repayment Period

M-Shwari's loan repayment period relates to the time period allowed to the individual M-Shwari borrowers before loan amount(s) taken becomes due. Loan repayment periods, according to Cheston and Allison (2016), help to indicate the nature of a loan, that is, whether it is long-term or short-term in nature. In most instances, loans will be regarded as long-term if their repayment period exceeds a period of one year and short-term if their repayment period falls within a period of one year. However, in most jurisdictions, digital credit offered by banks and Fintechs tend to be short-term in nature as much of it is repayable within weeks, a month or a few months (Sindhuja, 2019). Loan repayment period is one of the key features of bank loan products that influence the uptake of the bank loans. According to Awdeh (2016), in normal instances, uptake of bank loans tends to positively relate with the loan repayment periods with increasing loan amounts advanced as repayment periods also increase. In this study, this variable will be measured by loan term lengths, minimum and maximum repayment periods.

2.9.3 M-Shwari's Loan Pricing

M-Shwari's loan pricing relates to the cost of credit that is offered to the individual M-Shwari borrowers by the loan provider. Loan pricing, according to Ahmad and Rasool (2017), is another key feature of bank loan products that influences the uptake of the bank loans. To the borrower, loan pricing represents the cost of loan funds and hence denotes the premium that a potential borrower is willing to pay to access loanable funds from a lender. To the lender, loan pricing depicts the revenue realizable from lending activities (Cheston & Allison, 2016). In most of the lending institution, interest income from loaned funds forms the main revenue stream (Singh & Sharma, 2018). Given the sensitivity of borrowers to loan interest rates and given the significance of interest income to a bank's revenue, loan pricing becomes an important element that influences uptake of bank loans and which requires due consideration (Moussa & Chedia, 2016). The indicators of this variable in this study are interest rates level, credit scores and other fees charged.

2.9.4 M-Shwari's Default Consequences

M-Shwari's default consequences relates to courses of action(s) taken by the loan provider when an M-Shwari borrower fails to repay the borrowed funds within the allowed time period. Loan default consequences can be viewed as measures, undertaken or put in place by a lender, to safeguard against non-payment of loans by the borrowers (Agwu, 2019). On their part, borrowers largely perceive loan default consequences as punishment for their defaulting on repayment of loan funds and thus these measures serve as a constraint against loan default. A few though may perceive the loan default consequences as incentive for timely repayment of borrowed funds (Musha, 2018). To the lenders, loan default consequences are an important feature of loan products as a mitigating measure against bad

loans or non-performing loans (Totolo, 2018). The indicators of this variable in this study are loan extensions, being listed in credit reference bureaus, being denied access to future loans and reduced credit scores for the defaulting borrower.

2.9.5 Uptake of Bank Loans

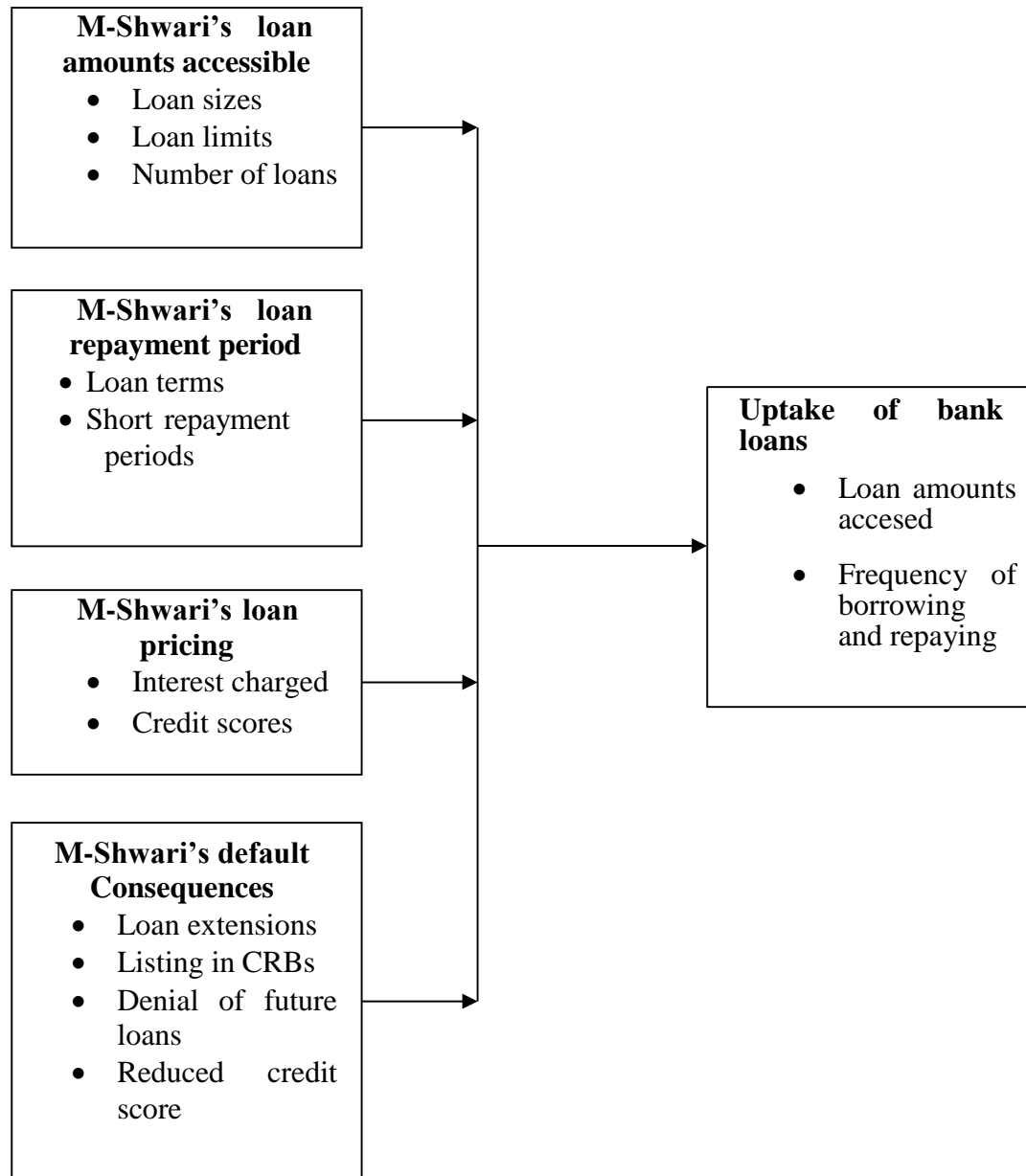
Loan uptake denotes the amounts of funds loaned out to individual bank customers. In the context of this study, it represents the amounts of funds that M-Shwari customers are able to take as a loan from the M-Shwari digital credit platform. Given that many banks offer lending services, uptake of bank loans is a measure of a bank's performance in this critical function. The indicators of this variable in this study are loan amounts accessed and frequency of borrowing.

2.10 Operational Framework

The researcher operationalizes the conceptual framework by breaking down the variables under investigation as shown in Figure 2.2.

Figure 2.2

Operational Framework



Independent variables

Dependent variable

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter covered the materials and methods that was used to reach the objectives of this research. The order followed in this chapter include the study design, population, sample size and sampling design, data gathering tools, pre-test, the research tool's reliability and validity and the analysis and presentation of data.

3.2 Research Design

The study adopted a cross-sectional descriptive survey research design. This design is particularly useful when the research seeks to provide unique traits of a given group, estimate the elements with these traits and come up with conclusions (Cooper & Schindler, 2011). This study design ensures a complete and accurate description of a situation ensuring zero bias in data gathering, which allows the organization of data meaningfully and effectively (Denscombe, 2014). The aim of descriptive design in research is provide an understanding that is accurate related to the elements behavior, events or situations under investigation (Pandey & Pandey, 2015). This study design was considered fit for the current study as it enabled the researcher to give an accurate and complete description of uptake of loans in NCBA Bank Kenya PLC Meru Branch and how it is affected by M-Shwari's loan amounts, loan repayment period, loan pricing and loan default consequences at the time of the study with no bias or manipulation.

3.3 Location of the Study

The study was conducted at the NCBA Bank Kenya PLC Meru Branch located in Meru town along Njuri Ncheke road. The branch is run at the top by the branch manager and has three major departments comprising of Customer experience, Operations and Credit operation. The Customer experience incorporates the customer service or care persons and the customer service or care authorizer. Additionally, in the Operations department it incorporates the Tellers and the cash officer for authorizing the tellers work. Finally, the Credit Operations has asset finance officers, small medium enterprises officers and the authorizing officers. The branch has a total of 18 staffs with the majority at the Credit and Operations department.

There is a variety of products offered at the branch, which includes the deposits, loan facilities and the card services. The deposits include the fixed deposits, call deposits and the wealth management where money market and unit trust is incorporated. The loan facilities include mobile loans like M-Shwari and loop account loans. Term loans which can be secured or unsecured are also offered at the branch to enhance and improve the loan book. The card services includes debit cards, credit cards and pre-paid cards which help the customer to access cash, shop or access facilities with like the Jomo Kenyatta Airport lounge.

3.4 Target Population

As noted by Cooper and Schindler (2011) target population related to a set of elements, people, services, households, groups that is well-defined and under investigation. As explained by Kumar (2018) the target population should have traits that are observable which the researcher hopes to generalize their findings. As defined in statistics, target

population is the total subjects, objects or members that have given specifications about which or whom information is desired or under investigation (Denscombe, 2014). For this study, the target population was NCBA Bank Kenya PLC Meru Branch customers. NCBA Bank Kenya PLC bank has 33 branches in Kenya one of which is in Meru County. Statistics from NCBA Bank Kenya PLC Meru Branch as of September 2019 indicated that 38,000 of its customers utilized the banks digital credit product referred to as M-Shwari (NCBA Bank Kenya PLC Meru Branch, 2020). This formed the study's target population. The list of the entire NCBA Bank Kenya PLC Meru Branch M-Shwari customers, that constituted the study's sampling frame, was obtained from the banks Customer Relations Department, upon obtaining necessary approval from the bank. The approval is in the form of filling and signing the Customer Data Access confidentiality protocol.

3.5 Sample Size and Sampling Technique

3.5.1 Sample Size

The sample size for this study was determined using the Krejcie and Morgan table for sample size determination shown in Appendix II. Given the study population of 38,000 M-Shwari customers in NCBA Bank Kenya PLC Meru, the study sample size was 380 respondents (Krejcie & Morgan, 1970).

3.5.2 Sampling Technique

Sampling technique refers to the sampling method adopted in sample selection (Cooper & Schindler, 2011). Simple random sampling technique was used to choose the 380 respondents. Each individual member of the population was given a number, which ranged from 1 to the total number of M-Shwari customers in the Branch. Using a random number

generator, the researcher generated 380 random numbers between 1 and the population size and this constituted the study sample. The simple random sampling technique is preferred in this study because it allowed every member of the population to have the same chance of being chosen to become part of the final sample. This eliminated biasness in sample selection. This sampling technique was also successfully applied in studies by Singh and Sharma (2018) and Musha (2018) in selection of the study participants who were bank customers. Upon consent from the bank, the sampled customers were reached via phone calls using contacts provided by the bank.

3.6 Data Collection Instruments

The raw nature of the data used in this investigation was used. The researcher administered a questionnaire in order to collect the primary data. There were open-ended and closed-ended questions in this data collection instrument. The questionnaire is organized into six parts as follows: Section A covering the respondents demographic information; Section B containing questions on M-Shwari's loan amounts accessible; Section C containing questions on M-Shwari's loan repayment period; Section D containing questions on M-Shwari's loan pricing; Section E containing questions on M-Shwari's default consequences and Section F containing questions on uptake of bank loans.

The part on the background information of the study participants responded through ticking the most appropriate response that applies to the respondent among alternatives listed. The sections on the independent variables (M-Shwari's loan amounts accessible; M-Shwari's loan repayment period; M-Shwari's loan pricing and M-Shwari's default consequences) was completed using a Likert scale rating system. On a five-point Likert scale (1=strongly disagree, 2=disagree, 3=neutral, 4=agree, and 5=strongly agree), respondents were asked to

score their level of agreement with statements concerning these four constructs, as shown in Sections B to E of the research tool (Appendix I). Questions on uptake of bank loans (Section F) responded through ticking the most appropriate response that applies to the respondent among alternatives listed and providing elaborations where it applies. The information used to come up with specific questions for each of the constructs was adapted from studies by Akande (2019), Makttoof and Khalid (2018) and Francis et al. (2017) due to their relevance to the research subject under investigation in the current study.

The data gathering environment took into account respect for the possible participants' autonomy and dignity by preventing any potential undue influence and by safeguarding both their privacy and the confidentiality of any information gathered. According to Kumar (2018), a questionnaire is an efficient and cost-effective way to collect data, especially if there are many responders. The researcher opted for this tool because it could be applied to many respondents and it was practical when it came to the objectives of the study and due to its affordability (Denscombe, 2014).

3.7 Data Collection Procedures

The researcher sought approval to conduct the study from Kenya Methodist University and authority to collect data from the management of NCBA Bank Kenya PLC Meru Branch. To be allowed access to customer data for academic research purposes, NCBA Bank Kenya PLC Meru Branch requires that the student provide an introduction letter from the university detailing the student's personal details, title of the study being conducted and nature of customer information needed for the study. The student was asked to complete and sign the Customer Data Access confidentiality protocol after submitting the introduction letter from the university. This protocol commits the student to only using the customer information

provided for the research study and no other reason. Therefore, the researcher provided to the bank the university's introduction letter and was then filled and signs the Customer Data Access confidentiality protocol as required by the bank to be allowed access to the customers' phone contact detail.

Upon approval from the university and the management of NCBA Bank Kenya PLC Meru Branch, and upon receipt of the contact list for the eligible customers from NCBA Bank Kenya PLC Meru Branch, the researcher was contacted via a phone call each of the sampled respondents, briefly informing them about the study and its purpose and requests their participation in the study. Once they give their consent, the researcher shall give each of the respondents, a copy of the questionnaire to respond to. The primary researcher, assisted by two research assistants, employed the drop and pick later technique to offer the research tool's users plenty of time to reply, hence raising the overall response rate. The two research assistants were recruited from the university School of Business and Economics. The principal researcher ensured that the research assistants are adequately familiarized with the study tool and the data collection procedures prior to the data collection exercise.

3.8 Pre-testing of Questionnaire

The researcher conducted a pre-testing of the instrument involving 38 questionnaires (representing 10% of the study sample). This pilot test allowed for elimination of errors and ambiguity thus enhancing the research tool. The pre-test was done at KCB Meru Branch among the banks KCB-Mpesa customers. KCB-Mpesa is a digital credit product by KCB that is similar to NCBA's M-Shwari. Like in the main study, the pretest respondents were selected using simple random sampling in which using a random number generator, the researcher generated 38 random numbers between 1 and the population size (total number of

KCB-Mpesa customers at KCB Meru Branch) and this constitute the participants for the pre-test. This selection method is preferred as it eliminates biasness in selection of respondents. A pre-test evaluates the research tools questions sequence and format offering an opportunity for the questions sequence and format to be improved before they are used in the main study (Weber, 2017). Pandey and Pandey (2015) suggest that an adequate pre-test sample should be at 10% of the sample size.

3.9 Validity of Research Instrument

Validity is the extent to which an instrument quantifies what it's expected to quantify. This related to its effectiveness, soundness and accuracy as a measuring tool (Denscombe, 2014) or it can be said to be the extent at which the results of the study after analysis are a representation of the phenomenon being studied (Pandey & Pandey, 2015). This study considered two kinds of validity: construct and content. Construct validity is the degree to which data obtained using the research instrument reflects the concept that it intends to measure. It evaluates whether a measurement tool really represents the thing we are interested in measuring (Pandey & Pandey, 2015). Construct validity, in this study, is ensured through ensuring that the study tool includes only relevant questions that measure known indicators of the research subject underreview.

Content validity refers to the degree to which items in an instrument reflect the content universe to which the instrument was generalized (Weber, 2017). It indicates the extent to which data collected using the research tool signifies a particular area of hypothesis or mirrors a whole universe of things in a specific theme (Kumar, 2018). In this study, content validity of the study tool was assessed through an expert opinion of the supervising lecturers regarding the content of the data collection instrument and whether it is a true representative

of the subject under review. In addition, a review of the instrument by an expert in instrumentation would help establish its face validity.

3.10 Reliability of Research Instrument

Reliability gauges how consistently the research instrument produces results after numerous trials (Nsubuga, 2006). Utilizing the pre-test data, the Cronbach's Alpha Coefficient, which measures internal coefficient, was used to determine the reliability of the data collection instrument. This was acceptable if the reliability was shown to be 0.70 with a 5% significance level. In case the reliability is lower than this percentage, the researcher made make the needed changes to enhance the tools reliability (Weber, 2017).

3.11 Data Analysis and Presentation

The data obtained from the close-ended questions was quantitative in nature and was analyzed using descriptive statistics and inferential statistics using the Statistical Package for Social Science (SPSS version 24.0). Presentation of the results was in form of standard deviation, mean, frequencies and percentages. The open-ended queries results were qualitative and were analyzed through conceptual content analysis. Qualitative data was presented in prose and was organized on the basis of emerging themes based on the study objectives. The study findings were presented using charts, graphs and tables.

A multiple regression model helped in determining the association between the study variables. This model is beneficial since it provides the degree to which changes in independent variables affect the dependent variable. It also shows how strong such an effect is in accordance to the different independent variables.

The model that was used in this study is shown below;

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$$

Where;

Y = Uptake of bank loans (which is the dependent variable)

X1 = M-Shwari's loan amounts accessible

X2 = M-Shwari's loan repayment period X3 = M-Shwari's loan pricing

X4 = M-Shwari's default consequences

β_0 = Constant

$\beta_1 - \beta_4$ = Beta coefficients of independent variables

ε = Error term

The significance of the overall regression model was tested using F-statistic while the significance of the regression estimators was tested using the t-test statistic, both at 5% significance level.

The researcher must run two diagnostic tests, including tests for normality, multicollinearity, linearity, heteroscedasticity, and autocorrelation, before beginning the multiple regression analysis. The Shapiro-Wilk test was used in this investigation to determine whether the data were normal at a significance level of 5%. Normalcy was presumed for p 0.05 whereas deviation from normality was presumed for p 0.05. The Variance Inflation Factor (VIF) and Tolerance values were used to test for multicollinearity, with VIF values 3 and Tolerance values > 0.1 indicating no multicollinearity among the research variables. These two

diagnostic tests were essential for confirming that the study data adhered to the specific assumptions that underlie the use of regression analysis, namely that the study data should be normally distributed and that the independent variables should not be significantly correlated with one another (multicollinearity).

Linearity was tested using scatter plots. Heteroscedasticity test was checked using Levene's test. If the p value is greater than 0.05, the constant variance of error terms null hypothesis is accepted. The existence of autocorrelation was examined using the Durbin- Watson test. Test statistic levels in the range of 1.5 to 2.5 are considered to be relatively typical, according to the decision rule. Values outside of this range may be concerning (Field, 2009).

3.12 Measurements of Variables

Table 3.1 showed the measurement of the study variables.

Table 3.1*Measurement of Study Variables*

Variable	Proxy	Variable type	Measurement/indicators	Expected sign
Uptake of bank loans	Y	Dependent	Loan amounts accessed Frequency of borrowing and repaying	-
M-Shwari's loan amounts accessible	X1	Independent	Loan sizes Loan limits Number of loans	Positive
M-Shwari's loan repayment period	X2	Independent	Loan term/length Minimum & maximum repayment periods	Positive
M-Shwari's loan pricing	X3	Independent	Interest rates level Credit scores Other fees charged	Negative
M-Shwari's default consequences	X4	Independent	Loan extensions Listing in CRBs Denial of future loans Reduced credit scores	Negative

3.13 Ethical Considerations

The code of conduct a researcher must follow when performing research is known as research ethics (Denscombe, 2014). Both Kenya Methodist University (KeMU) and the National Commission for Science, Technology, and Innovation gave their approval for this study (NACOSTI). Permission to collect data was sought from relevant authorities at NCBA Bank Kenya PLC Meru Branch. NCBA Bank Kenya PLC Meru Branch allows access to

customer information for academic research purposes provided the student provides an introduction letter from the university and the student fills and signs the Customer Data Access confidentiality protocol as required by the bank. The principal researcher would comply with this requirement when seeking access to the banks M-Shwari customers phone contacts.

The researcher would observe ethical consideration such as anonymity, consent, confidentiality during the collection and reporting of study results. In addition, no inducements or gifts were provided to those who agree to participate in the research. The study participants' involvement entailed no additional hazards for them. All completed surveys were stored securely behind locked doors in preparation for data analysis and presentation. Lastly, all literature materials used are duly acknowledged in the list of references. No data manipulation was done to safeguard the integrity of information obtained.

The respondents' consent was sought prior to participation in the study and also told the reason for this study. The participants were not coerced but were informed that being part of the study is purely voluntary and if any of them wants to withdraw at any study stage, they were not penalized. Further, the researcher made it known to the respondents that the data they give would be handled in confidentiality and if there are issues noted these was highlighted anonymously.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

Results and analysis based on the study's objectives are presented in this chapter. In chapter two, the study results are evaluated and discussed in connection to the examined literature. First, the reliability of the data collected, and the response rate are provided. This is followed by a description of the demographic information of the respondents. Descriptive results are further presented in line with the study constructs followed by diagnostic test results. The chapter then presents hypothesis testing using correlation results. The chapter winds up by assessing the extent to which M-Shwari digital lending practices influence uptake of loans from NCBA Bank Kenya PLC in Meru County, Kenya.

4.2 Reliability Test Results

Results from reliability tests were used to evaluate the variables' internal consistency as determined by the five-point Likert scale. Each and every Likert scaled item's reliability coefficients were calculated, with the findings shown in Table 4.1.

Table 4.1

Reliability results

Variables	Items	Cronbach's Alpha	Decision
M-Shwari's loan amounts accessible	6	0.786	Reliable
M-Shwari's loan repayment period	6	0.872	Reliable

M-Shwari's loan pricing	6	0.799	Reliable
M-Shwari's default consequences	6	0.734	Reliable
Uptake of bank loans	2	0.710	Reliable

Results in Table 4.1 showed that M-Shwari's loan amounts accessible had a Cronbach value of 0.786, M-Shwari's loan repayment period had a value of 0.872, M-Shwari's loan pricing had a value of 0.799, M-Shwari's default consequences had a value of 0.734, and uptake of bank loans had a value of 0.710. The values for each construct were all higher than 0.7. This suggested that the study variables were reliably measured by the items. All of them were employed in the analysis that came next. A Cronbach alpha of 0.7 and higher is regarded as being reasonably sufficient for statistical analysis, according to Sekaran and Bougie (2013).

4.3 Response Rate

A total of 380 questionnaires were distributed to M-Shwari customers in NCBA Bank Kenya PLC Meru. Out of the 380 questionnaires, 263 were given back which indicates 69% response rate. A response rate of greater than 50% is regarded as appropriate for the analysis, according to Saunders et al. (2009). In a similar vein, according to Mugenda & Mugenda (2013), a response rate of 50% is regarded as adequate, a rate of 60% as good, and a rate of 70% or more as very good. Thus, it was determined that the 69% response rate obtained in this study was sufficient for further investigation.

4.4 Demographic Information of the respondents

Demographic information that were tested in the study include gender, level of education and work duration of the respondents.

4.4.1 Gender of the Respondents

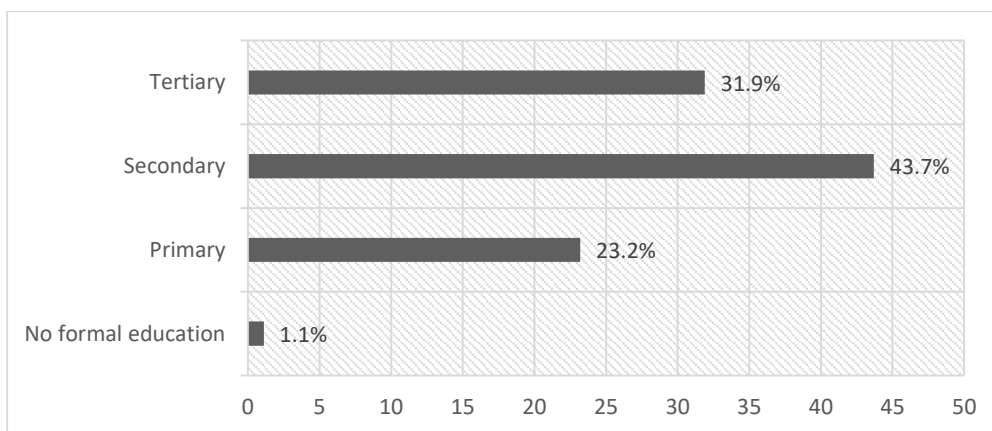
The analyzed information showed that male respondents (141, 54%), were more than female respondents (122, 46%). This implied that more male NCBA Bank Kenya PLC customers participated in the survey than female customers. However, the difference between men and women customers was relatively small implying fair representation of views from both gender on the subject relating to m-shwari digital lending practices and uptake of loans.

4.4.2 Level of Education

The results for the level of education were presented in Figure 4.1.

Figure 4.1

Level of Education



Results showed that 43.7% of the respondents had attained secondary level education, 31.9% tertiary and 23.2% primary level education. This implied that majority of the Mshwari customers had attained a minimum of secondary education. As such, the respondents are able to understand digital lending practices and their effect on uptake of loans.

4.4.3 Period used Mshwari

Results for the period the respondents had used M shwari were presented in Figure 4.2.

Figure 4.2

Period Used M shwari

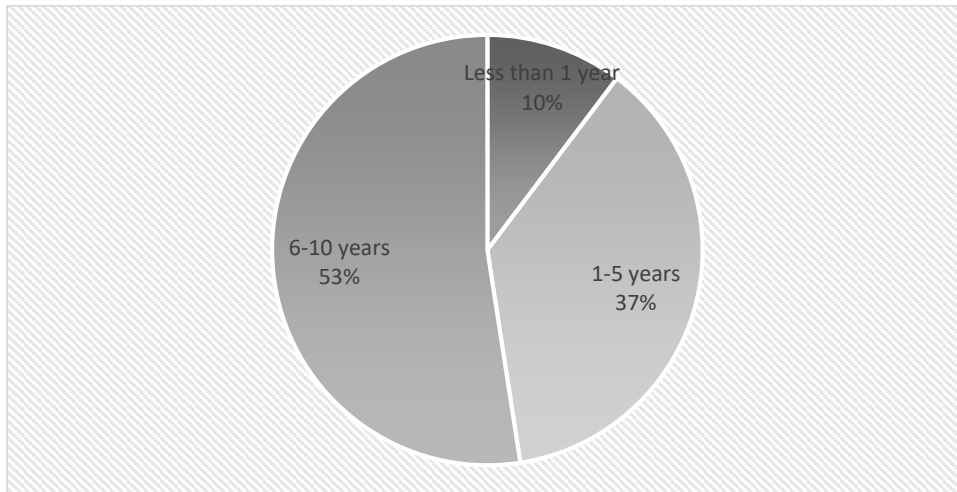


Figure 4.2 showed that most of the participants indicated that they had used M shwari for 6 – 10 years, 37% of the respondents had used M shwari for 1 – 5 years, while 10% had used M shwari for less than 1 year. This implied that most of the customers had used M shwari services for more than 5 years. This indicated that they had adequate knowledge and experience on the use of M shwari. Therefore, the information they provided on M-shwari digital lending practices and uptake of loans was reliable.

4.5 Descriptive statistics on M-Shwari's loan amounts accessible

The study sought to assess the effects of M-Shwari's loan amounts accessible on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. The respondents were asked to rate the items measuring the concept on M-Shwari loan amounts accessible.

These were; loan sizes, loan limits, and number of loans. The scale used was: 1= strongly disagree, 2-disagree, 3- neutral, 4-agree and 5= strongly agree. Table 4.2 shows the descriptive results.

Table 4.2

Descriptive statistics on M-Shwari's loan amounts accessible

Statements (N=263)	1	2	3	4	5	M	Std. dev
The loan amounts I access are insufficient for my needs	3 (1.1%)	27(10.3%)	3(1.1%)	104(39.5%)	126(47.9%)	4.2	1.0
Despite regular borrowing on the M-Shwari platform, my loan limit has not significantly increased	17(6.5%)	23(8.7%)	13(4.9%)	93(35.4%)	117(44.5%)	4.0	1.2
I am working to grow my loan limit so I can access adequate loan amounts	11(4.2%)	22(8.4%)	9(3.4%)	109(41.4%)	112(42.6%)	4.1	1.1
I take several digital loans at a time to complement my low income	7(2.7%)	16(6.1%)	14(5.3%)	101(38.4%)	125(47.5%)	4.2	1.0
An increase in my M-Shwari's loan amounts accessible would be very helpful	12(4.6%)	27(10.3%)	18(6.8%)	98(37.3%)	108(41.1%)	4.0	1.1
I do not know what I need to do to grow my M-Shwari loan limit	97(36.9%)	128(48.7%)	7(2.7%)	22(8.4%)	9(3.4%)	1.9	1.0
Aggregate mean						3.75	1.07

Results showed that majority of the respondents who were 230(87.4%) agreed with the statement that the loan amounts they access are insufficient for their needs. Further results showed that majority of the respondents who were 210(79.9%) agreed with the statement that despite regular borrowing on the M-Shwari platform, their loan limit had not significantly increased. Based on the findings, the customers expressed concerns in regard to the loan amounts they were able to access. There was a general agreement that the loan limit

for most customers remained stagnant even after regularly borrowing on the M-Shwari platform. This implied that most of the customers were not satisfied with the loan amounts from M-Shwari. According to Ewert et al. (2016), lenders prefer borrowers whose debt-to-income ratio is low. Therefore, the low loan limit could be attributed to customers also having high debt-income ratio, causing the banks to be reluctant to increase the loan limit.

In addition, results showed that majority of the respondents who were 221(79.9%) agreed with the statement that they are working to grow their loan limit so that they can access adequate loan amounts. Further results showed that majority of the respondents who were 226(85.9%) agreed with the statement that they take several digital loans at a time to complement their low income. According to Ahmad and Rasool (2017), lenders consider the risks they will face when issuing loan to specific individuals. From the findings, most customers admitted to having multiple loans, which makes them risky borrowers.

Further, results showed that majority of the respondents who were 206(78.4%) agreed with the statement that there is an increase in their M-Shwari's loan amounts accessible was very helpful. Further results showed that majority of the respondents who were 225 (85.6%) disagreed with the statement that they do not know what they need to do to grow their M-Shwari loan limit. The respondents expressed desire to have access to more loans or rather to increase their loan limit. Akande (2019) observed that the loan amount accessible is determined by a loan provider based on a combination of various factors. Musha (2018) pointed that the capacity to pay the loan is determined by the number and amounts of loans the borrower has which are outstanding and this is compared to their revenue or income they get monthly.

4.6 Descriptive statistics on M-Shwari's loan repayment period

The study sought to examine the effects of M-Shwari's loan repayment period on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. The respondents were asked to rate the items measuring the concept on M-Shwari's loan repayment period. The items were mainly about loan terms, short repayment periods, and extension of repayment period. The scale used was: 1= strongly disagree, 2-disagree, 3- neutral, 4-agree and 5= strongly agree. Table 4.3 shows the descriptive results.

Table 4.3

Descriptive statistics on M-Shwari's loan repayment period

Statements (N=263)	1	2	3	4	5	M	Std. dev
The grace period for M-Shwari loan repayment is too short hence I find it insufficient	14(5.3%)	21(8%)	22(8.4%)	91(34.6%)	115(43.7%)	4.0	1.2
I struggle to repay my M-Shwari loan(s) within the allowed repayment period	10(3.8%)	34(12.9%)	30(11.4%)	50(19%)	139(52.9%)	4.0	1.2
The short repayment period is an impediment for qualifying to larger loan amounts	14(5.3%)	21(8%)	11(4.2%)	65(24.7%)	152(57.8%)	4.2	1.2
Most of the loan terms are short-term and hence encourage shorter and more frequent cycles of borrowing	10(3.8%)	16(6.1%)	32(12.2%)	56(21.3%)	149(56.7%)	4.2	1.1
Extension of loan repayment periods for M-Shwari loans comes with additional costs and this acts as a disincentive to further borrowing	11(4.2%)	43(16.3%)	50(19%)	94(35.7%)	65(24.7%)	3.6	1.1
Lengthening of M-Shwari's loan terms would allow me to increase the loan amounts sought	14(5.3%)	38(14.4%)	29(11%)	83(31.6%)	99(37.6%)	3.8	1.2
Aggregate mean						4.0	1.2

Results in Table 4.3 showed that majority of the respondents who were 206(81.3%) agreed with the statement that the grace period for M-Shwari loan repayment was too short hence they find it insufficient. The results also showed that majority of the respondents who were 189(71.9%) agreed with the statement that they struggle to repay their M-Shwari loan(s) within the allowed repayment period. This implied that most of the respondents struggle to repay the M-Shwari loan owing to short repayment period. Tunisia et al. (2016) observed that loan interest rates were too high yet the time allowed for repayment of amounts taken was largely inadequate or too short.

The results further showed that majority of the respondents who were 217 (82.5%) agreed with the statement that the short repayment period is an impediment for qualifying to larger loan amounts. In addition, results showed that majority of the respondents who were 205 (78.0%) agreed with the statement that most of the loan terms are short-term and hence encourage shorter and more frequent cycles of borrowing. Based on the findings, most of the customers felt that the loan repayment period was not adequate. Moreno and Estrada (2019) reported that there was a favorable and significant association between loan repayment periods and uptake of bank credit. This means that the longer the repayment period, the high the loan uptake.

The results also showed that majority of the respondents who were 159(60.4%) agreed with the statement that extension of loan repayment periods for M-Shwari loans comes with additional costs and this acts as a disincentive to further borrowing. The results also showed that majority of the respondents who were 182(69.2%) agreed with the statement that the lengthening of M-Shwari's loan terms would allow me to increase the loan amounts sought. This implied that increasing the loan repayment period would encourage more customers to

borrow. Akande (2019) established that loan repayment period was positively and significantly related with the total loan amounts given by the institutions.

4.7 Descriptive statistics on M-Shwari's loan pricing

The study sought to establish the effects of M-Shwari's loan pricing on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. The respondents were asked to rate the items measuring the concept on M-Shwari's loan pricing. The items were mainly about interest charged, credit scores, and other charges. The scale used was: 1= strongly disagree, 2-disagree, 3- neutral, 4-agree and 5= strongly agree. Table 4.4 shows the outcome.

Table 4.4

Descriptive statistics on M-Shwari's loan pricing

Statements (N=263)	1	2	3	4	5	M	Std. dev
I feel that the interest charged on M-Shwari loans is high	6(2.3%)	16(6.1%)	5(1.9%)	117(44.5%)	119(45.2%)	4.2	0.9
The relatively high interest rates of M-Shwari loans adversely affect my borrowing capacity on the platform	14(5.3%)	16(6.1%)	4(1.5%)	107(40.7%)	122(46.4%)	4.2	1.1
I would consider applying for larger loan amounts if the digital loans interest rates were not that high	4(1.5%)	11(4.2%)	3(1.1%)	130(49.4%)	115(43.7%)	4.3	0.8
I am not aware of the considerations made in credit scoring of digital loans customers	6(2.3%)	13(4.9%)	8(3%)	127(48.3%)	109(41.4%)	4.2	0.9
Other fees charged on loan amounts applied for, in addition to the loans interest rates, make digital loans to be expensive	9(3.4%)	13(4.9%)	7(2.7%)	111(42.2%)	123(46.8%)	4.2	1.0
I am dissatisfied with the high interest rates charged on M Shwari loans	11(4.2%)	19(7.2%)	6(2.3%)	124(47.1%)	103(39.2%)	4.1	1.0

Results in Table 4.4 showed that majority of the respondents who were 236 (89.7%) agreed with the statement that they feel that the interest charged on M-Shwari loans is high. Further results showed that majority of the respondents who were 229 (87.1%) agreed with the statement that the relatively high interest rates of M-Shwari loans adversely affect my borrowing capacity on the platform. Results also showed that majority of the respondents who were 245 (93.1%) agreed with the statement that they would consider applying for larger loan amounts if the digital loans interest rates were not that high. Based on the findings, most of the customers felt that the interest charged on loans was too high, which was a hindrance to accessing more credit. Carlson (2017) argued that lenders in general, make their money through loan pricing. As such, for banks to make high profit, they have to charge higher interest rates. Björkegren and Grissen (2018) argued that high costs of credit are known to adversely affect uptake of bank loans particularly among the low income and the underserved groups. This implied that the demand for credit reduced with increase in cost of credit.

Further results showed that majority of the respondents who were 236 (89.7%) agreed with the statement that they are not aware of the considerations made in credit scoring of digital loans customers. Results also showed that majority of the respondents who were 234 (89.0%) agreed with the statement that other fees charged on loan amounts applied for, in addition to the loans interest rates, make digital loans to be expensive. Further results showed that majority of the respondents who were 227 (86.2%) agreed with the statement that they are dissatisfied with the high interest rates charged on M Shwari loans. This implied that most of the respondents were not happy with the interest rates charged on loans.

According to Hwang and Tellez (2016), if the interest rate is high, the loan is expensive and the opposite is also true. The findings also agreed with Singh (2018) assertion that loan interest rate was the single most important determinant that affected the bank credit uptake.

4.8 Descriptive statistics on M-Shwari's default consequences

The study sought to determine the effects of M-Shwari's default consequences on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. The respondents were asked to rate the items measuring the concept on M-Shwari's default consequences. The items included loan extensions, listing in CRBs, denial of future loans, and reduced credit score. The scale used was: 1= strongly disagree, 2-disagree, 3- neutral, 4-agree and 5= strongly agree. Table 4.5 shows the outcome.

Table 4.5

Descriptive statistics on M-Shwari's default consequences

Statements (N=263)	1	2	3	4	5	M	Std. dev
I always pay my M-Shwari loans on time	85(32.3%)	87(33.1%)	12(4.6%)	30(11.4%)	49(18.6%)	2.5	1.5
I have had several loan extensions following default in loan repayment	7(2.7%)	17(6.5%)	2(0.8%)	118(44.9%)	119(45.2%)	4.2	1.0
I fear that I am listed at the CRB for defaulting on repayment of my M-Shwari loan(s)	8(3%)	20(7.6%)	6(2.3%)	107(40.7%)	122(46.4%)	4.2	1.0
In several occasions, I have been denied accessing a loan due to previous outstanding/unpaid loan amount balances	14(5.3%)	15(5.7%)	2(0.8%)	116(44.1%)	116(44.1%)	4.2	1.1
I have poor credit scores owing to regular late loan repayments	111(42.2%)	101(38.4%)	11(4.2%)	25(9.5%)	15(5.7%)	2.0	1.2
I fear taking loans because of the penalty in case of default	103(39.2%)	111(42.2%)	8(3%)	24(9.1%)	17(6.5%)	2.0	1.2
Aggregate mean						3.2	1.1

Results in Table 4.5 showed that majority of the respondents who were 172 (65.4%) disagreed with the statement that they always pay their M-Shwari loans on time. Further results showed that majority of the respondents who were 237(90.1%) agreed with the statement that they have had several loan extensions following default in loan repayment. Results showed that majority of the respondents who were 229 (87.1%) agreed with the statement that they fear to be listed at the CRB for defaulting on repayment of their M-Shwari loan(s). The findings suggested that most of the respondents made effort to repay the loans on time. At the same time, the respondents noted that they had to seek extension due to delays in repayment. Chipeta and Kanyumbu (2018) identified several loan default consequences including listings in credit reference bureaus, denial of future loans, loan restructuring, legal action and deteriorating credit scores. This means that failure by customers to repay the loan on time could result to the above-mentioned consequences. This would mean overall reduction in the loan uptake.

Further results showed that majority of the respondents who were 232(88.1%) agreed with the statement that in several occasions, they had been denied accessing a loan due to previous outstanding/unpaid loan amount balances. The findings implied that customers who fail to repay the loan on time are denied access to more credit. The findings concurred with Awdeh (2016) argument that borrowers who defaulted on their loans were not allowed to take up new loans before settlement of outstanding loans. Therefore, loan default consequences have an effect on loan uptake.

Results showed that majority of the respondents who were 212 (80.6%) disagreed with the statement that they have poor credit scores owing to regular late loan repayments. Further

results showed that majority of the respondents who were 214(81.4%) disagreed with the statement that they fear taking loans because of the penalty in case of default. The respondents argued that their credit scores were good. Ngugi (2017) established that various mobile based loan management practices that included credit scoring, repayment periods, default patterns and risk profile had a significant effect on credit uptake.

4.9 Descriptive statistics on Uptake of bank loans

The dependent variable in this study was uptake of bank loans among NCBA Bank Kenya PLC customers. The respondents were asked to indicate the range of bank loan amount. Results were presented in Table 4.6.

Table 4.6

Range of Bank Loan

	Frequency	Percent (%)
Below Kshs. 500	6	2.3
Kshs. 500 — Kshs. 1000	58	22.1
Kshs. 1000 — Kshs. 5,000	119	45.2
Above Kshs. 5,000	80	30.4
Total	263	100

Results in Table 4.6 showed that 119(45.2%) had Kshs. 1000 to Kshs. 5,000 bank loan, 80(30.4%) of the respondents had above Kshs. 5,000 bank loan, 58(22.1%) had Kshs. 500 to Kshs. 1000 while 6(2.3%) had less than Kshs 500 bank loan. This implied that most customers had over Ksh 1000 bank loan.

The respondents were further asked to indicate how frequent they borrow on the M-Shwari platform. Results were presented in Table 4.7.

Table 4.7

Frequency of Borrowing

	Frequency	Percent (%)
Weekly basis	13	4.9
Fortnight basis	24	9.1
Monthly basis	226	85.9
Total	263	100

Results in Table 4.7 showed that 226(85.9%) borrowed loan on Mshwari on monthly basis, 24(9.1%) borrowed loan on Mshwari on fortnight basis while 13(4.9%) had borrowed loans on weekly basis. This implied that the most used frequency of borrowing by customers was monthly basis. Akande (2019) identified borrowing and repayment frequency as a key indicator of loan uptake among borrowers.

The respondents were further asked ways through which they grow their M-Shwari loan limits. Majority of the respondents noted that they often buy credit using Mpesa, increased number of transactions made per day, and also increased daily sending of many. This means that to increase M-Shwari loan limits, one needs to increase the number of transactions per day.

When asked to suggest possible interventions that if taken may enhance the uptake of digital loans on the M-Shwari platform, majority of the respondents noted that following: lower lending rates, extended grace period, long repayment period, and non-listing at the CRB. The respondents considered the above interventions as incentives to increased uptake of

digital loans on the M-Shwari platform. Alkhazaleh (2017) and Rababah (2015) identified four attributes of uptake of bank loans including loan amounts accessible, interest charged, loan repayment and loan default consequences.

4.10 Diagnostic Tests Results

Diagnostic tests were done to make sure that suitable statistical tests were utilized in data analysis, which would ensure accurate results. The tests conducted were normality test, multicollinearity test, linearity test, heteroscedasticity test and autocorrelation test.

4.10.1 Normality Test

Normality of data was tested by use of Shapiro-Wilk test. The null hypothesis was that data is normally distributed. The rule was to accept the null hypothesis if the p value was greater than 0.05 and vice versa. Shapiro-Wilk test was used to check for normality. The results are shown in Table 4.8.

Table 4.8

Normality Test

	Statistic	Df	Sig.
Uptake of bank loans	0.837	263	0.059
M-Shwari's loan amounts accessible	0.683	263	0.101
M-Shwari's loan repayment period	0.753	263	0.477
M-Shwari's loan pricing	0.725	263	0.056
M-Shwari's default Consequences	0.749	263	0.121

a Lilliefors Significance Correction

The Shapiro wilk test results in Table 4.8 indicate that the probability values for the variables – uptake of bank loans, M-Shwari's loan amounts accessible, M-Shwari's loan

repayment period, M-Shwari's loan pricing, M-Shwari's default were, 0.059, 0.101, 0.477, 0.056 and 0.121 respectively. The p values were greater than 0.05, therefore the null hypothesis was accepted. The results indicated that the data was normally distributed for all the variables.

4.10.2 Multicollinearity test

Multicollinearity test was assessed in this study using the Variance Inflation Factor (VIF). According to Field (2009), VIF values in excess of 10 indicate presence of multicollinearity, while values below 10 imply absence of multicollinearity. Results are shown in Table 4.9.

Table 4.9

Multicollinearity tests

Variables	Tolerance	VIF
M-Shwari's loan amounts accessible	0.492	2.031
M-Shwari's loan repayment period	0.699	1.43
M-Shwari's loan pricing	0.625	1.601
M-Shwari's default Consequences	0.472	2.117

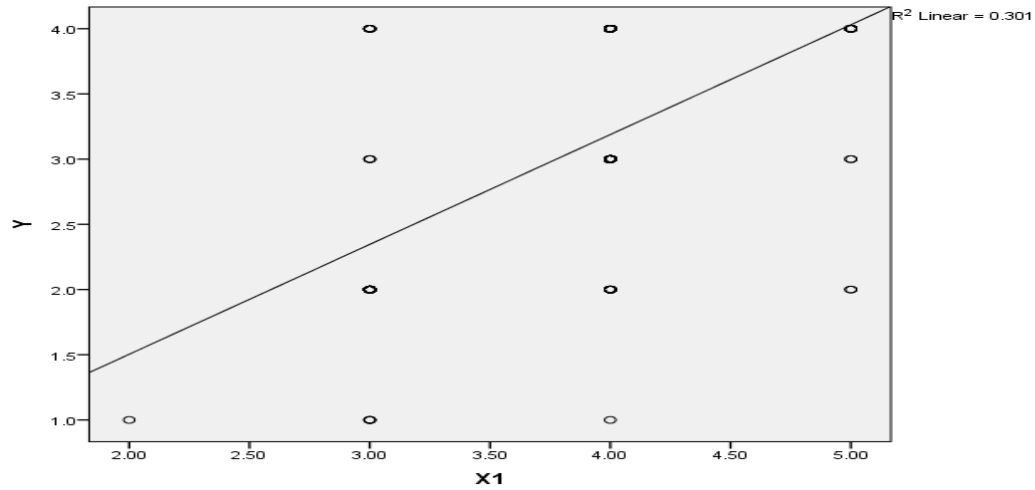
Results in Table 4.9 shows that the value of VIF ranged from 1.43 (M-Shwari's loan repayment period) to 2.117 (M-Shwari's default). The values were less than 10, and therefore, there was no multicollinearity among the independent variables (Field, 2009).

4.10.3 Linearity Test

Linearity test was done using scatter plots. The aim was to establish whether there exists a linear relationship between the predictor variables and the dependent variable. The findings are shown in Figure 4.3.

Figure 4.3

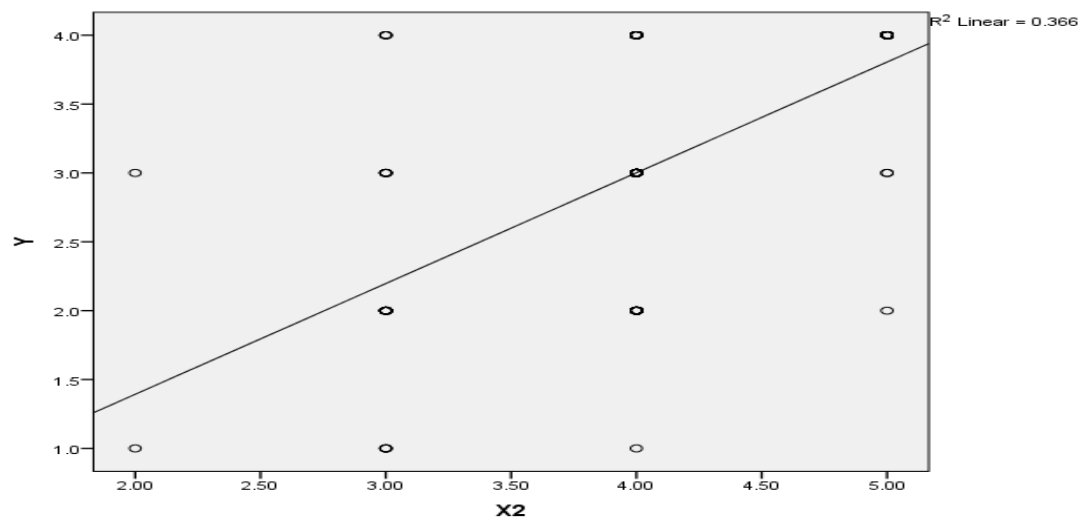
Scatter Plot; Uptake of bank loan and loan amount accessible



The scatter plots in Figure 4.3 indicate the existence of a positive linear relationship between uptake of bank loan (Y) and loan amount accessible (X1). This is illustrated by the line of fit.

Figure 4.4

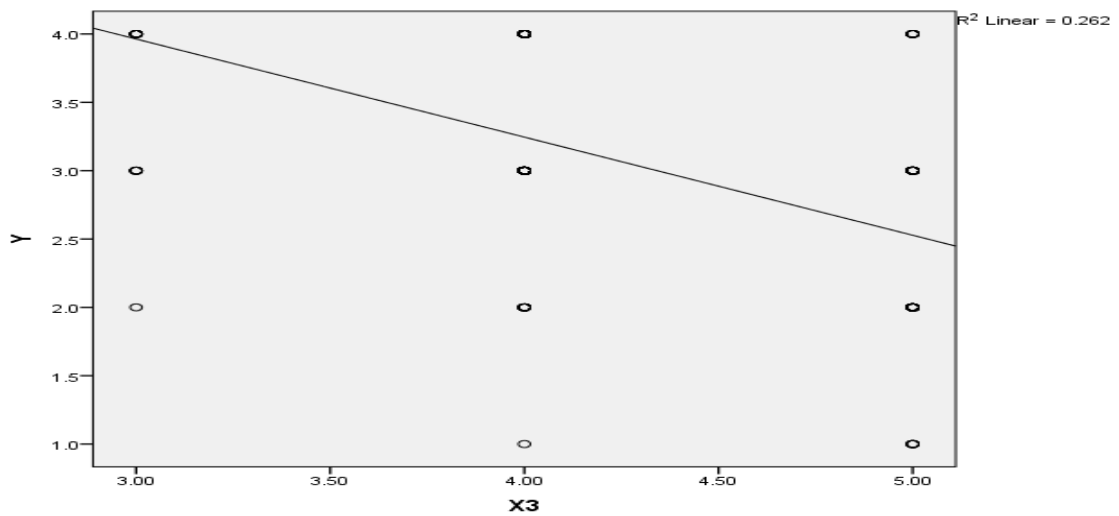
Scatter Plot; Uptake of bank loan and loan repayment period



The scatter plots in Figure 4.4 indicate the existence of a positive linear relationship between uptake of bank loan (Y) and loan repayment period (X2). This is illustrated by the line of fit

Figure 4.5

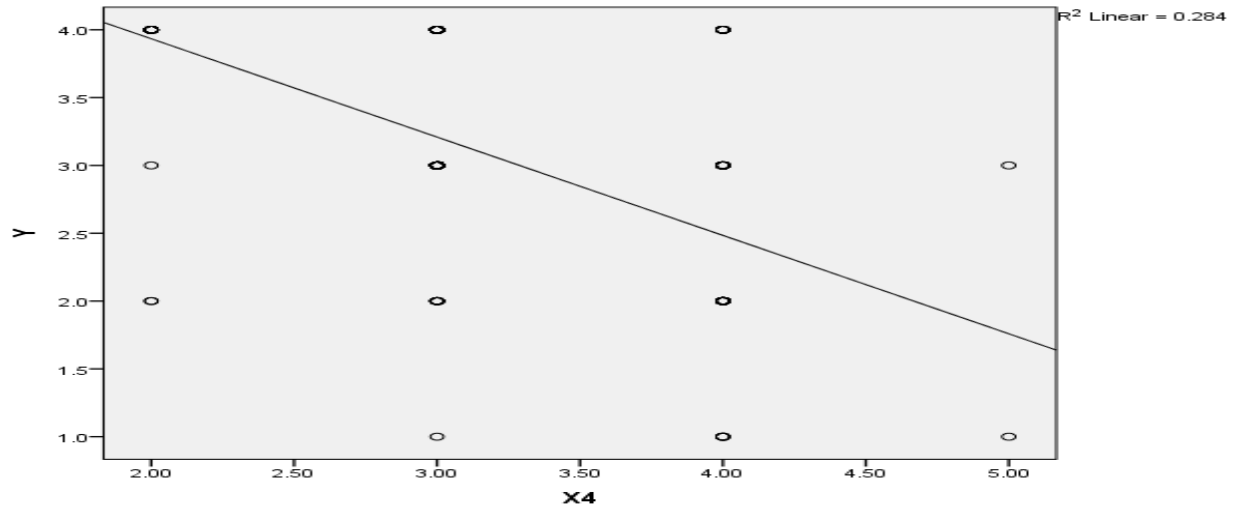
Scatter Plot; Uptake of bank loan and loan pricing



The scatter plots in Figure 4.5 indicate the existence of a negative linear relationship between uptake of bank loan (Y) and loan pricing (X3). This is illustrated by the line of fit

Figure 4.6

Scatter Plot; Uptake of bank loan and loan default consequences



The scatter plots in Figure 4.6 indicate the existence of a negative linear relationship between uptake of bank loan (Y) and loan default consequences (X4). This is illustrated by the line of fit

4.10.4 Heteroscedasticity Test

The heteroskedasticity test was carried out by use of Levene's test of equality of error variances. The results are shown in Table 4.10.

Table 4.10

Levene's Test of Equality of Error Variances

Dependent Variable: Y			
F	df1	df2	Sig.
2.957	30	232	0.061

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

Table 4.10 showed a p value of 0.061 greater than 0.05 implying that the null hypothesis of constant variance of error terms was accepted. Therefore, the variance of the residuals was homoscedastic. In other words, heteroskedasticity was not present.

4.10.5 Autocorrelation Test

Durbin- Watson test was used in checking for autocorrelation. The decision rule was that test statistic values in the range of 1.5 to 2.5 are relatively normal. Values outside this range could be cause for concern (Field, 2009). The results are shown in Table 4.11.

Table 4.11

Durbin-Watson test of Auto-correlation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.700 ^a	.489	.482	.566	1.567

a Predictors: (Constant), X4, X2, X3, X1

b Dependent Variable: Y

The results in Table 4.11 reveal a Durbin-Watson value of 1.567, which was within the acceptable range of 1.5 to 2.5. The null hypothesis of no autocorrelation was, therefore, accepted and thus residuals were not autocorrelated.

4.11 Hypothesis Testing using Correlation Results

The correlation analysis was conducted to determine the relationship between the independent variables (M-Shwari's loan amounts accessible, loan repayment period, loan pricing and default consequences) and the dependent variable (uptake of bank loan). The results were also used in hypothesis testing. Table 4.12 shows the correlation results.

Table 4.12*M-Shwari digital lending practices and uptake of loans: Correlations*

		Y	X1	X2	X3	X4
Y	Pearson Correlation	1				
	Sig. (2-tailed)					
X1	Pearson Correlation	.549**	1			
	Sig. (2-tailed)	.000				
X2	Pearson Correlation	.605**	.494**	1		
	Sig. (2-tailed)	.000	.000			
X3	Pearson Correlation	-.511**	-.525**	-.421**	1	
	Sig. (2-tailed)	.000	.000	.000		
X4	Pearson Correlation	-.533**	-.671**	-.479**	.568**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	263	263	263	263	263

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

Results in Table 4.12 showed that there was a positive and significant correlation between M-Shwari's loan amounts accessible correlation ($r=0.549$, $p=0.000$). The first hypothesis stated that M-Shwari's loan amounts accessible have no significant effect on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. The hypothesis was rejected since the p value was less than 0.000. Therefore, M-Shwari's loan amounts accessible have a significant effect on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. These findings agreed with Makttoof and Khalid (2018) who established that loan amounts accessible were one of the leading attributes of mobile credit that influenced uptake of digital credit from the selected banks. The uptake of bank loans was positively correlated with the amounts of loans that the customers accessed.

In addition, results that M-Shwari's loan repayment period had a positive and significant correlation ($r=0.605$, $p=0.000$). The second hypothesis stated that M-Shwari's loan repayment period has no significant effect on uptake of bank loans among NCBA Bank

Kenya PLC customers in Meru County. The hypothesis was rejected since the p value was less than 0.000. Therefore, M-Shwari's loan repayment period have a significant effect on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. These findings agreed with Akande (2019) who established that loan repayment period were positively and significantly related with the total loan amounts given by the chosen institutions.

Further results showed that there was a negative and significant correlation between M-Shwari's loan amounts pricing ($r=-0.511$, $p=0.000$). The third hypothesis stated that M-Shwari's loan pricing has no significant effect on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. The hypothesis was rejected since the p value was less than 0.000. Therefore, M-Shwari's loan pricing have a significant effect on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. The study findings agreed with Yunus (2019) who found a negative and statistically significant association between the credit cost and uptake of loans.

In addition, results that M-Shwari's default Consequences had a negative and significant correlation ($r=-0.533$, $p=0.000$). The fourth hypothesis stated that M-Shwari's default consequences has no significant effect on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. The hypothesis was rejected since the p value was less than 0.000. Therefore, M-Shwari's default consequences have a significant effect on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. These finding agreed with Sindhuja (2019) who revealed that loan default consequences were a major factor that affected demand for digital loans in the study area.

4.12 Multiple Regression Model

Regression analysis was done to determine the effect of M-Shwari digital lending practices on uptake of loans from NCBA Bank Kenya PLC in Meru County. Table 4.13 shows the model summary results.

Table 4.13

M-Shwari digital lending practices and uptake of loans: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.700a	0.489	0.482	0.566

a Predictors: (Constant), X4, X2, X3, X1

M-Shwari digital lending practices were found to be satisfactory in explaining uptake of loans from NCBA. This was supported by coefficient of determination also known as the R square of 48.9%. This means that M-Shwari digital lending practices explain 48.9% of the variations in the dependent variable which is uptake of loans from NCBA. Further, the correlation coefficient (R=0.7) denoted that M-Shwari digital lending practices had a strong relationship with the uptake of bank loans. The validity of the model was also validated using Analysis of Variance (ANOVA) and results are shown in Table 4.14.

Table 4.14

M-Shwari digital lending practices and uptake of loans: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	79.101	4	19.775	61.829	.000b
	Residual	82.519	258	0.32		
	Total	161.62	262			

a Dependent Variable: Y

b Predictors: (Constant), X4, X2, X3, X1

The results indicate that the overall model was statistically significant as supported by a p

value of 0.000 which was less than the critical p value of 0.05. This was supported by an F statistic of 19.775 which implied that M-Shwari digital lending practices are a good predictor of uptake of loans. The regression weights of each variable in the model are presented in Table 4.15. The regression coefficients demonstrate the marginal effect of each predictor on the dependent variable.

Table 4.15

M-Shwari digital lending practices and uptake of loans: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	1.63	0.718		2.272	0.024
X1	0.276	0.097	0.18	2.84	0.005
X2	0.501	0.071	0.377	7.09	0.000
X3	-0.262	0.079	-0.187	-3.316	0.001
X4	-0.171	0.088	-0.126	-1.942	0.053

a Dependent Variable: Y

The hypothesized model [$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$] becomes;

$$Y=1.63+0.276X_1+0.501X_2-0.262X_3$$

Where;

Y = Uptake of bank loans

X1 = M-Shwari's loan amounts accessible

X2 =M-Shwari's loan repayment period

X3 = M-Shwari's loan pricing

All the independent variables (loan amounts accessible, loan repayment period, loan pricing

and default consequences) have identical (Likert) scales, and also the constant value in the model is significant, thus the use of unstandardized B-coefficients. From the regression weights, M-Shwari's loan repayment period best explains uptake of bank loans ($\beta=0.501$), followed by loan amounts accessible ($\beta=0.276$), followed by loan pricing ($\beta= -0.262$) and lastly loan default consequences ($\beta= -0.171$).

Regression of coefficients (Table 4.15) showed that M-shwari loan amounts accessible and uptake of loans were positively and significantly related ($\beta=0.276$, $p=0.005$). This implies that a one unit increase in M-shwari loan amounts accessible will increase uptake of loans by 0.276 units. These findings agreed with Chipeta and Kanyumbu (2018) who found that the level of access to banks loans rose in ascending order from rural to peri-urban to urban areas. The level of access to bank loan services also increased with the increase in income with higher degrees of access to bank loans reported among salaried personnel, business people and persons earning rental income

Further results showed that M-shwari loan repayment period and uptake of loans were positively and significantly related ($\beta=0.501$, $p=0.000$). This implies that a one unit increase in M-shwari loan repayment will increase uptake of loans by 0.501 units. These findings agreed with Ngugi (2017) who indicated that the loan repayment duration effected favorably the commercial banks financial performance.

In addition, results showed that M-shwari loan pricing and uptake of loans were negatively and significantly related ($\beta=-0.262$, $p=0.001$). This implies that a one unit increase in M-shwari loan pricing will decrease uptake of loans by 0.262 units. These findings agreed with Tomak (2018) and Sindhuja (2019) who concluded that loan pricing, was one of the bank lending aspects, that required due consideration, if uptake of bank credit was to improve.

Further results showed that M-shwari default consequences and uptake of loans were negatively but insignificantly related ($\beta=-0.171$, $p=0.053$). These findings agreed with Agwu (2019) who indicated a significant factor that affected the consumers' uptake of bank loans was consequences of loan default.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the findings of the study on effects of M-Shwari digital lending practices on uptake of loans from NCBA Bank Kenya PLC in Meru County. It further provides the conclusions and recommendation of the study. The chapter also highlights the areas of further research. The research was anchored on the financial intermediation theory and the information asymmetry theory. The study adopted a descriptive survey research design. The target population was 38,000 NCBA Bank Kenya PLC Meru Branch customers who utilize the banks M-Shwari digital credit. From this, a sample size of 380 respondents was selected using simple random sampling technique. A semi-structured questionnaire was used to collect the study data. Quantitative data was analyzed through descriptive and inferential statistics. Qualitative data was analyzed thematically using conceptual content analysis.

5.2 Summary of Major Findings

This section presents summary of the major findings in accordance with the study variables and objectives.

5.2.1 Uptake of bank loans among NCBA Bank Kenya PLC customers

The dependent variable in this study was uptake of bank loans among NCBA Bank Kenya PLC customers. Majority of the respondents noted that they borrowed loan on Mshwari on monthly basis. The respondents also noted that they increase their loan limit through buying

credit using Mpesa and regularly sending of money via Mpesa. Further, the respondents highlighted lowering lending rates, extended grace period, loan repayment period, and non-listing at the CRB as some of interventions that can enhance the uptake of digital loans on the M-Shwari platform.

5.2.2 M-Shwari's loan amounts accessible and uptake of bank loans

The first objective of the study was to assess the effects of M-Shwari's loan amounts accessible on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. Results showed that most respondents indicated that the loan amounts they access are insufficient for their needs. Further results showed that most respondents indicated that despite regular borrowing on the M-Shwari platform, their loan limit had not significantly increased. In addition, most of the respondents indicated that they were working to grow their loan limit so that they can access adequate loan amounts. Further results showed that most respondents indicated that they take several digital loans at a time to complement their low income. In addition, results showed that most of the respondents indicated that there is an increase in their M-Shwari's loan amounts accessible was very helpful. Further results showed that most of the respondents indicated that they know what they need to do to grow their M-Shwari loan limit.

Hypothesis results showed that M-Shwari's loan amounts accessible have a significant effect on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. Regression results showed that M-shwari loan amounts accessible and uptake of loans were positively and significantly related.

5.2.3 M-Shwari's loan repayment period on uptake of bank loans

The second objective of the study was to examine the effects of M-Shwari's loan repayment period on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. Results showed that most of the respondents indicated that the grace period for M-Shwari loan repayment was too short hence they find it insufficient. In addition, most of the respondents indicated that they struggle to repay their M-Shwari loan(s) within the allowed repayment period. The results also showed that most of the respondents indicated that the short repayment period is an impediment for qualifying to larger loan amounts. In addition, results showed that most of the respondents indicated that most of the loan terms are short-term and hence encourage shorter and more frequent cycles of borrowing. The results also showed that most of the respondents indicated extension of loan repayment periods for M-Shwari loans comes with additional costs and this acts as a disincentive to further borrowing. The results also showed that most of the respondents indicated that the lengthening of M-Shwari's loan terms would allow them to increase the loan amounts sought.

Hypothesis results showed that M-shwari loan repayment period have a significant effect on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. Regression results showed that M-shwari loan repayment period and uptake of loans were positively and significantly related.

5.2.4 M-Shwari's loan pricing on uptake of bank loans

The third objective of the study was to establish the effects of M-Shwari's loan pricing on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. Results

also showed that most of the respondents felt that the interest charged on M-Shwari loans was high. Further results showed that most of respondents indicated that the relatively high interest rates of M-Shwari loans adversely affect their borrowing capacity on the platform. Results also showed that most of the respondents indicated that they would consider applying for larger loan amounts if the digital loans interest rates were not that high. Further results showed that most of the respondents indicated that they were not aware of the considerations made in credit scoring of digital loans customers. Results also showed that other fees charged on loan amounts applied for, in addition to the loans interest rates, make digital loans to be expensive. Further results showed that most of the respondents indicated that they are dissatisfied with the high interest rates charged on M Shwari loans.

Hypothesis results showed that M-shwari loan pricing have a significant effect on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. Regression results showed that M-shwari loan pricing and uptake of loans were negatively and significantly related.

5.2.5 M-Shwari's default consequences on uptake of bank loans

The fourth objective of the study was to determine the effects of M-Shwari's default consequences on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. Results showed that most of the respondents indicated that they do not always pay their M-Shwari loans on time. Further results showed that most of the respondents indicated that they have had several loan extensions following default in loan repayment. Results also showed that most of the respondents indicated that they had fear to be listed at the CRB for defaulting on repayment of their M-Shwari loan(s). Further results showed that most of the respondents indicated that in several occasions, they had been denied accessing a loan due

to previous outstanding/unpaid loan amount balances. Results also showed that most of the respondent indicated that they have not had poor credit scores owing to regular late loan repayments. Further results showed that most of the respondents that they do not fear taking loans because of the penalty in case of default.

Hypothesis results showed that M-shwari default consequences have a significant effect on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. Regression results showed that M-shwari default consequences and uptake of loans were negatively and significantly related.

5.3 Conclusions

5.3.1 Conclusion on Uptake of bank loans among NCBA Bank Kenya PLC customers

The study concluded that most of the customers borrow loan on Mshwari on monthly basis. It also concluded that customers increase their credit limit through purchasing of credit using Mpesa and regularly sending of money via Mpesa. The study further concluded that lowering lending rates, extended grace period, loan repayment period, and non-listing at the CRB were essential interventions in enhancing uptake of digital loans on the M-Shwari platform.

5.3.2 M-Shwari's loan amounts accessible and uptake of bank loans

The study concluded that M-Shwari's loan amounts accessible have a positive and significant effect on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. The study also concluded that most NCBA Bank Kenya PLC customers are not able to access enough loans for their needs. In addition, most customers loan limits were

not changing despite their regular borrowing in NCBA. The study also concluded that increase in loan amounts accessible was very helpful to customers.

5.3.3 M-Shwari's loan repayment period on uptake of bank loans

The study also concluded that M-Shwari's loan repayment period has a positive and significant effect on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. In addition, the study concluded that the grace period of Mshwari loan repayment was insufficient to the customers since it was too small. In addition, short repayment period is an impediment for qualifying to larger loan amounts. The study also concluded that extension of loan repayment periods for M-Shwari loans comes with additional costs and this acts as a disincentive to further borrowing.

5.3.4 M-Shwari's loan pricing on uptake of bank loans

The study also concluded that M-Shwari's loan pricing has a negative and significant effect on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. In addition, the interest charged on Mshwari loans was high and this affected borrowing capacity of customers on the platform. The study also concluded that the customers were not aware of the considerations made in credit scoring of digital loans customers.

5.3.5 M-Shwari's default consequences on uptake of bank loans

The study further concluded that M-Shwari's default consequences have a negative and significant effect on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. In addition, most customers of Mshwari do not repay their loans on time. There was also increase in number of default cases. Most of the respondents indicated that

they have had several loan extensions following default in loan repayment. Results also showed that most of the respondents indicated that they had fear to be listed at the CRB for defaulting on repayment of their M-Shwari loan(s). Further results showed that most of the respondents indicated that in several occasions, they had been denied accessing a loan due to previous outstanding/unpaid loan amount balances. Results also showed that most of the respondent indicated that they have not had poor credit scores owing to regular late loan repayments. Further results showed that most of the respondents that they do not fear taking loans because of the penalty in case of default.

5.3.6 Conclusion based on overall model

Based on the overall model, the study concluded that M-Shwari's loan amounts accessible and M-Shwari's loan repayment period have a positive and significant effect on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. On the other hand, the study concluded that M-Shwari's loan pricing and M-Shwari's default consequences have a negative and significant effect on uptake of bank loans among NCBA Bank Kenya PLC customers in Meru County. It was concluded that M-Shwari's loan repayment period best explains uptake of bank loans, followed by loan amounts accessible, followed by loan pricing and lastly loan default consequences.

5.4 Recommendations

This section provides recommendations on study findings, implications on policy, practice and theory.

5.4.1 Recommendations on study results

The study recommended that NCBA Bank Kenya PLC management should review policies relating to online credit through the M-Shwari platform. In particular, the management should consider lowering the lending rates, extending the grace period, increasing the loan repayment period and non-listing at the CRB.

The study found that most NCBA Bank Kenya PLC customers the loans they are able to access do not meet their needs. The study therefore recommends that NCBA Bank Kenya PLC should provide enough loans to their customers especially the loyal customers. NCBA Bank Kenya PLC management should increase the loan limits of their customers who borrow regularly. The customers on the other hand should work to grow their loan limits.

The study found that grace period for M-Shwari loan repayment was insufficient since it was too short. Therefore, the NCBA Bank Kenya PLC management should look at the grace period they are giving their customers to repay their loans and make it longer so as the customers are able to pay. This will help the customers to stop struggling while paying the loans.

In addition, the study found that the interest charged on Mshwari loans was high. Therefore, the study recommended that NCBA Bank Kenya PLC managers should charge lower interest to their customers so as they can attract more customers. The study recommends that NCBA Bank Kenya PLC managers should create awareness to their customers on considerations made in credit scoring of digital loans customers. Training forums should be organized by NCBA Bank Kenya PLC to their customers.

The study found that most customers at NCBA Bank Kenya PLC do not repay their loans on

time thus leading to a lot of default cases. Therefore, NCBA Bank Kenya PLC should come up with policies that will favour customers such as lower interests and extension of loan repayment period so as to minimize the number of default cases.

5.4.2 Implications on Policy and Practice

The study findings have significant role on policy and practice in finance sector. In terms of policy implications, the research informs key policy makes such as bank management and Central Bank of Kenya. Results bring out the need to align policies relating to online credit management. From the outcome, policymakers need to focus on loan repayment period, loan amounts accessible, loan pricing and loan default consequences. On practice, the research informs NCBA Bank Kenya PLC management on how best to improve uptake of bank loans using various M-shwari digital lending practices.

5.4.3 Implications on Theory

This research contributes substantially towards theoretical development in the finance sector. This study was anchored on the financial intermediation theory which points out the significance of banks financial intermediation on its role in value addition to the economy and the financial sector. The digital credit products such as M-Shwari are innovations aimed at enhancing and facilitating this role. The theory thus supported the importance of online credit through the M-Shwari platform. Findings in this research also confirmed that online credit through the M-Shwari platform was essential in ensuring that borrowers have easy access to credit.

The study was also anchored on the information asymmetry theory, which emphasized on how information asymmetry between lenders and borrowers affects uptake of loans. The

current study appreciates the view that when it comes to digital lending there is no doubt that borrowers have access to greater information regarding their loan repayment abilities compared to the lenders. The theory provided a theoretical prediction on the link between lending practices and update of loans. Findings confirmed this prediction where M-Shwari's loan repayment period, loan amounts accessible, loan pricing and loan default consequences had a significant relationship with update of bank loans.

5.5 Areas of Further Research

The study focused on effects of M-Shwari digital lending practices on uptake of loans from NCBA Bank Kenya PLC in Meru County. Future researchers should consider widening the scope of the population. This is because, this study only concentrated in Meru County. Therefore, future researchers should consider doing the same research topic but in different Counties such as Nairobi County. In addition, the R squared of the study was not 100%. This implies that there are other M-Shwari digital lending practices that affect uptake of loans from NCBA. Thus, further studies could focus on other M-Shwari digital lending practices.

REFERENCES

- Agwu, E. M. (2019). Empirical determinants of consumers uptake of bank loans in Nigeria. *West African Journal of Industrial and Academic Research*, 4(1), 83-89. https://www.academia.edu/33474770/Empirical_Determinants_of_Consumers_uptake_of_Electronic_Banking_in_Selected_States_of_Nigeria
- Ahmad, F., & Rasool, N. (2017). Determinants of digital bank loans uptake: Empirical Evidence from Commercial Banks in Pakistan. *Journal of Economics and Sustainable Development*, 8(1), 47-55. <https://doi.org/10.8246/jesd.v7i2.99171>
- Aizstrauta, D., Ginters, E., & Eroles, M. A. P. (2015). Applying theory of diffusion of innovations to evaluate technology acceptance and sustainability. *Procedia Computer Science*, 43, 69-77. <https://doi.org/10.1016/j.procs.2014.12.010>
- Akande, O. M. (2019). An empirical analysis of determinants of bank loans uptake in Nigeria. *International Journal of Economics and Finance*, 8(5), 32-39. <https://edinburgjournals.org/journals/index.php/journal-of-strategic-management/article/view/108>
- Alkhazaleh, A. M. K. (2017). Factors may drive the commercial banks lending: evidence from Jordan. *Banks and Bank Systems*, 12(2), 31-38. <https://pdfs.semanticscholar.org/4e4e/14a3e482b4ec9ee82758927e5cf350cbf83a.pdf>
- Allen, F., & Santomero, A. M. (2017). The theory of financial intermediation. *Journal of Banking & Finance*, 21(12), 1461-1485. <https://ideas.repec.org/a/eee/jbfina/v21y1997i11-12p1461-1485.html>

- Amidu, M. (2017). What influences banks lending in Sub-Saharan Africa? *Journal of Emerging Market Finance*, 6(2), 17-23.
<https://journals.sagepub.com/doi/abs/10.1177/0972652714534022>
- Amondo, E. (2019). Effect of interest rates on uptake of bank credit in Uganda. *International Business Research*, 3(1), 45-53.
<https://doi.org/10.1237/ibr.2019.07.4333>
- Awdeh, A. (2016). The determinants of credit growth in Lebanon. *International Business Review*, 13(2), 9-16. <https://doi.org/10.5539/ibr.v10n2p9>
- Bertil, O., Robertson, D. H., & Hawtrey, R. G. (2017). Alternative theories of the rate of interest: Three rejoinders. *The Economic Journal*, 47(5), 424-437.
<https://doi.org/10.2307/2225356>
- Bessler, W., Drobetz, W., & Grüninger, M. C. (2011). Information asymmetry and financing decisions. *International Review of Finance*, 11(1), 123-154.
<https://doi.org/10.1111/j.1468-2443.2010.01122.x>
- Bethune, Z., Sultanum, B., & Trachter, N. (2019). *An information-based theory of financial intermediation*. Federal Reserve Bank of Richmond. <https://doi.org/10.21144/wp19-12>
- Björkegren, D., & Grissen, D. (2018, May). *The potential of digital credit to bank the poor*. [Conference Proceedings]. In AEA Papers and Proceedings (Vol. 108, pp. 68-71).
<https://doi.org/10.1257/pandp.20181032>
- Carlson, S. (2017). *Dynamic incentives in credit markets: An exploration of repayment*

decisions on digital credit in Africa. <https://bepp.wharton.upenn.edu/wp-content/uploads/2018/01/S18-AE-Carlson.pdf>

Cheston, S., & Allison, L. (2016). Determinants of bank credit uptake. *Journal of Banking & Finance*, 7(4), 91-98. <https://doi.org/10.1309/jbf.g94168>

Chhonker, M. S., Verma, D., & Kar, A. K. (2017). Review of technology adoption frameworks in mobile commerce. *Procedia computer science*, 122, 888-895. <https://doi.org/10.1016/j.procs.2017.11.451>

Chipeta, C., & Kanyumbu, E. (2018). Determinants of access to banking services in Malawi. *Journal of African Economies*, 8(3), 103-109. <http://aercafrica.org/wp-content/uploads/2018/09/Research-Paper-351.pdf>

Cooper, S., & Schindler, D. (2011). *Business Research Methods* (11th ed.). McGraw-Hill Publishing.

Dapp, T., Slomka, L. A., & Hoffmann, R. (2015). Fintech reloaded -Traditional banks as digital ecosystems. *Publication of the German Original*, 4(3), 261-274. http://www.dbresearch.info/PROD/RPS_ENPROD/PROD0000000000451937/Fintech_reloaded_%E2%80%93Traditional_banks_as_digital_ec.pdf

Dearing, J. W., & Cox, J. G. (2018). Diffusion of innovations theory, principles, and practice. *Health Affairs*, 37(2), 183-190. <https://doi.org/10.1377/hlthaff.2017.1104>

Denscombe, M. (2014). *The good research guide: for small-scale social research projects*. McGraw-Hill Education.

- Dermine, J. (2017). Digital disruption and bank lending. *European Economy*, 5(2), 63-76.
<https://european-economy.eu/wp-content/uploads/2017/12/Digital-Disruption-and-Bank-Lending.pdf>
- Ewert, R., Szczesmy, A., & Schenk, G. (2016). Determinants of bank lending performance in Germany. *Schmalenbach Business Review (SBR)*, 5(2), 344-362.
<https://doi.org/10.1007/BF03396624>
- Francis, E., Blumenstock, J., & Robinson, J. (2017). *Digital credit: A snapshot of the current landscape and open research questions*. CECA White Paper.
<https://escholarship.org/uc/item/88r1j7s>
- Greenbaum, S. I., Thakor, A. V., & Boot, A. W. (2019). *Contemporary financial intermediation*. Academic Press.
<https://www.arnoudboot.nl/files/files/Contemporary%20Financial%20Intermediation%202019.pdf>
- Hansen, A. H. (2011). Classical, loanable fund and Keynesian interest theories. *The Quarterly Journal of Economics*, 21(7), 429-432.
<https://doi.org/10.2307/1882223>
- Hwang, B. H., & Tellez, C. (2016). *The proliferation of digital credit deployments*.
<https://openknowledge.worldbank.org/handle/10986/24567>
- Kothari, C. R. (2004). *Research methodology: methods and techniques*, (2nd ed.). New Age International Publishers Limited.
- Kumar, R. (2018). *Research methodology: A step-by-step guide for beginners*. Sage.

- Leland, H., & Pyle, D. (2017). Informational asymmetries and financial intermediation. *The Journal of Finance*, 17(3), 81-89. <https://doi.org/10.2307/2326770>
- Levinson, C. (2018). Using the theory of intermediation to explain the role of financial intermediaries. *The Review of Economic Studies*, 71(2), 353-360. <https://doi.org/10.1062/tres.2018.19155>
- Lore, M. O. (2019). *Factors affecting the growth of mobile phone loan uptake among small and medium traders in Nairobi Central Business District* [Doctoral dissertation, United States International University-Africa]. Kenya. <http://41.204.183.105/handle/11732/5006>
- Makttoof, M. N., & Khalid, H. (2018). A review of mobile credit use factors by customers for Iraqi banks. *International Journal of Engineering & Technology*, 7(3), 629-637. <https://doi.org/10.14419/ijet.v7i3.20.22958>
- Markard, J. (2018). The life cycle of technological innovation systems. *Technological Forecasting and Social Change*, 153(1), 119-141. <https://doi.org/10.1016/j.techfore.2018.07.045>
- Miller, R. L. (2015). Rogers' innovation diffusion theory (1962, 1995). In *Information seeking behavior and technology adoption: Theories and trends* (pp. 261-274). IGI Global. <https://doi.org/10.4018/978-1-4666-8156-9.ch016>
- Moreno, C., & Estrada, D. (2019). Bank credit utilization and their determinants in Colombia. *Temas*, 3(7), 11-19. <https://doi.org/10.3110/temas.v18-8421-03>
- Moussa, M., & Chedia, H. (2016). Determinants of bank lending: Case of Tunisia.

International Journal of Finance and Accounting, 5(1), 27-36.
<https://doi.org/10.5923/j.ijfa.20160501.04>

Mugenda, O., & Mugenda, A. (2003). *Research methodology: qualitative and quantitative techniques*. Acts Press.

Muriuki, G. (2017). *Factors affecting loan supply in Commercial Banks in Kenya* [Master's Thesis, University of Nairobi]. Kenya.
<http://erepository.uonbi.ac.ke/bitstream/handle/12293/71641>

Musha, T. B. (2018). *Factors influencing uptake of credit by Kenyan Youth in Nairobi County* [Masters' Thesis, University of Nairobi]. Kenya.
<http://hdl.handle.net/11295/75140>

Ndagijimana, A. N. (2017). *Effect of mobile lending on the financial performance of commercial banks in Kenya* [Master's Thesis, University of Nairobi]. Kenya.
<http://hdl.handle.net/11295/102241>

Ndemo, B., & Weiss, T. (Eds.). (2016). *Digital Kenya: An entrepreneurial revolution in the making*. Springer. <https://doi.org/10.1057/978-1-137-57878-5>

Ngugi, J. W. (2017). *Mobile based loan management practices and financial performance of commercial banks in Kenya*. [Master's Thesis, Kenyatta University]. Kenya. <http://ir-library.ku.ac.ke/handle/123456789/18794>

Njoroge, K. K. (2017). Effect of supply side characteristics on uptake of loans on commercial banks in Kenya: Case study of listed banks in Kenya. *Journal of Business Management*, 5(1), 49-56.

<http://41.89.49.13:8080/xmlui/handle/123456789/1423>

Nsubuga, E. H. K. (2006). *Fundamentals of Education Research*. K Publishers (U) Ltd.

Olawale, F., & Akinwumi, O. (2018). The determinants of access to trade credit by SMEs in Nigeria. *African Journal of Business Management*, 4(1), 63-70.
<https://academicjournals.org/journal/AJBM/article-full-text-pdf/1963C1C24144>

Pandey, P., & Pandey, M. (2015). *Research Methodology: Tools and Techniques*. Bridge Center.

Pyle, D. H. (2011). On the theory of financial intermediation. *The Journal of Finance*, 26(3), 737-747. <https://doi.org/10.2307/2325957>

Rababah, M. (2015). Factors Affecting the Bank Credit: An Empirical Study on the Jordanian Commercial Banks. *International Journal of Economics and Finance*, 7(5), 166-178. <https://doi.org/10.5539/ijef.v7n5p166>

Sakuhuni, S. (2017). An analysis of factors resulting in low uptake of digital credit in Zimbabwe: A case study of CBZ Bank (2009-2014). *Journal of Monetary Economics*, 13(4), 115-122. <https://ir.uz.ac.zw/xmlui/bitstream/handle/10646/3264>

Santacreu, A. M. (2015). Innovation, diffusion, and trade: Theory and measurement. *Journal of Monetary Economics*, 75 (11)1-20.
<https://www.sciencedirect.com/science/article/pii/S030439321500080X>

Saunders, M., Lewis P., & Thornhill, A. (2009). *Research Methods for Business Students* (5th ed.). Prentice Hall. <https://www.academia.edu/23374295>

- Sayed, M. N., & Shusha, A. (2019). Determinants of Financial Inclusion in Egypt. *Asian Economic and Financial Review*, 9(12), 1383-1401.
<https://doi.org/10.18488/journal.aefr.2019.912.1383.1404>
- Scholtens, B., & Van Wensveen, D. (2015). A critique on the theory of financial intermediation. *Journal of Banking & Finance*, 24(8), 1243-1251.
<https://www.sciencedirect.com/science/article/pii/S0378426699000850>
- Siabei, R., Kibati, P., & Gitahi, N. (2019). Influence of mobile-based lending on the financial performance of microfinance banks in Nairobi County, Kenya. *International Journal of Business Management and Processes (IJBMP)*, 5(3), 38-55.
<http://ir.kabarak.ac.ke/handle/123456789/285>
- Sindhuja, P. N. (2019). Determinants of digital credit uptake in India. *Indian Business Journal*, 2(4), 36-41. <https://doi.org/10.1080/2157930X.2020.1850012>
- Singh, A., & Sharma, A. K. (2018). An empirical analysis of factors affecting digital credit uptake in Indian banks. *Future Business Journal*, 5(1), 29-36.
<https://doi.org/10.1071/8136607q.31.226>
- Singh, N. (2018). Bank credit uptake in rural India. *Journal of Economic Development*, 6(1), 33-40. <https://doi.org/10.1063/417-772-239-12>
- Tomak, S. (2018). Determinants of commercial bank credit uptake: Evidence from Turkey. *Asian Journal of Empirical Research*, 3(8), 133-140. <https://doi.org/10.1188/s31975-010-0623-00>
- Totolo, E. (2018). *The digital credit revolution in Kenya: An assessment of market demand*,

5 years on. FSD Kenya. <https://fsdkenya.org/themes/consumer-insights/the-digital-credit-revolution-in-kenya-an-assessment-of-market-demand-5-years-on/>

Warue, B. N., Charles, B. J., & Mwanja, P. M. (2018). Theories in Finance Discipline: A Critique of Literature Review. *The University Journal*, 1(2), 113-146. <https://daea.or.ke/wp-content/uploads/2018/07/TUJ-1208.pdf>

Weber, M. (2017). *Methodology of social sciences*. Routledge. <https://www.taylorfrancis.com/books/mono/10.4324/9781315124445/methodology-social-sciences-max-weber>

Yunus, N. (2019). Factors that influence the demand for credit among small scale business operators in Accra, Ghana. *Journal of Finance and Accounting*, 8(3), 71-78. <https://www.scirp.org/journal/paperinformation.aspx?paperid=117630>

APPENDICES

Appendix I: Questionnaire

Section A: Background information

1. State your gender Male [] Female []

2. What is your current level of education?

No formal education [] Primary []

Secondary [] Tertiary []

3. For which purpose do you take M-Shwari loans?

.....

.....

4. Indicate the period of time for which you have used M-Shwari digital loans

Less than 1 year [] 1-5 years []

6-10 years []

Section B: M-Shwari's loan amounts accessible

5. Kindly rate your opinion regarding the following statements on M-Shwari's loan amounts accessible. Use a scale of 1-5 where 1= strongly disagree, 2-disagree, 3-neutral, 4-agree and 5= strongly agree.

Statements on M-Shwari's loan amounts accessible	1	2	3	4	5
The loan amounts I access are insufficient for my needs					
Despite regular borrowing on the M-Shwari platform, my loan limit has not significantly increased					
I am working to grow my loan limit so I can access adequate loan amounts					
I take several digital loans at a time to complement my low income					
An increase in my M-Shwari's loan amounts accessible would be very helpful					
I do not know what I need to do to grow my M-Shwari loan limit					

Section C: M-Shwari's loan repayment period

6. Kindly rate your opinion regarding the following statements on M-Shwari's loan repayment period. Use a scale of 1-5 where 1= strongly disagree, 2-disagree, 3-neutral, 4-agree and 5= strongly agree.

Statements on M-Shwari's loan repayment period	1	2	3	4	5
The grace period for M-Shwari loan repayment is too short hence I find it insufficient					
I struggle to repay my M-Shwari loan(s) within the allowed repayment period					
The short repayment period is an impediment for qualifying to larger loan amounts					
Most of the loan terms are short-term and hence encourage shorter and more frequent cycles of borrowing					
Extension of loan repayment periods for M-Shwari loans comes with additional costs and this acts as a disincentive to further borrowing					
Lengthening of M-Shwari's loan terms would allow me to increase the loan amounts sought					

Section D: M-Shwari's loan pricing

7. Kindly rate your opinion regarding the following statements on M-Shwari's loan pricing. Use a scale of 1-5 where 1= strongly disagree, 2-disagree, 3-neutral, 4-agree and 5= strongly agree.

Statements on M-Shwari's loan pricing	1	2	3	4	5
I feel that the interest charged on M-Shwari loans is high					
The relatively high interest rates of M-Shwari loans adversely affect my borrowing capacity on the platform					
I would consider applying for larger loan amounts if the digital loans interest rates were not that high					
I am not aware of the considerations made in credit scoring of digital loans customers					
Other fees charged on loan amounts applied for, in addition to the loans interest rates, make digital loans to be expensive					
I am dissatisfied with the high interest rates charged on M-Shwari loans					

Section E: M-Shwari's default consequences

8. Kindly rate your opinion regarding the following statements on M-Shwari's default consequences. Use a scale of 1-5 where 1= strongly disagree, 2-disagree, 3-neutral, 4-agree and 5= strongly agree.

Statements on M-Shwari's default consequences	1	2	3	4	5
I always pay my M-Shwari loans on time					
I have had several loan extensions following default in loan repayment					

I fear that I am listed at the CRB for defaulting on repayment of my M-Shwari loan(s)					
In several occasions, I have been denied accessing a loan due to previous outstanding/unpaid loan amount balances					
I have poor credit scores owing to regular late loan repayments					
I fear taking loans because of the penalty in case of default					

Section F: Uptake of bank loans

9. Kindly indicate the range of bank loan amount(s) that you take on M-Shwari?

- Below Kshs. 500 Kshs. 500 — Kshs. 1000
- Kshs. 1000 — Kshs. 5,000 Above Kshs. 5,000

10. How frequent do you borrow on the M-Shwari platform?

- Daily basis Weekly basis
- Fortnight basis Monthly basis

11. How are you able to grow your M-Shwari loan limits?

.....

.....

12. Suggest possible interventions that if taken may enhance your uptake of digital loans on the M-Shwari platform?

.....

.....

Thank you for your time

Table for Determining Sample Size for a Given Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	246
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	180	118	400	196	1300	297	7000	364
50	44	190	123	420	201	1400	302	8000	367
55	48	200	127	440	205	1500	306	9000	368
60	52	210	132	460	210	1600	310	10000	373
65	56	220	136	480	214	1700	313	15000	375
70	59	230	140	500	217	1800	317	20000	377
75	63	240	144	550	225	1900	320	30000	379
80	66	250	148	600	234	2000	322	40000	380
85	70	260	152	650	242	2200	327	50000	381
90	73	270	155	700	248	2400	331	75000	382
95	76	270	159	750	256	2600	335	100000	384

Note: "N" is population size
"S" is sample size.

Source: Krejcie & Morgan, 1970

Appendix II: Krejcie and Morgan Table

Appendix III: Research Permit

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