FINANCIAL INCLUSION: IMPACT OF M-SHWARI ON ACCESS TO CREDIT AMONG MSE'S IN KIAMBU COUNTY

BY

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DECLARATION

This project is my original work and has never been presented for examination in any other university.

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This project has been submitted for presentation with my approval as the University supervisor.

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DEDICATION

I dedicate this project to the perpetual memory of my late father, Mr. Ambrose Koyo Nyamori. I am forever indebted for the virtues you instilled in my sisters and me; you taught us the value of commitment and hard work at a very early age. I could never pay you back, but it saddens me that you died before I could even get a chance to try. May God rest your soul in eternal peace.

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LIST OF ABBREVIATIONS

EFA	**-**	Exploratory Factor Analysis
GOK	–	Government of Kenya
ICT	–	Information and Communication Technology
KNBS	–	Kenya National Bureau of Statistics
MSE	–	Micro and Small Enterprise
MSME	–	Micro, Small and Medium Enterprise
rho	-	Spearman’s rank
SDG	–	Sustainable Development Goals
SME	–	Small and Medium and Enterprise
UFA	**-**	Universal Financial Access

ABSTRACT

MSEs are considered engines of growth, crucial in the stability of most economies. Studies have shown that Micro, Small and Medium Enterprises (MSME's) account for 95% of firms in most countries. According to a report by the Kenya National Bureau of Statistics (KNBS), the sector in Kenya had been recognized for its role in the provision of goods and services, fostering competition, enhancing innovation, generating and increasing employment opportunities especially in the informal sector and consequently alleviating poverty. Despite playing such a significant role in most economies, MSEs in numerous developing countries continue to struggle due to lack of capital and inability to access credit.

The objective of this study was to assess the impact of M-Shwari on access to credit on MSEs based in Kiambu County. With an estimated population of 26,710 licensed MSEs in Kiambu, the researcher used stratified random sampling then applied simple random sampling to select 30 respondents from each strata which were Githurai, Ruiru, and KM (adjacent to Kenyatta University) areas, making it 90 respondents in total. Questionnaires were used to gather primary data from respondents and of the 90 questionnaires, 84 were filled and successfully returned. The study employed the use of descriptive analysis as well as regression analysis to analyze the data collected. The researcher used the Statistical Package for the Social Sciences, (SPSS), to analyze the quantitative data. The study revealed that there was a positive and a significant correlation between access to M-Shwari and access to credit among MSEs in Kiambu County, the study also depicted a positive relationship between affordability of the product and access to credit; both findings lending credence to the argument that when a financial product is accessible and affordable it impacts financial inclusion positively and significantly. The study thus recommends for policies and innovations that encourage and improve financial inclusion as they have proven to be critical to the development and sustainability of small businesses and startups.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Access to credit is a practical necessity in today's economy; much more than a means to make purchases, credit enables individuals and businesses to meet every day needs. Inaccessibility is a major constraint to the development and growth of micro and small enterprises (MSEs) and also to poor rural and urban households. This is mainly due to the behavior of lenders in terms of hedging against borrowers' risks by demanding collateral, which they lack, but also due to information asymmetry (Mwangi & Ouma, 2012)

Organizations have had to adjust significantly on how they operate and conduct their businesses due to technological advancement especially in the areas of information technology (Al-Jabri, 2012). Commercial banks for instance have had to adapt to the reality of M-banking, online banking and other such services made possible due to evolution in technology. These developments have not only been beneficial to banks and other financial institutions but it has also provided the customer with improved access to financial services, information, options and other benefits. Banks are being forced to come up with more innovative ways to attract and even retain existing customers as the movement from the traditional branch banking to mobile banking is slowly but steadily gaining traction. The ever so crucial balance of maximizing profit while also reducing operational and administrative costs persists even has competition makes it necessary for banks to re-invent; however, to attain the balance, an increase in customer M-banking adoption is equally crucial (Bradley and Stewart, 2003).

1.1.1 Access to Credit

Access to credit refers to the ability of individuals and enterprises to obtain external funding to enable them ease cash flow problems (Osoro&Muturi, 2013). Credit can either be short-term or long-term depending on the lenders assessment of the borrowers' ability to repay. Access for credit by SMEs in Kenya has been identified as a necessary condition for job creation and economic growth. The ability to access credit for by businesses is a critical factor of private sector growth and especially for SMEs' that most often lack adequate capital that they need to grow and expand. Credit access also has an impact on the agricultural sector where expenditure on inputs exceeds the returns from sale of the proceeds (Holton, Lawless, & McCann, 2013)

Monteiro (2013) observed that smaller enterprises generally have limited access to nonbank lenders due to lack of creditworthiness in their information which is usually unpublished hence they are challenged by finance. The main concern of this study is the external credit facilities available to SMEs. According to Holton et al (2013) external financing or credit facilities is kind of finance provided by person(s) other than the actual owner of the company who are the company creditors. Manasseh further added that credit can be in any of the following forms; overdrafts, trade creditors, lease financing, debentures, loans, overdrafts among others. All these external sources depend on the enterprises creditworthiness.

Internationally, in developing countries like Vietnam, (Minh, 2012) found that firm characteristics are not the main factor to influence SME financing, but if a business has higher financial leverage the higher the probability of obtaining bank loans. According to Minh the level of information in the possession of the SMEs, owners contributes to whether to borrow credit based on past audited data of the company. Elsewhere in the Malaysia investigation on factor influencing access to loan showed that presence of collateral plays a significant role in assessing repayability of the loan, especially in primary borrowing and it gives a higher chance for loan approval (Haron, Said, Jayaraman, & Ismail, 2013). Elsewhere study in Ghana revealed that lack of collateral, high cost borrowing and absence of audited financial statement makes it difficult to access a bank loan, (Ackah & Vuvor, 2011). Haron et al (2013) observed that in Ghana 75% SMEs are in dire need of loans for expansions, but lack of tangible security takes the lead in forming the basis of most small scale traders' loan disapproval. In Nigeria study examining the credit accessibility in Niger Delta showed that social capital,enterprises age and gender significantly influence informal credit access -those that are not supervised and charges high interest like money lenders,societies etc.- while enterprise age, size, collateral and education had a significant influence on formal credit access -those that are supervised and lend marginally more credit at low interest like banks, traders etc. – according to Ubon & Chukwuemeka, (2014).

Of late the Kenya government has introduced "Uwezo Fund" in its budget to expand access to finance and promote the well-being of youth, women and people with disabilities led enterprises as outline in its blueprints of vision 2030. Mwongera (2014) found out that in Athi-River, collateral plays a big role in the decision by banks and microfinance whether to give a credit or not. Mwongera further noted that interest charged was not reasonable, the level of literacy had a negative influence on a borrowers awareness on how to and where to get loans to improve business and the number of lending institutions had a positive impact on accessibility to finance, since more institutions will meet the specific service needs required. In a case study of Meru Central District, Kenya, (Wangai & Omboi, 2011) observed that education level has a positive impact on an entrepreneur's credit uptake. The level of education gave an added advantage to those who had good accounting knowledge, better management skills and adoption of technology when borrowing credit. Wangai and Omboi (2011) further added that wealthy individuals (those with accumulated collaterals) were more likely to succeed in obtaining credit from a formal financial institution that charge lower interest compared to others

M-Shwari

M-Shwari is a paperless mobile money product from Safaricom Kenya Limited and in conjunction with Commercial bank of Africa (CBA). It allows one to save and borrow varied amounts of money, depending on one's activity on M-Pesa i.e, the rate of depositing and sending money but also on your history of saving with M-Shwari (Safaricom, 2017)

With M-Shwari, one is able to open and operate an account through the mobile phone provided one is already on the M-Pesa platform and without having to visit a banking institution or go through the trouble of filling forms. The platform makes it possible transfer money back and forth from your M-Pesa to M-Shwari savings and account and back as often as one wishes to without extra charges.. Further, it also allows access to micro credit product (loan) of a minimum of KSHs.100 which is processed instantly and deposited in ones M-PESA account. (Safaricom, 2017)

According to a research carried out by Okumu (2016), by the year 2014, an aggregate of KSh24 billion had been deposited into M-Shwari accounts and another KSh7.8 billion has been loaned out.

1.1.2 Micro and Small Enterprises(MSE's) in Kenya

MSE stands for Micro and Small Enterprise. The MSE authority of Kenya describes a Micro Enterprise as being a firm or a business with an annual sales turnover of less than Kshs.500, 000, or such a business that has 1-9 employees working in it. A Small Enterprise on the other hand, the authority defines it as a business that records sales of between Kshs.1, 000,000 and Kshs.5, 000,000 annually, or one that has 10-50 employees working in it (Micro and Small Enterprises Authority, 2017)

MSMEs are largely considered engines of growth, crucial in stability of economies. Study suggests that Micro, Small and Medium Enterprises (MSME's) account for 95% of firms in most countries; according to a report by the Kenya National Bureau of Statistics (KNBS, 2016), the sector in Kenya has been recognized for its role in provision of goods and services, fostering competition, enhancing innovation, generating and increasing employment opportunities especially in the informal sector and consequently alleviating poverty. The role of MSME's is further pronounced in Kenya's vision 2030 where the sector is identified and prioritized as a key growth driver for achievement of the vision 2030 (KNBS, 2016).

In 2015, MSME's national total output stood at Ksh. 3,371.7 billion against a national output of Ksh 9,971.4 billion effectively accounting for 33.8% of the total national output. In terms of gross value added, the MSME are estimated to have contributed Ksh 1,780.0 compared to Ksh. 5,668.2 billion for the whole economy (KNBS, 2016).

Despite playing such a crucial role in the economy, the sector still struggles to raise finance for its operations; according to the same report (KNBS, 2016) traditional sources of financing this sector revolves around personal savings, loans from friends and families and other mostly informal sources.

1.1.3 Financial Inclusion

The World Bank defines financial inclusion as a way through which businesses and individuals obtain appropriate, affordable and quality financial products and services, e.g., ability to save, transact, insurance, transfer funds, etc. (World Bank, 2017).

Joshi (2011) defines Financial Inclusion as a means of ensuring accessibility of essential financial products and services required especially by the disadvantaged in the society, e.g., the poor and low-income people at an affordable cost conveniently and openly. Joshi (2011) argues that Financial Inclusion is comprised of demand and supply side. The demand side is concerned with Financial information, Credit counseling, ability to make efficient use of credit, product literacy, etc. while, the Supply side is concerned with institutions like Banks and financial markets, products & Services, etc. (Joshi, 2011).

Financial inclusion has also variously been looked at in the context of a larger issue of social exclusion, in which cases it has also been referred to as Financial Exclusion. Sinclair (2001) argues that financial exclusion is the inability, by particular groups within the society, to access appropriate financial products and services in the required form. Financial exclusion is a state that prevents poor and disadvantaged social groups from gaining access to the formal financial systems of their countries. Sarma (2010) argues that financial exclusion is a revelation of a much bigger concern of social exclusion of vulnerable groups within the society; that financial exclusion in a way portrays a certain level of discrimination of the poor and other disadvantaged groups.

Across the developing world, Millions of people still do not have access to basic banking services. Several limitations such as cost, geography, and education, continue to present challenges for most people globally, making it ever difficult to safely transfer funds, save money, insurance or even accessing credit facilities such loans (Sinclair, 2001). These four services are crucial in the financial wellbeing of most households, and accessing this product range is an essential goal of financial inclusion. Credit enables most people to use future income to address current requirements and needs or to even leverage on investment opportunities. Saving is a means by which households can have a secure place store funds, enabling them to tap into "past income" as needed. Insurance protects against eventualities and accidents.

Financial Inclusion, if not checked, comes with its fair share of downside. Research has shown that, without adequate financial information, vulnerable people such as the poor or the illiterate take up credit they are not able to pay back or in some cases even secure loans they don't need (Ramakrishnan, 2011).

Ramakrishnan (2011) defines Financial Literacy as the familiarization and understanding of financial products and services, especially the benefits of the products and services but also the associated risks so to make informed decisions. It is the ability to make correct decisions and choices that are useful with regards to money management.

1.2 Research problem

Although there has been significant development towards achieving universal financial inclusion, a considerable amount of people, estimated at 2billion globally, still don't have access to basic financial products and services like banking, saving and credit facilities. Worldwide, close to 59% of adults cite a lack of enough money as their main impediment in accessing these services; which therefore indicates that financial products and services remain expensive and out of reach of the ordinary person or they are simply not designed to suit the needs of the vulnerable groups (World Bank, 2017).

According to the International Finance Corporation (2013), significant number of the sub-Saharan African population still lacks access to formal financial services and products; the corporation states that about three-quarters of the adult population in this region are not able to save money formally and securely, transfer money, access credit, insurance etc.

Statistics indicate that out of five micro and small businesses started in Kenya, three fail within the first two years of startup (GoK, 2016). The factors identified as hindering MSE growth include capital access, cost of capital, and collateral requirements for credit, information access, and capital management. Lack of financial literacy especially as to where to obtain and how to utilize financial services reduce entrepreneurs' ability to borrow. Availability of savings facilities and easy access to credit from financial facilities has been found to accelerate households' abilities to borrow (Ellis et al, 2010)

Hasnah et al (2013), Fatoki & Asah (2011) all carried out studies touching on credit access by SMEs where they concluded that lack of collateral among other challenges were limiting SMEs access to credit from financial institutions. In Kenya in particular, banks are not keen to extend credit to most MSE's due to lack of collateral (Sacerdoti, 2005) thus hampering the growth, development and sustainability of these enterprises.

The World Bank Group regards progress in financial inclusivity as a key proponent towards poverty alleviation and also as a means of improving equity and has they have put together an elaborate global plan in the form of Universal Financial Access (UFA) by 2020. The group, quoting the United Nations in their website, states that Financial Inclusion has been established as a catalyst and a key component towards achieving seven of the seventeen Sustainable Development Goals (SDG's) (World Bank, 2017)

From the above discussions, it is evident therefore that Financial Inclusion is a critical component in the economic and social welfare of society as well as an enabler of extreme poverty alleviation. But there still exists a gap, and although the world bank has put in place an ambitious UFA plan to help bridge the gap, ultimately it comes down to individual countries to adopt the proposals and even initiate a few of their own.

While many studies have been done on mobile banking and other related products, no study has looked at the impact M-Shwari has had on MSE's in Kenya, and in Kiambu county in particular. Okumu (2016) looked at the impact of M-shwari on financial inclusion but only focused his study on Muhoroni Sugar Company. This research study therefore aims at addressing the aforementioned identified gap and consequently seeks to answer the question: has M-Shwari played an instrumental role in helping minimize financial exclusion of vulnerable groups in Kenya? And more specifically has it contributed to the ease of access of credit among MSE's in Kenya.

1.3 Objective of the study

To evaluate the impact of M-Shwari on access to credit among MSEs in Kiambu County

1.4 Value of the study

The study seeks to address a contemporary issue, financial inclusion, which has been identified as a key driver towards poverty alleviation amongst the world's vulnerable and disadvantaged groups. This study is significant mostly to start-ups and existing micro and small businesses as it touches on the issue of access to credit which is crucial part of all businesses.

This study will be substantial to Safaricom Kenya Limited as well as the CBA bank who may want to understand the contribution, if any, that the product may have had towards Financial inclusion; but also to the government of Kenya who may look at the pros and cons of this product and where possible encourage innovation in the sector to promote inclusion of vulnerable groups and by extension support start-ups and small businesses.

1.5 Scope of the study

This study proposes to assess the impact M-Shwari has had on financial inclusion in Kenya between 2012 and 2017; more specifically, the study looks at the impact on access to credit among the MSE found in Kiambu County.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The objective of this chapter is to review journals, books and articles, present a theoretical framework and relevant empirical findings related to the current study.

2.1.1 Theoretical review

This section will introduce and describe some theories related to this study. The particular principles that shall be discussed are: Financial Intermediation, Demand and Supply Side Twin Theory & Credit theory of money.

2.1.2 Financial Intermediation Theory

This theory, developed by Fama (1980), is based on the notion that intermediaries serve to reduce transaction costs and informational asymmetries, for instance, Banks are financial intermediaries that receive deposits from clients and use the proceeds to purchase securities and other forms of investments. Scholtens and Van Wensveen (2003) suggest that the function of the financial intermediary is often regarded as that of coming up with varied financial products for and on behalf of the players in the market, they argue that in a perfect market where information and transactions costs are known to all the players, financial intermediaries would be rendered redundant and thus abolished.

This theory is relevant to my study which seeks to identify the impact of M-Shwari on financial inclusion; M-Shwari in this case is a necessary product being offered by the intermediaries and this theory therefore will help highlight how this relationship might impact on financial inclusion.

2.1.3 Demand and Supply Side Twin Theory

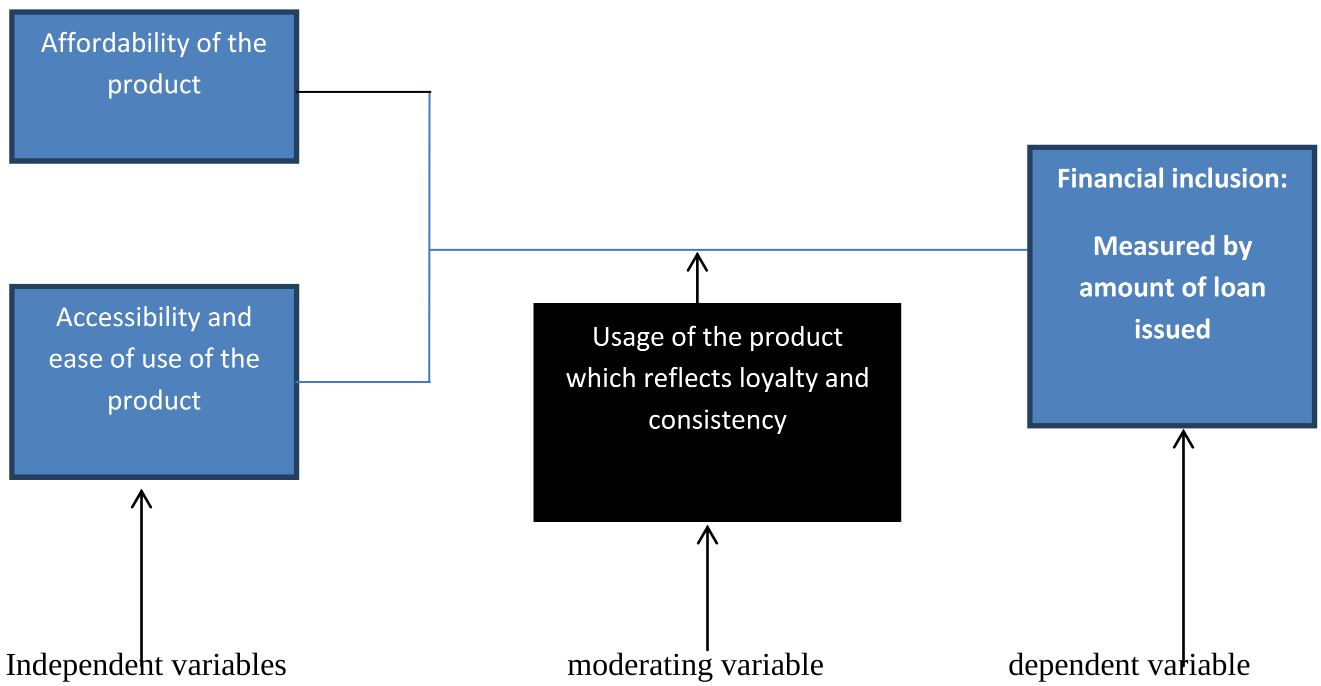
This theory is modeled around the two pillars of financial inclusion and financial literacy (Chakrabaty, 2011). one side, financial inclusion, we have the supply side which is concerned with financial products and services as is desired and demanded by the market on the other side we have financial literacy, which is what informs the demand side; financial literacy involves knowledge of the available products and services, how they work their benefits and cons; the two sides must be present and co-exist to stimulate significant growth in the economy. According to Gol (2007), in order to unlock the potential of an economy as well as ensuring equitable and inclusive growth, while also curbing poverty, it is imperative to develop all areas especially the rural areas which is often a neglected part of the economy. Mehrotra et al (2009) argues that financial institutions like the banks are crucial in mitigating processes and other obstacles that prevent the poor and the other disadvantaged groups in a society from gaining access to basic financial services and products. In spite of the risk associated with inexperience and uncertainty, financing of budding or first time entrepreneurs is crucial for financial inclusion and growth. Financial exclusion leads to the disadvantaged resorting to personal savings and other internal sources to run their macro enterprises, invest in health, housing, education etc. which is often not sustainable.

2.1.4 Credit theory of money

It is a theory that highlights the relationship between credit and money; according to Innes (Wray, 2004), Money is essentially equivalent to credit; Innes (Wray, 2004) argues that the act of selling and purchasing is simply a process of exchange a commodity for credit. Emanating from this theory is a sub-theory that postulates that the value of money or credit is not dependent on the value of metal or paper but on the right acquired for payment by the creditor i.e. in the satisfaction for the credit, the debtor is obligated to clear his debt and it is therefore the right of the debtor to release himself from his debt by an equivalent tender to the debt owed by the creditor, and it is that of the creditor to accept this tender in satisfaction of the owed credit

Innes (Wray, 2004) further argues that ultimately, payment is the promise to nullify our debt by an equivalent credit that is reflected in an abstract and intangible standard. The notion that money is in effect an equivalence of credit or debt has long been used by those advocating particular reforms of the monetary system, and by commentators calling for various monetary policy responses (Okurut, 2006)

2.2 Conceptual Framework



2.3 Determinants of Credit Access

Access to financial products and services is greatly determined several factors key among them is the location of the service and product provider and their conditions significantly impact on the chances of access Okurut (2006) while quoting Porteus (2003) notes that access to formal financial products and services is often limited to people with stable jobs and thus excluding disadvantaged groups like the unemployed, the poor etc. the situation is made worse by institutions who insist of official pays lip, guarantors or some form of employment recognition before opening a bank account. Mwangi and Ouma (2012) also observed that in the rural areas, the people there are especially disadvantaged by the long distances and cost of travelling they have to incur to access financial services

Other requirements that determine or inhibit access include interest rates and collateral requirements. Okurut (2006) studied the impact of formal sector interest rates on access; his study revealed a positive and a significant correlation between the interest rate and chances of access to credit

2.4 Review of Empirical Studies

Musau (2002) researched the effect of financial liberalization on selected financial sector development indicators in Kenya and established that financial liberalization increased penetration level of financial services in Kenya. Of the selected financial sector developments, Microfinance institutions played a significant role in promoting financial sector development.

While using a cross-country empirical study, Sharma (2008), evaluated the relationship between financial inclusion and development in Pakistan; the research established a positive correlation between financial inclusion and various socioeconomic variables such as income, literacy, inequality, etc.

Kathuria, Mamta, and Uppal (2009) examine the effect of mobile penetration on economic growth across Indian states. They estimated a three equations structural model for 19 Indian states from 2000 to 2008. Kathuria et al (2009) looked at the ways in which cell phones impact growth and the corresponding constraints that hinder their effect. They established that Indian states with a significant level of mobile penetration grow considerably faster and also that there is a critical point, which is a penetration rate of 25 percent, beyond which network effects then enhances the impact of mobile phones on growth; they determined that the growth impact is therefore significantly higher when a considerable threshold of network size in place.

Sarma and Pais (2010) evaluated the relationship between financial inclusion and development by identifying country specific factors associated with the degree of financial inclusion. They established that development and financial inclusion in a given country/society are positively correlated. In socioeconomic and infrastructure related factors; literacy, income, inequality, physical infrastructure for movement and communication as well as urbanization was critical. The wellbeing of the banking sector did not occur to have far reaching effect on financial inclusion.

Mago (2014) carried out a related research study while examining the impact of mobile banking on financial inclusion in Zimbabwe, in his study where he used a qualitative research design and employed the use of questionnaires to collect primary data, he was able to establish that mobile banking had enable ordinary people to easily and cheaply transfer money and buy mobile airtime; 79 % of the respondents found mobile banking to be convenient and beneficial.

Achieng (2011) investigated the various strategies Commercial Banks in Kenya were employing as a response to the emerging mobile banking in Kenya. She found that the mobile banking industry was rapidly growing at what she terms a high-velocity and it could no longer be ignored by the commercial banks and it was thus imperative for most of the traditional institutions to embrace of partner with this in order to remain relevant and share in the vast potential offered to mobile subscribers.

Waihenya (2012) looked at agency banking and the effect it might have had on financial inclusion; The study found that agency banking can significantly impact financial inclusion in the country. The study determined that financial inclusion is still significantly low and that there is a considerable gap not yet covered by formal banking framework. In addition, the study revealed that agency banking is experiencing competition from the emerging and the fast growing mobile banking penetration in the country and other mobile money related services.

Nyasetia (2012) carried out a study to examine the implications of financial deepening on savings and investments in Kenya. He employed a causal research design to establish the connection between financial deepening and savings and investments in Kenya in which he used secondary data on savings and investments ranging between 2006 and 2011, his study established that the level of savings and investments improves considerably with an increase in financial deepening, also that when interest rates are unfavorable and the stock market is performing under par, with significant drop in bank deposits then it follows that there will be a significant drop in levels of savings and investments.

Okumu (2016) assessed the effects of M-shwari on financial inclusion; he focused specifically on the sugar cane out-growers in Muhoroni. In his study, in which he employs the use of descriptive research method, he was able to establish that innovative products like M-Shwari help in overcoming barriers to financial inclusivity by increasing accessibility and by providing a safe proximal source to inclusive financial systems. He also established that M-Shwari provides a convenient and a less fractious avenue thus helping to overcome financial market frictions.

According to Nkurunziza (2005) inability to access credit is one of the main impediments of most SME broths in developing countries. He argues that despite the continued proliferation of SMEs in Africa, most end up winding up due to lack of sufficient credit.

Ademi (1986) carried out a research in Dominican which centered on the effect of borrowing by SMEs on the growth of the enterprises and more specifically on fixed assets, sales, savings, salaries and employment. The study revealed that there was a significant increase of between 8 to54 percent on the fixed assets while employment levels shot up by between 2 to 27 percent, and most of the participating SMEs were also able to save significantly.

Karanja et al (2014) carried out a study among entrepreneurial women in Isiolo in which they examined the factors that influenced access to credit among the women, they used descriptive survey to investigate ix financial institutions, management employees and twenty women entrepreneurs; in their study, they found that there exists a significant but negative relationship between collateral and access to credit.

2.5 Financial inclusion indicators

Financial Inclusion indicators are important as they help in setting priorities, targets and strategies necessary to overcome exclusion gap. When government agencies and other policy makers have clear set indications of financial exclusion they are able to bridge the gap by formulating relevant and necessary strategies and policies that can help close the gap and improve the general welfare of its people.

The generally accepted financial inclusion indicators are:

Access: This indicates the penetration and ease of reach of financial services, e.g the existing number of banks and their corresponding number of branches in various centers

Usage: These reflect the activity, frequency and duration of use of the existing financial services e.g., savings accounts, activity level of the existing banks and branches, etc.

Quality: this refers to how relevant the products and services are to the clients, if they meet their needs, how beneficial the products are and availability of information. (World Bank, 2017).

2.6 Summary of the Literature Review

This chapter reviewed theories and literature by other researchers and scholars on the subject of innovation and financial inclusion. Financial intermediary theory by Fama gives an insight on the relationship of banks as intermediaries and their clients; the productivity gains and reductions in transaction cost theory lends voice to the importance of ICT innovation and helps highlight the significance of M-Shwari as an innovative ICT product. On empirical studies, Musau (2002) researched the impact of financial liberalization on selected financial sector development indicators in Kenya and established that liberalization of the financial sector increased the penetration level of financial services in Kenya. Sarma and Pais (2010) examined the relationship between financial inclusion and development and they established that there's evident of a positive correlation between financial deepening and human development; thus lending credence to the importance of financial inclusion. Mutsune (2014) and Okumu (2016) both look at mobile banking products and their impacts on financial inclusion; they both reach a similar conclusion that financial technology enhances financial inclusion; and financial inclusion has been proven to significantly alleviate poverty among the disadvantaged groups as well as help promote economic growth significantly.

As demonstrated by Ademi (1986), financial inclusion helps support the small businessman; we see from his studies that when SMEs are able to borrow without the associated hindrance of collateral and other obstacles, these enterprises are able to grow significantly and by extension even able to promote employment and encourage savings and in the long run improve the quality of life among the disadvantaged groups.

2.7 Research Gap

From the empirical reviews, it is evident that the foregoing and indeed the existing studies on financial inclusion have focused more on the significance of financial inclusion and the impact it has on development. A few studies have been done on mobile banking products and their respective impact on access to credit, a crucial aspect of financial inclusion that is often forgotten; although Okumu (2016) studied the impact of M-Shwari on financial inclusion, his research is generalized on financial inclusion and focuses specifically on Muhoroni sugar company staff and their households. This study, thus, aims at filling this research gap by determining the impact of M-Shwari on financial inclusion in Kenya, and more specifically, assess the impact M-Shwari has had on access to credit among MSEs in Kenya and in Kiambu County in particular.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter introduces the proposed research methodology of the study; it highlights the steps that will be followed, as well as the specific procedures that will be taken during the study. This chapter will also discuss the target population, the sampling process, and design as well as the data analysis techniques to be employed.

3.2 Research Design

A Research design is a strategy the researcher wishes to employ in his research with respect to the objectives of the study as well as the available data. The study design indicates the methods to be used in the collection as well as the analysis of the data to arrive at a considered judgment (Vaus, 2001).

I propose to use descriptive research design in studying the impact of M-Shwari on access to credit. According to Mugenda and Mugenda (2003) descriptive research design is the systematic and empirical investigation of a phenomena or event in which the researcher relies on already existing data or information since the manifestation has already occurred and therefore cannot manipulate any of the variables. Descriptive is more appropriate given that the research aims at investigating the impact M-Shwari has had on access to credit in the period between 2012 and 2017. Gay (1981) as quoted by Mugenda and Mugenda (2003) refers to descriptive research as a process of collecting, studying and analyzing data in order to answer questions concerning the current status or intended objectives of the subjects in the study.

3.3 Population

Population refers to group, events or objects under study (Mugenda & Mugenda, 2003). The study population in this research is all the registered micro and small enterprises in Kiambu County, which stood at approximately 26,710 (Kiambu County Government, 2017)

3.4 Sampling design and sample size

A sample is a representation of the population that can be used to gain data and relevant information about the entire population. It is a group of people carefully selected to form the population for the sake of a survey (Kombo & Tromp, 2006)

Kenya is a vast country with several big towns and cities; but I used purposive sampling to select Kiambu County due to convenience and ease of accessibility and time constraint. Further, I employed stratified sampling to select key centers within Kiambu and those included Githurai, Ruiru and KM areas in Kiambu county, finally I used simple random sampling, in sampling of the MSE's in the selected regions. Mugenda & Mugenda (2003) proposes a formula to help reach a sample size i.e., $n = Z^2pq/d^2$ for target populations; with a desired accuracy of 0.05 at z-statistic of 0.196 which results in a sample size of 384. However, Kombo and Tromp (2006) argue that for co-relational and descriptive research, a researcher can use at least 30 subjects to represent each group, as such I administered 30 questionnaires in each of the three centers, 90 questionnaires in total.

3.5 Data Collection

3.5.1 Questionnaire

In order to determine the impact of M-Shwari on access to credit among the MSE's in Kiambu, this study proposes to use both self and interviewer-administered survey questionnaires, where the researcher or research assistant asks questions and records responses, to collect primary data from respondents. The questionnaires will seek to find out if M-Shwari is indeed beneficial to ordinary Kenyans; in doing this, the study will therefore try to ascertain the attitude and perceptions of the ordinary Kenyans with regards to convenience, accessibility, usage and affordability of the product. The proposed questionnaire is a hybrid of closed and open ended questions so as to get specific response on some questions but also to allow for further explanation on others.

3.6 Data Analysis and presentation

Data was collected using questionnaires and this process then included the interpreting the data as collected from respondents. Using the SPSS the interpreted results were then compiled by way of data editing, sorting and coding to indicate the various key relationships. The data was then analyzed quantitatively and qualitatively to give meaning to the findings and establish existing patterns and relationships. The researcher used frequency tables and graphs where necessary to demonstrate the noted patterns.

The study also employed the use of exploratory factor analysis (EFA), again using SPSS, to identify some of the factors with significant explanatory power in relation to the impact of M-Shwari on access to credit among MSEs in Kiambu county. According to Kothari (2007) EFA is an effective procedure used for constructs validation; He argues that it is important to take note of factors with loadings of 0.40 as an absolute minimum while at the same time, Heir et al (2010) recommends that factors with 0.33 should all be included in the final analysis.

The regression model as employed

$Y= \alpha +\beta_1X_1 +\beta_2X_2+\beta_3X_3 + _+ e$

Where,

Y= access to credit - as reflected by the average amount of M-Shwari loan received annually

α = constant term

X_1- independent variable: affordability - relative cost of M-Shwari

X_2 – independent variable: accessibility and ease of use of M-Shwari

X_3- moderating variable: usage of M-Shwari- as represented by the number of months of active use.

β_1, β_2, β_3 = Beta coefficients depicting the various significance levels of the predictor variables (weight of each factor)

to analyze data, the researcher employed the use of a proven statistical tool the SPSS, statistical package for social sciences (version 24), to code and analyze the data collected through the questionnaires and to run both the correlation and regression analysis.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the analysis and findings from the data collected through the questionnaires. Data was analyzed in accordance with the objective of the study, patterns were considered, interpreted and conclusions drawn. The main objective of this study was to evaluate the impact of M-Shwari on access to credit among MSE's in Kiambu County. Before analyzing the data, it was first screened to check for missing variables, outliers and any possible data entry errors. Initial examination revealed that four questionnaires had more than 70% of information missing and they were deemed not suitable for further analysis and thus excluded in the final examination.

4.2 Response Rate

I sampled 90 questionnaires, 84 of which were correctly filled and returned representing a response rate of 93.3% as shown in Table 4.1. Kothari (2004) argues that 50% response rate is adequate, 60% good and above 70% rated very good. This response rate was a result of a combination of self-administration and assisted administration where deemed necessary; the help of a local research assistant with a considerable knowledge of the region and the people also counted for a great deal.

Table 4.1 : Response Rate

Questionnaires	Frequency	Percentage
Returned	84	93.3%
Not returned/incomplete	6	6.7%
Total	90	100%

4.3 Background Information

The study established the demographic information of the respondents; i.e. age, marital status, business experience, business ownership, number of employees and amount of start-up capital.

4.3.1 Age of the Respondents

The study revealed that of the respondents, 5.2% were aged between 20 and 25 years, while another 27% were aged between 25 and 30 years old, majority, however, represented a staggering 44.1% aged between 30 and 35 years, another 22% represented those aged above 35 years while a paltry 1.6% were those aged 19 and below.

4.3.2 Marital Status

This study also sought to establish the marital status of the MSE's owners and it revealed that 42.1 % of the respondents were married while 38.6% are single, and 19.3% had either separated with their partners or divorced.

4.3.3 Business Experience

Running a business requires some level of management skill, experience and basic financial literacy. The study revealed that most individuals, 42.2%, had over ten years' experience in business management, another 25% had 5 to 10 years' experience, 20.1% had between 1 and 5 years' experience while the rest, 12.7%, had less than a year of business management experience; this confirmed that most of the respondents had the required business acumen and experience to respond to questions on credit access.

4.3.4 Business Ownership

The study also sought to find out the form of ownership and/or business arrangement of the respondents so as to get a clear insight on credit accessibility and worthiness of the MSE's in Kiambu County; and the exercise revealed that majority of the businesses (80%) were sole traders, while 16% were partnerships and only 4% of the sampled respondents were private limited companies as shown in figure 4.2

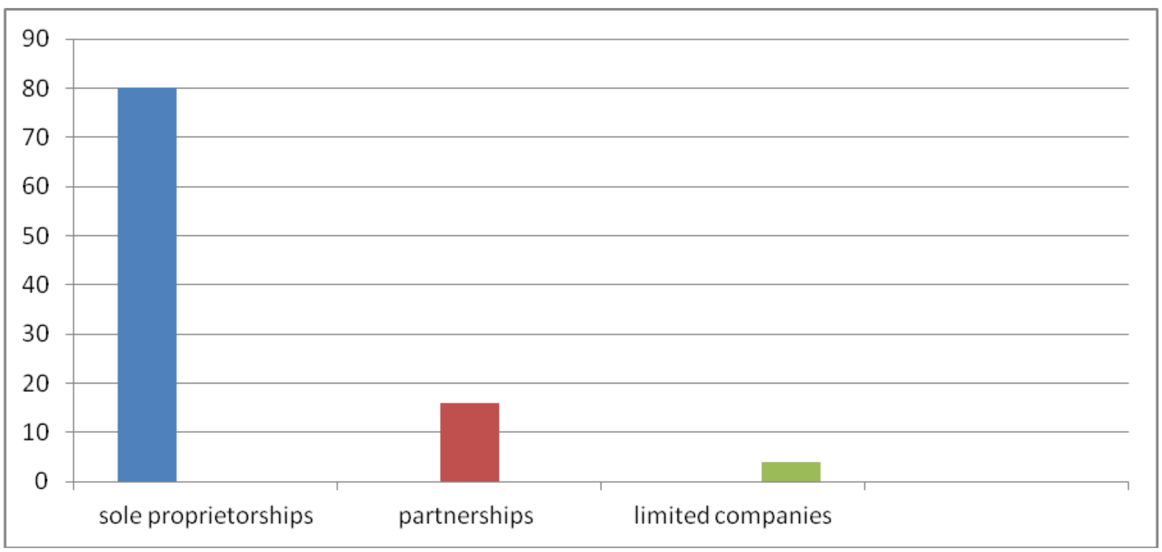


Figure 4.1 registered business ownerships of the MSE's in Kiambu

4.3.5 Number of Employees

The Micro and Small Enterprises Authority of Kenya (2017) defines a micro enterprise as that which has an annual turn-over not exceeding ksh.500,000 or one that has employees of between 1-9 people, while a small business is one that has an annual turn-over not exceeding Ksh. 1,000,000 or with that with employees ranging from 10 to 50.

It was thus important to establish the number of employees in the various enterprises sampled and the study revealed that 72.4% of the enterprises had between 1- 9 employees, while 27.6% of the small business sampled had between 10-50 employees.

4.3.6 Start-up Capital

the study also sought to establish the amount needed as capital to establish the MSE's in Kiambu and from the questionnaire's I found that majority of the businesses, 64.3% had a capital ranging from ksh.10, 000 to50, 000, 17.9% between 50,001 to 100,000, 7.1% had a capital of over 100,000 while the rest, 10.7%, had had a capital of less than Ksh. 10,000; meaning that on average, one needed a sum of between Ksh. 10,000 to Ksh. 50,000 to establish an MSE in Kiambu County.

Table 4.2 Amount of Start-up Capital

	Frequency	Percent
Below Ksh. 10,000	9	10.7%
Ksh. 10,001 to 50,000	54	64.3%
Ksh. 50,001 to 100,000	15	17.9%
over Ksh. 100,000	6	7.1%

4.4 Pilot Results

The study carried out a pilot research to establish the reliability and validity of the data and the results are as follows:

4.4.1 Reliability Analysis

In testing reliability and validity, Cronbach's alpha is one of the most common consistency and reliability coefficient. It estimates the validity and consistency by establishing how the items correlate. The estimates are expressed as coefficient ranging between 0.00 and 1.00. the closer to 1.00 the coefficient is, the more reliable the set is. In this study, using the SPSS software, Cronbach's alpha was used to determine the reliability of the research instrument. The results shown that the value of Cronbach's alpha were about or above the recommended 0.7 indicating that the instrument was reliable. See table 4.4

Table 4.3 Reliability test

Variables	Number of items	Reliability Cronbach's alpha	Comments
Affordability	6	0.712	Accepted
Accessibility	7	0.698	Accepted
Usage of M-Shwari	7	0.684	Accepted

4.4.2 Validity Analysis

Principal Components Analysis (PCA) was administered in examining of the validity of the instrument of this research. The method to extract factors was as advised by Heir et al (2010); they argue that given a sample size less than 200, factor loadings exceeding 0.40 are considered to be statistically significant for further statistical test. Given the study had a sample size of 90, the cut-off of 0.40 was thus adopted as a procedure on factor loadings. Heir et al further argue that the higher the factor loading the better. Concerning affordability, all factors had loadings exceeding 0.40 with the least loading of 0.512 and a maximum of 0.792, Accessibility also posted factor loadings greater than 0.40 and thus considered for further examination. The attributes of Usage –of-M-Shwari revealed that the lowest factor loading was 0.54 and the maximum was 0.656. literacy level attributes posted lowest loading factors of 0.55 while the maximu stood at 0.623 and thus considered for further examination

4.5 Descriptive Statistics

4.5.1 Affordability and Access to Credit

One of the factors that make it possible to access credit is the cost of acquiring the credit. This research sought to find out to what extent the cost of credit influenced access to credit by MSE's by inquiring from the respondents and by asking them to indicate their extent of agreement or disagreement based on a five-point Likert scale. the study thus asked the respondents if they found the cost of M-shwari, which stood at 7.5% one –of fee (CBA, 2017), to be more affordable as compared to loans from other financial institutions; and again using the five-point Likert scale, majority of the respondents, 58.4%, strongly agreed, 20% only agreed while 9.7% were not sure or were simply undecided about the relative affordability of the product.

4.5.2 Access of M-Shwari and access to credit

Accessibility of a financial institution, product or service is often deemed to have a significant impact on ease of use and financial inclusion. The study therefore sought to understand how accessible and easy to use did the respondents find M-Shwari to be and whether that influenced their decision on whether to use it or not; again the five point likert scale was employed to assess the attitude of the respondents on this factor. First the respondents were asked to rate the ease of using M-Shwari considering the reduced paperwork and other bureaucratic procedures; majority of the respondents 35.9% and 34.2% strongly agreed and agreed respectively that accessing credit through M-Shwari was much easier and less bureaucratic as compared to most financial institutions, 15.8% of the respondents were indifferent to the question neither agreeing nor disagreeing while the rest disagreed. Secondly, 44% of the respondents strongly agreed that M-Shwari was easily accessible, another 38% only agreed, 6% were undecided on the accessibility of M-Shwari while only 7.1% and and 4.9% disagreed and strongly agreed respectively with the assertion that M-Shwari was easily and readily accessible.

4.5.3 Usage of M-Shwari

The study endeavored to establish the level of usage of M-shwari amongst the respondents in terms of period of active usage in months and in order to establish if there's a corresponding relationship with credit accessed; and the study revealed that of the respondents, 35.1% had been active M-Shwari users for a period spanning more than 60 months, translating to 5 years of active usage, while another 27.8% indicated having used M-shwari actively for a period ranging between 40 and 60months, 20% had used M-Shwari for a duration of between 20 and 40 months while 13.5% had only used M-shwari for less than 20 months; only 3.6% of the total respondents had never used M-Shwari at all. Confirming that indeed a good percentage of the MSE's in Kiambu relied on M-shwari quite regularly to access short loans to help bolster their businesses.

4.6 Correlation Analysis

The study set to determine the direction and strength of the relation between the dependent variable, access to credit, and the various independent variables by conducting a correlation analysis. The study established that between affordability and access to credit via M-Shwari, there exists a moderate and positive (rho=0.528) with a significant level of 1%, the study also revealed that there exists a weak but a positive relationship between accessibility and credit accessed through M-Shwari (rho=0.241) at a significant level of 5% and finally, the study further indicated a strong and a positive relationship between usage of M-Shwari and credit accessed through the platform. as (rho=0.779) at 1% significant level . The summarized results are as follows:

Table 4.4 : Correlation coefficient

	Access to credit	Affordability	Accessibility	Usage of M-Shwari
Access to credit	1			
Affordability	0.528**	1		
Accessibility	0.241*	0.112	1	
Usage of M-Shwari	0.779**	0.542	0.211	1

*** Significant level 1%*

**significant level 5%*

4.7 Regression Analysis

Model summary

The researcher conducted multiple regressions using the statistical package for social sciences (SPSS v24.0) to assess the impact of the predictor variables on the dependent variable. SPSS was used to code, enter and compute the measurements; the resulting model is summarized below:

Table 4.5 Model Summary

Model	R	R square	Adjusted R square	Std. error of the estimate
1	0.928a	0.861	0.855	0.3250506

a predictors: (constant) , affordability, Accessibility, usage of M-Shwari

b dependent variable: access to credit

The value adjusted R squared, is a coefficient of determination which indicates the variation in the dependent variable resulting from changes in the independent variables. As indicated in the table, the valueof adjusted R square was found to be 0.855 depicting a variation of 85.5% in level of access to credit due to change in credit affordability, Accessibility and consistency in usage of the M-Shwari platform; an indication that there's a strong positive relationship between the dependent variable and the predicting variables

Table 4.6 Regression Coefficients

Model	**Unstandardized coefficients**		**Standardized coefficients**	**t**	**Sig**
	B	Std. error	Beta		
(constant)	0.062	0.04		1.576	0.114
Affordability	0.547	0.037	0.573	6.772	0.00
Accessibility	0.194	0.033	0.204	5.862	0.00
Usage of M-Shwari	0.673	0.036	0.712	8.35	0.00

Table 4.6 shows the results of regression coefficients including the acceptance region, the t ratio. Given a t ratio greater than + or – 1.96, this indicates a significant relationship between dependent and independent variable as such; the null hypothesis should be rejected. Equally, the P value can be used to test the acceptance of the null hypothesis; if the P value is less than 0.05, we reject the null hypothesis and accept if otherwise. The B column shows the nature of the

relationship and indicates whether there exists a positive or a negative correlation between the variables given the value of B.

A multivariate regression model links the independent and dependent variables as follows:

$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$

Where;

Y= access to credit - as reflected by the average amount of M-Shwari loan received annually

α = constant term

X_1- independent variable: **affordability** - relative cost of M-Shwari loan

X_2 – independent variable: **accessibility** and ease of use of M-Shwari

X_3- moderating variable: **usage of M-Shwari**- as represented by the number of months of active use.

β_1, β_2, β_3 = Beta coefficients indicating various levels of importance (weight of each factor)

The resulting regression model therefore was:

Y= 0.062 + 0.547X1+0.194X2+0.673X3

The study found that there's a positive and significant relationship between affordability and access to credit among MSE's in Kiambu County (β=0.547, t=6.772, p-value <0.05) this implies that, holding other factors constant, a unit increase in affordability increases the chances of accessing credit by 0.547.

There's also a positive and a considerable relationship between accessibility of the product and service and access to credit (β=0.194, t= 5.862, p-value <0.05) again implying that a unit change in accessibility of the product leads to a 0.194 change in the same direction (+/_) of the chances of accessing credit, other factors remaining constant.

On the usage of M-Shwari, this is a moderating variable and the study revealed that there was a positive and significant relationship between the level of usage of M-Shwari and access to credit ($\beta=0.673$, $t=8.35$, p value<0.05) implying the longer one used M-Shwari the more credit they stood to get, more specifically, the study found that a unit increase in usage of M-Shwari resulted in a positive increase of chances of accessing credit by 0.673 while holding other factors constant.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary of key data findings, conclusions and recommendations are discussed in this chapter, suggestions of areas that need further research are also highlighted.

5.1 Summary

This study was informed by the financial challenges experienced by most small business in developing nations due to financial exclusion. There are several Micro and Small Enterprises (MSEs) in Kenya today some of them doing well but most are struggling or on the verge of closing down due to limited capital and infrequent cash flow. Empirical literature indicate that indeed most small business around the country had challenges accessing adequate and affordable credit but there's very limited studies highlighting some of the progress that has been made to enhance financial inclusivity and in particular there was hardly any research looking at the impact M-Shwari has had with regards to access on credit among MSE's in Kenya and in Kiambu county in particular.

The study used simple random sampling to select 90 respondents from a total of 26,710 licensed MSE's in Kiambu County. Primary data was collected using questionnaires that employed both open closed ended questions technique. The services of a research assistant familiar with the various localities were sought in the administration of the questionnaires.

The results revealed that the MSEs in Kiambu county remain critical channels of employment since most of the MSEs had employed between 5 and 50 people per enterprise; the results also indicate that most of the MSEs in Kiambu county are run by the youths most of them in their early thirties. Most small businesses in Kiambu, 79.8%, were sole proprietorship as the study revealed, although there are also some that are partnerships, most of whom were married couples, and very few businesses were limited companies.

To assess the impact of M-Shwari on access to credit among MSEs in Kiambu, the study reviewed affordability of the product, accessibility of the service as well as the level of Usage of the product as part of the model to help assess the impact, but the research also looked at other factors including convenience of the product, ease of use, as well as challenges encountered by the users of this commodity. Both correlation and regression analysis revealed that there was a positive and significant relationship between the dependent variable, access to credit, and the predictor variables, affordability, accessibility and Usage of the product; These calls for need of government to encourage policies that would make credit more affordable and financial products more accessible in order to support the MSEs and other startups.

5.2 Discussion of the Findings

The study‘s objective was to analyze the impact M-Shwari has had on accessing of credit amongst the micro and small enterprises found in Kiambu county. The study revealed that when credit is not overly priced, then it is considerably accessible to the small businesses who tend to shy off mainstream financial institutions products’ which are relatively more expensive. The study found that, most MSE’s in Kiambu County regarded M-Shwari’s credit facility to be comparatively cheaper thus making credit readily available, which is consistent with the findings of Okumu (2016) where he looks at the impact of M-Shwari on financial inclusion amongst the sugar cane plantation workers in Muhoroni, and in his study he observed that a considerable number of the households' in Muhoroni saved and borrowed using M-Shwari and affordability of the product was considered to be significant aspect of its success.

The study equally reveals that most MSE's found M-Shwari to be very easy to access due to a number of factors including the fact that it is mobile based, so you really don't have to leave your premise to access M-Shwari. Saving, borrowing and withdrawing is also made easy due to the various M-Pesa agents whom we observed were literally in almost every other corner across Kiambu centers. The ease of access makes M-Shwari very popular among MSEs in Kiambu and thus making credit readily available. This is consistent with the World Bank findings (World Bank, 2016) which observed that when a financial product or service is readily and easily accessible it contributes significantly to financial inclusion.

The study also found that frequent and consistent use of a financial product can translate to improved and favorable credit ratings at least on the platform; which is consistent with Safaricom's strategy of encouraging their clients to use the platform consistently to improve loan limits. The study shows that those clients who demonstrated their loyalty by consistent use of the product had better loan limits and also had a better chance (B= 0.673) of accessing credit through the facility. This finding is in line with Okurut (2006) which demonstrated that financial agencies tend to trust frequent customers more than they do one-off customers.
with most of them only qualifying for amounts ranging between Ksh. 7,000 and Ksh. 15,000, 29.8% of the respondents thought that the payback period of only one month was the major

challenge and wished it could be extended to two or three months, another 10.7% mentioned blacklisting and the rest were not sure or didn't answer

5.3 Challenges of using M-Shwari

The study sought to establish if there were any challenges being experienced the respondents in their use of M-Shwari and a staggering 48.8% mentioned the M-Shwari Limit as being too low with most of them only qualifying for amounts ranging between Ksh. 7,000 and Ksh. 15,000, 29.8% of the respondents thought that the payback period of only one month was the major challenge and wished it could be extended to two or three months, another 10.7% mentioned blacklisting and the rest were not sure or didn't answer

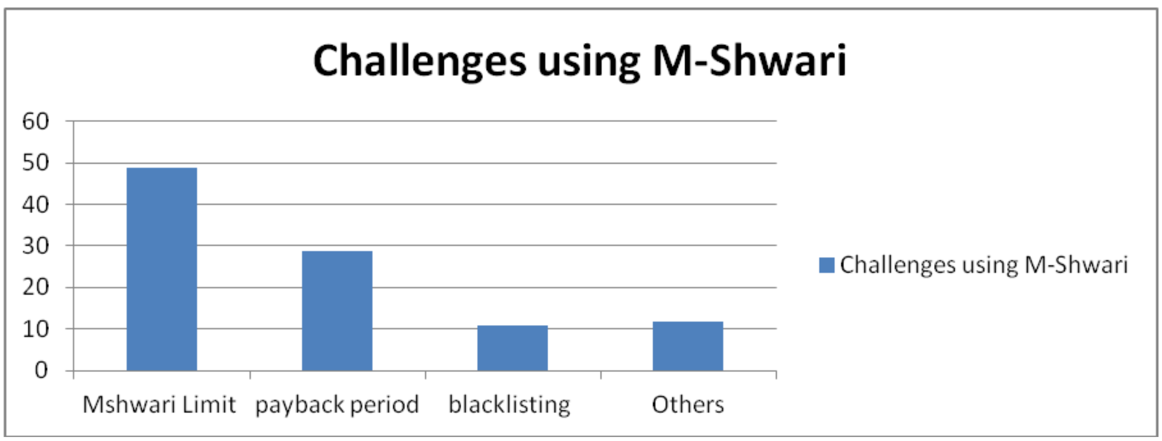


Figure 5.1 : Challenges using M-Shwari

5.4 Conclusion

Form the findings of this study it can be concluded that M-Shwari has had quite a significant impact on access to credit among MSEs in Kiambu county and based on this evidence alone it is suffice to conclude that the impact is countrywide. M-Shwari has made it possible for small businesses in Kiambu county to access periodic loans due to ease in accessibility, nearly every enterprise owner had a safaricom line with an active M-Pesa service, the product is also reasonably priced with an interest rate of 7.5% compared to loans from most mainstream financial institutions who charge at least 10% with most banks charging as high as 14%. some of the MSE owners we talked to had no formal bank account thus making it impossible for them to access loans through these institutions, at the same time, most institutions require guarantors and/or collateral from a borrower to qualify for a loan an aspect that saw most of the business operators prefer to use M-Shwari and other similar recently launched products to access credit.

5.5 Recommendations

Although M-Shwari has proved to be a very popular product among many small businesses and individuals around the county of Kiambu, it is still marred with a few challenges that most end users feel should be addressed to improve further the suitability of this product. Key among the challenges is the fixed one month payment duration; M-Shwari extends loans to its clients that are strictly payable back within one month; an aspect of the product that most users feel is too short a period especially to borrowers with a limit exceeding Ksh. 15,000. Secondly, most users are inconvenienced with the very low limits some of them qualify for i.e some traders we talked reported to have only qualified for Ksh. 5,000 or thereabout, an amount which in most cases is not able to meet their urgent needs, most other people qualified for limits ranging between Ksh. 5,000 and 20,000, again amounts which most respondents felt were still very low. The study recommends M-Shwari increases its loan limits, while also extending the payback period so as to improve on the product's suitability.

5.6 Limitation of the study

Due to time and resource constraint the study was conducted in only three key areas within Kiambu county i.e Githurai, Ruiru and KM (a small shopping Centre adjacent to Kenyatta University), these three areas are all situated along Thika road and are relatively close to one another, it is possible therefore that the research would have been more comprehensive and representative if the researcher had reached to other key towns and areas within Kiambu such as Thika and Kiambu town. The study reached out to only 90 MSEs within Kiambu, it is again possible that a larger sample would have yielded a much more comprehensive result.

5.7 Suggestion for Further Research

This study focused on the period beginning 2012 to 2017, the duration M-Shwari has been in the market and as a result the research disregarded the impact of other similar products that have since been launched i.e M-Kesho and KCB-Mpesa, the researcher suggests a similar study but in consideration of other similar products in the market and their collective impact on access to credit and by extension financial inclusion.

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APPENDIX I

<u>Research Questionnaire</u>

I am a student from the University of Nairobi, Kenya. I am carrying out a survey to assess **the impact of M-Shwari on financial Inclusion in Kenya**. This is a voluntary survey and you are kindly requested to participate in the study by filling in the sections of the questionnaire. All the information you give will be treated with utmost confidentiality and it will be used for academic purposes only.

Thank you.

<u>Part one</u>

1. Age in years

   18 -28 [ ] 24- 34 [ ] 34 – 44 [ ] 44 – 54 [ ] 54 and above [ ]

2. Gender : MALE [ ] FEMALE [ ]

3. Marital status

   Married [ ] Single [ ] Divorced/separated [ ]

4. Where do you live? (kindly indicate the town and estate below)

   ____

5. Nature of business

   Sole proprietorship [ ]   Partnership [ ]   Limited company [ ]

   Other**__________________** (please specify)

6. For how long have you run this business business?

   Less than 1 year [ ]   between 1 to 5 years [ ]   between 5 to 10 years [ ]

   over 10years [ ]

7. How many employees do you have?

   Between 1 and 9 employees [ ]   between 10 and 50 employees [ ]   more than 50 [ ]

8. How much did you use to start your business?

   Below Ksh**. 10,000** [ ]   Ksh. 10,001 to 50,000 [ ]   Ksh. 50,001 to 100,000 [ ]

   Over Ksh. 100,000 [ ]

9. Kindly estimate your average annual sales

   Ksh. 100,000 to 500,000 [ ]   Ksh. 600,000 to 1000, 000[ ]

   Over Ksh. 1000,000 [ ]

10. Do you own a mobile phone?   YES [ ]   NO [ ]

Part two

1. Have you ever heard of M-Shwari? YES [ ] NO [ ]

2. Have you saved with M-Shwari YES [ ] NO [ ]

3. Kindly indicate accordingly how you feel about the following statements:

   a) I prefer borrowing through M-Shwari because it is cheaper

Strongly agree	
Agree	
Not sure	
Disagree	
Strongly disagree	

   b) Borrowing through M-Shwari is easier and less tedious as compared to borrowing through banks

Strongly agree	
Agree	
Not sure	
Disagree	
Strongly disagree	

c) I use M-Shwari because it is readily accessible

Strongly agree	
Agree	
Not sure	
Disagree	
Strongly disagree	

4. What are some of the challenges you have experienced while using M-Shwari?

____

____

____

____

5. If NO in (2) above any reasons why you have never use M-Shwari?

____

____

____

Thank you for your time.