EFFECT OF MOBILE LENDING ON FINANCIAL SUSTAINABILITY OF SMALL AND MICRO ENTERPRISES IN ROYSAMBU SUB-COUNTY, NAIROBI

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A PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION, FACULTY OF BUSINESS AND MANAGEMENT SCIENCES, UNIVERSITY OF NAIROBI

2021

DECLARATION

I declare that this research project is my own original work and has net been submitted to any institution for any award.

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This project has been submitted with my approval for examination as the university supervisor.

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ACKNOWLEDGEMENT

A number of persons merit my profound appreciations for being so supportive in this research process. I thank Allah because of endowment of life and opportunities thus far. Secondly, I sincerely thank Dr. Kennedy Okiro, my supervisor for his direction and advice during the whole research process. Thirdly, I would like to acknowledge the commitment and consolation from my family and colleagues particularly for their significant assistance in making the research process successful. Finally but not least, gratitude goes to the professors and lecturers of the Faculty of Business and Management Sciences, University of Nairobi, who devotedly imparted their knowledge and skills throughout the course.

DEDICATION

This project is dedicated first and foremost to God Almighty who has been there right from the beginning to this very point and for providing me strength. I also dedicate this work to my husband; Kennedy who always gave me courage and ensured that I give it all it takes to complete that which I had started. To my son; Frank who has been understanding by this quest, my parents for their relentless support and compassion towards my course. I give you all thanks.

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ABBREVIATIONS AND ACRONYMS

ATM	Automated Teller Machine
CBK	Central Bank of Kenya
FSS	Financial Self-Sufficiency
GDP	Gross Domestic Product
GMM	Generalized Method of Moments
MFI	Micro Finance Institutions
MSME	Micro, Small and Medium Enterprises
NPL	Non-Performing Loan
OIC	Organization of Islamic Corporations
OLS	Ordinary Least Squares
SME	Small and Micro Enterprises
VIF	Variance Inflation Factors

ABSTRACT

The informal sector, is Kenya's largest employer, employing over 83 percent of the workforce and generating about 34 percent of the country's GDP. Despite their importance, statistics show that three out of every five companies collapse during the initial period in existence, with 80 percent of those who survive failing by the fifth year. The most pressing issue confronting MSMEs is a lack of access to finance. Mobile lending has come to fill this gap but questions are being raised due to its high interest rates. The main aim of this research was to analyze the influence of mobile lending on financial sustainability among SMEs in Roysambu Sub-county. The following objectives were used to provide guidance; to determine the influence of credit accessibility on financial sustainability, to study the effect of cost of credit on financial sustainability, to study the effect of terms of credit on financial sustainability and to establish the effect of credit convenience on financial sustainability. This research adopted the financial intermediation theory, information asymmetry theory and finance growth theory. This research employed a descriptive research design. The 1098 registered SMEs in Roysambu Sub-county served as the research population. Sample size was 96 respondents arrived at using Yamane formula. This research relied on primary data collected through questionnaires. Google forms were made use of in the questionnaire administration. The collected data was converted into quantitative format to make analysis by use of SPSS. The statistics generated were descriptive statistics which comprised of mean and std. deviation and inferential statistics which included both correlation analysis and multiple linear regression. The study revealed a significant positive relationship between credit accessibility, cost of credit, terms of credit, credit convenience and financial sustainability among SMEs in Roysambu Sub-county. Regression analysis revealed that 93.3% of changes in financial sustainability among SMEs were attributed to the four variables selected in this study. In conclusion, credit accessibility, cost of credit, terms of credit and credit convenience are essential in enhancing financial sustainability. Based on the findings, credit convenience had the greatest influence on financial sustainability followed by terms of credit while credit accessibility and cost of credit had the least influence. As a result, it is recommended that SMEs' managers and owners should utilize mobile lending, as this improves their financial sustainability.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Mobile lending is a financial service among other services provided by mobile financial services. Mobile lending is still the most current trend in financial services industry that provides credit access for small and micro enterprises (SMEs) (Chironga, De Grandis, & Zouaoui, 2017). McCarthy (2014) notes that mobile telephone debtors often don't have a significant physical asset to guarantee their loans. Simply put, they are highly restricted to the sources from which they may draw. However, new internet platforms are creating ripples for small company loans in conventional financial sectors. Lenders who are updated technology wise are claimed to conveniently and quickly have applicants go through online application and processing of the loans. In spite of much higher borrowing costs in terms of both interest and fees, the uptake of mobile phone loans is still on a tremendous rise among SMEs and therefore need to investigate how this affects the financial sustainability of these firms.

On a theoretical perspective, the financial intermediation theory by Diamond (1984) state that through intermediation, financial institutions may create and provide customized financial solutions to meet the needs of each client. By doing so, the financial intermediaries enhance financial sustainability of SMEs. Asymmetric information theory by Akerlof (1970) states that imperfections in financial markets are impediments to the micro- and small enterprises with minimal security, poor history of credit, and connections, hence lowering their chances and causing a sustained inequality and slowing their financial sustainability. According to Bagehot's (1973) finance growth theory, financial access provides a conducive condition for financial sustainability of SMEs.

The current study focused on small and micro enterprises in Roysambu Sub-County. Studies have indicated that funding is a bigger barrier for SMEs comparable to big enterprises, especially emerging countries, and that access to finances negatively impacts SME growth outpaces that of big corporations (Calvert, Campbell & Sodini, 2015; Rambo, 2013; Osano & Languitone, 2016). It was therefore unexpected that the World Bank has identified access to financing for small and micro businesses as a key issue for policy.

1.1.1 Mobile Lending

Mobile financing entails making investment utilizing cutting-edge technology in order to boost income and increase the system's efficiency and efficacy (Sheleg & Kohali, 2011). Mobile lending entails the automation of processes and structures that are critical to improving and simplifying the loan process (Kigen, 2010). Revenue creation may be mobilized using mobile lending as a contemporary method in banks. This may improve and expand the income base and banking transaction of services and products (Health Finance and Governance, 2013). According to several research, mobile lending refers to new technologies that enable money transfer services and financial transactions that are regulated and carried out by financial institutions through mobile phone rather than conventional over-the-counter trades (John, Fredrick & Jagongo, 2014).

Globally, financial innovations like mobile lending are occurring at a breakneck pace. Customers may now transact using their mobile phones instead of going to a commercial bank and doing it over the counter. Mobile lending enables those who can't go to a bank or do not possess a bank account that allows you to transact money as fast and simply as text messaging. According to research conducted in Kenya, mobile lending has brought about an increment in the quantity of people signing up for banking services, as well as Additional profit from interest and transaction fees for commercial banks (Kigen 2010).

Adoption of mobile lending helps in minimizing the operational costs and in being efficient and effective as service provider. The banks saves the cost of opening new branches because mobile lending enables bank reach customers and penetrate new markets. Mobile lending enables the banks to maximize the income collection that is not supported by any funding (Sheleg & Kohali, 2011). Previous studies have operationalized mobile lending in terms of either number of mobile loan applicants, value of mobile loans or as a proportion of mobile loans to total loans. In this study, mobile lending was operationalized as the availability, cost and amount of mobile loans.

1.1.2 Financial Sustainability

Financial sustainability is a metric that assesses a company's capacity to achieve its goals while also meeting the demands of its stakeholders. It refers to a company's capacity to grow, expand, and operate efficiently throughout time (Aguilar & Hansen, 2018). Financial sustainability is the standard to which an organization creates growth and development strategy that run indefinitely (Elliot, 2012). Financial sustainability is the ability to look into your past, the context of your work and the risk you are facing as an organization in order to plan for the future. You ought to know what you need to do, to have the financial resource and reserves you need in order to be able to do the work that achieves your organization mission and vision (Bell, Masaoka & Zimmerman, 2010).

In order to sustain an organization, it needs be able to obtain and retain resources. Financial resources are one of the most important resources in terms of development or survival for non-governmental organizations and thus a sound financial situation and performance is essential for them to accomplish their objectives (Lin & Wang, 2018). Sustainability is essential for SME's ongoing operations in the implementation of its plans, says Renz (2019). It means the capacity to develop a diversified resource base so that the intended beneficiaries can continuously provide products and services.

Measuring financial sustainability is frequently difficult. Financial sustainability of the organization was linked with the financial position and strength of the company. If sustainability is not achieved, it hinders the company from obtaining more donor financing or increasing income (Ibrahim, 2017). Gezikol, Ergüzel and Tunahan (2019) utilized financial self-satisfaction (FSS) calculated using financial income over overall financial sustainability expenditures. Financial stability in this case was gauged by profitability. The research notes that small and medium-sized enterprises that rely on their income to stabilize their operating levels and accomplish specific growth goals were financially sustainable. The research showed that SMEs could only be seen as viable based on whether the money produced were capable of meeting both financial and operating costs. The current study measured financial sustainability using income over expenditure, cost structure and operating margin ratio.

1.1.3 Mobile Lending and Financial Sustainability

The dynamics of development involves availing financial facilities and services conveniently to members irrespective of the economic status of the individual who may or may not be located in remote areas. From the modern views on development, the livelihoods of people and their prospects are affected by the development of capacity that encourages access to the asset base that produces revenue. However, mobile lending and financial facilities services delivery enables people to access property and diversify their asset base, thereby generating income earning opportunities (Datta & Zhing, 2019).

Dinh and Nguyen (2019) argues that failure to access financial services significantly linked with poverty-related financial exclusion and inequality. In other words, if an individual or area is jobless, has no skills, has low incomes, is impoverished, or has a stable environment or poor health in society, it will be ignored. All these problems can lead to depression in the family. Consequently, there are more extreme social disparities, the rich get richer, the poor get poorer and domestic economic developments are affected.

In the context of financial sustainability, mobile lending is crucial, particularly in decreasing poverty and inequality in all countries. It is impossible to define the versatility of mobile lending, as it improves the capacity of people on low incomes to access funding. Furthermore, companies and families may also improve their income and self-confidence, positively improving their SME's financial sustainability. Forced to actually access formal financial services and products can lead to a loss of opportunities for development, further poverty and access cost. A nation with a functioning financial sector accessible to individuals can cut information and transaction costs. This system will have implications for savings and long-term rates of growth, financial investments and technology development (Zhang & Posso, 2019).

1.1.4 Small and Micro Enterprises in Roysambu Sub-County

Roysambu Sub-county is the home of companies in the small and medium-sized business sector consisting of a mix of diverse businesses working in the metropolitan region. Information at the local authority's offices in Roysambu indicates an increasing number of entrepreneurs who run small businesses. In Kenya categorization of firms is mainly by the total number of staff employed by the enterprises (Njoroge, 2012). Enterprises that employ between 6 to 50 and 51 to 99 employees are categorized as minor firms and medium scale firms respectively (Kinyanjui, 2016).

Most enterprises in Roysambu Sub-County are mostly comprised of single household groups and sole proprietorship businesses. Most of them are artisans and self-help groups engaged in raw items supply and production from indigenous crops. Majority of income generating activities within this category include manufacture of small household items, clothing and fashion. Others include ceramics, footwear, jua kali artisans, wood, bricks and cement, soft drinks, foodstuffs and cuisine specialists and confectionery (Mokogi, 2013).

Roysambu Sub-county is one of the most populated sub-counties in Nairobi County, Kenya. A good number of this population earns a living by engaging themselves in small and medium businesses which are family owned and distributed all over the sub-county (Nairobi City Council, 2018). Many enterprises are run on a temporary structure others have mobile structures, moving from one place to another while only a few possess shelters permanently. Available informaiton suggest that only a small percentage of these enterprises survive long enough to realize their full potential. Hence, factors affecting sustainability, performance, growth strategies of SMEs in Roysambu need to be established and strategies put in place to promote their performance.

1.2 Research Problem

Although mobile loans are a huge step forward in formal financing, much more is equipped to explain the true social and economic impacts of digital loans on financial sustainability for SMEs (Totolo, 2018). In spite of much higher borrowing costs in terms of interest and fees, journalistic articles in Business Daily, Daily Nation, Bloomberg and New York Times show that the uptake of Mobile phone loans is still on a tremendous rise in terms of take-up amongst small and micro businesses. The growth utilization of mobile telephone loans despite considerably higher borrowing rates than commercial banks is a fascinating phenomena deserving of a university research. There still lacks a documented model that can be used to enable conceptualization of how mobile lending influences financial sustainability of SMEs.

The informal sector, which is defined by Micro, Small, and Medium Enterprises (MSMEs), is Kenya's largest employer, employing over 83 percent of the workforce and generating about 34 percent of the country's GDP (GoK, 2015). Despite their importance, statistics show that three out of every five companies collapse during the initial period in existence, with 80 percent of those who survive failing by the fifth year (KNBS, 2017; Gichuki et al., 2014). According to the World Bank (2015), the most pressing issue confronting MSMEs is a lack of access to finance. Despite considerable progress, inaccessibility to capital is nearly generally acknowledged as a significant challenge for SMEs. In Kenya, credit restrictions manifest themselves in a number of forms, entrepreneurs are forced to fundamentally higher short-term funds from banks due to their reliance on self-funding or loans from friends or family. Mobile lending has come to fill this gap but questions are being raised due to its high interest rates. It was therefore vital to investigate how mobile lending influences financial sustainability of SMEs.

From an empirical perspective, Weining, Jian and Singh (2018) studied the informal credit for micro enterprises in emerging markets focusing on Asia where the modalities and administration of the loans notably vary from those of the mobile lenders. Usually, more liquid borrowers who pay back the loans on a timely basis are awarded higher amounts in their subsequent borrowing, along with lower interest rates. Kisseih (2017) concentrated on the implications of interest rates on the development of SMEs in Accra and found that the profitability of SMEs and interest rates are interdependent. High interest rates on loans is one of the challenges encountered in the process of seeking additional funds by SMEs. Ndagijimana (2017) zeroed in on the impact of mobile lending on performance of commercial banks in Rwanda but did not address SMEs financial sustainability.

Locally, a cross sectional study by Bwisa (2014) examined impacts of M-Pesa on businesses performance but did not focus on other mobile banking payment platforms. This becomes impossible in generalizing findings. Moenga (2015) performed another research in which he examined the impacts of mobile banking in the developing countries with specific reference to Kenya but the study did not touch on informal sector. Emphasis has always focused on large companies to the neglect of challenges faced by the informal sector in Kenya (Marchini, 2016). Little efforts have been put on the effect of cost of transaction among micro businesses in the informal sector. Mutisya (2016) performed a research in the Kitui County on the impact of mobile banking in developing small and medium businesses. The study did not consider the impact of financial accessibility among SMEs in the informal sector in other Counties like Nairobi. These knowledge gaps were the motivation for the current study. This research sought to address the question: What is the impact mobile financing will have on the financial sustainability of SMEs in Roysambu, Nairobi?

1.3 Research Objectives

The objective of this study was to assess the influence of mobile lending on financial sustainability of small and micro enterprises in Roysambu Sub-County, Nairobi

1.4 Value of the Study

The existing theory is strengthened as a result of this study. This will be by adding more literature to the existing collection of works on the variables in the world. It will also serve as a great source of knowledge on mobile financing and financial sustainability for future researchers or those in the academic field.

Policymakers should be very interested in this research including CBK in their mandate to make credit accessible and spur economic activity. The policy makers would be able to assess the significant role placed by mobile phone loan providers and how to contain the negative effects of exorbitant charges on one hand and the effects brought about by interest rate capping law on contrary. They ought to be able to adjust their choices more easily in the future.

This research will assist governments and other policymakers in formulating laws and processes that will guide businesses in implementing mobile lending mechanism that will enhance their efficacy in reaching the unbanked, thus contributing to SMEs' financial sustainability.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Key theories underpinning mobile lending and financial sustainability will be discussed here. The chapter goes on to examine the theoretical framework that underpins the study variables, as well as the drivers of financial sustainability, research gaps, an empirical evaluation, and the conceptual framework.

2.2 Review of Key Theories

This paper provides an overview of the important theories discussing the link between mobile lending and financial stability. Financial intermediation theory, information asymmetry theory and finance growth theory were all addressed in the theoretical reviews.

2.2.1 Financial Intermediation Theory

Diamond (1984) was the originator of this theory. It illustrates how financial institutions interfere with creditors and savers. Financial institutions enhance financial access, diversity, and use as middlemen. The amount of inclusion affects the level of stability as literature shows. Ndebbio (2004) noted that the idea of financial intermediation underscores financial institutions' involvement in bridging the difference between deficits expenditure clients and surplus expenditures.

Financial market volatility, according to Demirgüç-Kunt et al. (2008), is a key issue. If corrective measures are not taken, it may result in persistent economic inequalities or poverty imbalances. Honohan (2008) further noted that the degree at which impoverished customers have access to money for consuming and capital accumulation investments is important in accumulated capital and uneven financial markets. There is thus a strong link between developments in integrated income models, growth, financial development, innovations and support for inclusion. Finance has an influence on both the efficiency in allocating resources within the economy, but also the comparable economic opportunities availed for rich and poor households.

In their arguments on financial intermediation Demirgüç-Kunt and Klapper (2012), noted that decreasing the imperfections of the financial market leads in increased individual possibilities, creating a motivating impact. As financial intermediaries, commercial banks play an important role in fostering good governance, reduced risk contracts and easier transactions for economic operators. By raising the amount of mobile lending, banks try to lower these frictions on the market. This lowers data asymmetry in turn, which minimizes market flaws among users (Hannig & Jansen, 2010).

This theory is important, since financial institutions may develop and provide specialist financial products via intermediation to suit the requirements of clients of various kinds. This occurs when financial firms demonstrate that they can provide greater returns to their financial goods, which cover all expenses. Moreover, financial intermediaries are exposed to market inefficiencies. Therefore, given the ideal market situation where transaction and information costs are absent, there are no financial institutions.

2.2.2 Asymmetric Information Theory

Akerlof (1970) argues that it may be a difficulty to distinguish between favourable and unfavourable borrowers when selling financial services. Information asymmetry occurs when one individual seems to be more knowledgable or more informed about the topic than the other person in a financial debt arrangement. Richard (2011) noted that asymmetric knowledge may contribute problems of moral hazard and adverse selection.

It also says that the individual having more knowledge related to the object being transacted would be better positioned to request better transaction conditions when entering into a financial contract compared to his counterpart. Thus, the individual who understands less about the goods is disadvantaged in taking choices on the contract.

Hansen and Jansen (2010) asserted the characteristics of financial inclusion include the arrival of new, and numerous customers with little experience in the formalized financial industry that includes commercial banks. This presents problems for debt suppliers since they find difficulties in determining if customers are good risk; this causes an impediment to financial performance and their stability. Thus, becoming problematic for banks to determine if inclusion is a profit-making investment or not (Bloem & Gorte, 2001). As per Bofondi and Gobbi (2003), knowledge asymmetry among borrower and the lender may reduce moral hazards and adversely affect credit stability and performance. The risk that one partner in a transaction may misrepresent information about its assets, obligations, or credit status is known as moral hazard. As a consequence, the number of non-performing loans has increased. .

Moneylenders appear to be not able to separate between borrowers according to the theory of adverse selection. with various degrees of risk and loan agreement restrictions. This forces borrowers to repay loans earlier than expected hence causes a substantial accumulation of NPLs (Bloem & Gorte, 2001). This is important in this research because it claims that lenders and borrowers lie about crucial facts in borrowing and lending agreements. Financial organizations depend on reliable data about borrower and project for which money is being sought.

2.2.3 Finance Growth Theory

Bagehot (1973) was behind the formulation of this theory. It states that financial development provides a productive and conducive condition for economic growth. In addition, restricted access to cheap financial products by the majority of the population contributes to economic disparity and imbalance. This has the effect of reducing development and growth pace.

According to Demirgüç-Kunt and Levine (2008), economic development and growth of a country are dependent on its ability to access financing. Because of this they implore nations to encourage policy makers to make policy formulation a priority. They need to channel efforts towards addressing factors influencing financial growth is a way of supporting all-inclusive growth. This is pushed via mobile loans.

Bagehot (1973) states that the theory gives an explanation of a well-working lending institution and how it can encourage increased market prosperity, lead to the creation and expansion of liquidity, mobilize savings, improve the accumulation of capital, resource transfer from conventional (limited-growth) sectors to the modern sectors that induce growth. Sparatt & Stephen (2013) suggested that mobile lending inflation depends on economic development, the financial institution's composition, and stability. Additionally, it improves entrepreneur response thereby sustaining growth and development.

The theory is the foundation of the study since it acknowledges that financial services' accessibility creates conditions that support economic growth influenced by supply push that causes a demand pull effect. It also states that insufficiency in low-cost financial products for all is a crucial factor that increases income inequality and imbalance thereby slowing down growth. The theory elucidates how the predictor variable mobile lending, helps a nation to form an inclusive economy. The reason for this is that a nation can only be built by all its citizens.

2.3 Determinants of Financial Sustainability

This section discusses the theoretically anticipated variables that affect financial sustainability. They include credit accessibility, cost of credit, credit terms and credit convenience.

2.3.1 Credit Accessibility

Loan restrictions work in Kenya in a number of ways when underdeveloped capital markets compel micro-enterprises to depend on their own finance or to borrow from family and friends. Inaccessibility for small companies credit for the long term leads them to depend on high-cost financing (Nair, 2015). These challenges come from the more formalized lending institutions, which resulted in a non-credit rating for all small and micro businesses (Omwansa, 2016). However, this cost is not reduced by the development of less formal institutions such as mobile banking loans. These microcredit organizations suffer restricted growth due to their low finances. Their mostly short-term financing implies that their savings cannot be readily converted into medium- and lengthy loans (Nzuki, 2013).

Micro businesses are seen as uncreditworthy by most conventional financial institutions, who refuse to lend to them (Atieno, 2013). One of the causes for the sluggish development of SMEs has been attributed to limited of financial resources (Kent, 2014). This is compounded by an unfavorable attitude toward them, which makes it difficult for them to get financial services from financial organizations. The target of versatile budgetary exchanges is to enhance the effectiveness of microfinance by utilizing portable saving money innovation to make exchanges quicker, less expensive and progressively secure (Guagraw, 2017).

2.3.2 Cost of Credit

The loan cost means the amount of money that entrepreneurs pay when acquiring money from financial organizations. The main cost indications here are legal expenses, personal insurance, loan charges and negotiating costs (Gichuki et al., 2014). Higher expenses of transaction not only increase the price of borrowing, but may also limit certain borrower groups' access to external financing. While the transaction costs of all borrowers are constrained, there are reasons that are much more restrictive for small and micro companies. Its varied features and relative opacity enhance the expenses of evaluation and monitoring.

In contrast to other types of credit, such as consumers' credit or credit, small and medium-sized enterprises financing remains a high-cost credit product. SME loans typically still rely significantly on the connection between lenders and borrowers, as opposed to other loan products that may be simplified to simple transactions. Banks were accused for overloading their customers by establishing excessive interest rates. The majority of their interest ranges from 18% to 20%. Low business performance compounded by the worldwide financial slump, most companies cannot only pay back their existing debts but are not encouraged to get new lending (Thuranira, 2019).

2.3.3 Credit Terms

Given a choice, a majority of micro-entrepreneurs would prefer a mobile loan to a regular bank loan because socially-oriented mobile lenders screen loan applicants less rigorously than regular banks (Shirazi & Manap, 2005). Kang (2015) highlights that information asymmetry challenges arising from poor or non-existent financial records by an SME limits the 20 borrower’s creditworthiness evaluation making it impossible for them to acquire loans from banks. Studies show various constraints facing companies when trying to get financing from banks.

The asymmetry of information between banks and the potential SME borrowers has serious implications for banks loan methods employed by bank loan officials. In the absence of adequate financial information, banks usually depend on high collateral values, as a consequence of which the danger of ash-induced selection of chards arising from faulty information is reduced (Verter & Becvarova, 2016).

2.3.4 Credit Convenience

Time element is one of the main aspects in the quality of mobile banking services for clients (Liu & Arnett, 2014). Time saving is an essential aspect that helps consumers to utilize cellphone loans (Beer, 2013). Mobile banking services can guarantee that such transactions are quick, reasonably cost-effective, risk-free and traceable (Caporaso, 2014).

Micro contractors go to the banks less frequently and spending more time operating their companies (Beza, 2014). In the same way, many unbanked Kenyans may get or transfer money anywhere in the nation (Wanyonyi, 2015). Larger parts of SMEs are aware of the versatile installation advantages, since they are tough to use and need no formal preparation prior to usage. A Kenya M-PESA study found that Micro-Business Owners use mobile services even though they spend less time frequenting the banks and create extra time to manage their enterprises (Zikmund, 2014).

2.4 Empirical Studies

This section presents empirical work done on the relation between mobile lending and financial sustainability. However, most studies concentrated on related factors and not necessarily two interest variables.

2.4.1 Global Studies

Dawood et al. (2016) studied the influence of mobile lending on alleviation of household poverty in Indonesia. The research showed that mobile lending reduces absolute poverty among 300000 families by use of Binary Logistic model as per Indonesian National Social and Economic Survey of 2017.

Additionally, mobile lending can be a compensation for limited assets, reduced non-agricultural occupations in rural areas, and little education for family heads. Additionally, it will reduce incentives for poor, to reduce rural-urban migration for low-skilled rural people who seek non-agricultural job opportunities.

Le, Ho and Mai (2017) focus on how mobile lending impacts income inequality in transitioning economies. The two-stage least squares model and two mobile lending indices are used in examining the impact that mobile lending has on income inequality among 22 transitioning economies as from the year 2005 to 2015. The study results show that there exists a negative relation between mobile lending index and the GINI coefficient. Among the suggestions put forward is that policy recommendations are needed to lower income inequality by the development of mobile lending.

Kim et al (2019) examined fifty four scholarly papers on the relationship among development, integration and mobile service in order to identify the critical questions and gaps in their study. Findings indicate that most of the examined literature addressed three main areas: mobile services, delivery and the environment. In the early phases of the research, the regions examined shown a prejudice to individual and institutional circumstances in the mobile banking services are being implemented, compared to real users' supply and demand and their social effect. The research techniques were selected additionally showing minimal variety and depth. This analysis enhances the knowledge of current publications on mobile financial service in regards to inclusiveness among emerging regions and identifies needs for further investigations.

Chinoda and Akande (2019) have examined Africa's mobile telephone distribution, economic development and financial inclusion. A Structural Equation Model examined mobile telephone diffusion, economic development and financial inclusion for thirty two countries in Africa between 2004 and 2016. Findings demonstrated inclusion affects economic development through mobile telephones. The implications of the study were in the management of the relevance of deploying mobile handsets for finance and growth in Africa.

From 2001 to 2014, Ghosh (2019) utilized data from key Indian states to evaluate the trinity of MIA (Mobile, Inclusion and Aadhaar) on economic development. Research demonstrated that mobile proliferation has a statistically substantial effect on economic development by use of advanced panel data techniques. Furthermore, significant complementarities have been identified connecting financial inclusion and mobile telephony. The extent to which financial use is complementary was much greater compared to accessibility. Furthermore, data demonstrated the increasing effect on inclusion of the biometric identification procedure (Aadhaar), mainly via better financial access.

2.4.2 Local Studies

The research interests of Wanalo (2017) were focused on investigating whether the usage of financial technology has a major impact on the results of financial companies, and evaluated their performance in Kenya. The three theories in this research were the theory of financial intermediaries, the theory of innovation and Silber's limits on finance technology. To do this project, the methodology involved in a descriptive research was used. Commercial banks were considered in this research. This research included a total sample size of 15 individuals and included banks from both the commercial and non-commercial sectors. Additional data was sourced from annual reports provided by commercial banks between 2012 and 2016, along with data gathered from the CBK and from the bank's website. Panel data analysis was used in the study. The Prais Winstein regression equation was used to get the results. Despite the increased ATMs utilization and agency banking, they have little impact on a bank's overall financial health.

Chirah (2018) attempted to identify how alternative banking channels affect the operational efficiency. A set of all commercial banks in Kenya that have 42 locations was utilized. In this study, the independent variable was alternative banking channels, which included transactions carried out using the internet, a smartphone, automated teller machines, and agency banking. The ratio of operating expenses to total revenue assessed operational efficiency. Additional data has been collected on an annual basis since January 2013 up to December 2017 for a period of five years. In this investigation, liquidity demonstrated a positive and considerable value. Studying the connection between ATM, internet banking, mobile banking, capital, firm size and mobile banking, firm size, mobile banking, internet banking, agency banking and ATMS were insignificant factors in determining operational efficiency in commercial banks.

Sindani, Muturi and Ngumi (2019) examined the impact of1 financial channels of distribution evolution on financial inclusion in Kenya over a period of six years beginning from 2012 to 2017. The specific objectives guiding this study include examine how internet banking affects financial inclusion in Kenya and to examine how ATM banking affect financial inclusion in Kenya. Secondary data was collected for subsequent analysis. For analysis of the data collected, Frequency table, percentage and mean have been utilized to prove the results of this research. Use of descriptive statistics in this study was meant to present the category sets formed by this research. The variance, standard deviation, and mean on dependent and independent variables functions were utilized to characterize the variables employed in the research. The conclusion from this study is that internet banking has had a beneficial effect on Kenya's financial industry in Kenya because it promotes productivity and efficiency. Also, ATM banking has enhanced financial inclusion in Kenya.

To better understand the financial technology impact of regulated MFIs in Kenya financial performance, Ogweno (2019) conducted a survey. A total of 13 regulated microfinance institutions (MFIs) currently serve the people of the study's community. The data for the first five years of the project's life was gathered on a yearly basis throughout that time. The association between variables was evaluated use a multi-linear model of regression, and the study methodology used was a descriptive cross-sectional design, according to the findings. The findings of the research revealed that deposit, mortgage, and bank size all had a substantial impact on savings account balances and growth. There was no significant correlation found between agency banking, the number of ATMs, and the bank's financial performance.

Abdulkadir (2019) in Kenya performed a thorough examination of effect of digital payments on the operation of commercial banks. The implementation of digital internet banking was attributed to the volume of transactions conducted through mobile and internet banking. All the data in this case comes from commercial banks. In order to account for the size of the bank, the research utilized financial institution and capital adequacy ratio variables. To gather data on all of the commercial banks in Kenya, a descriptive research approach was adopted. The simple linear connection was created using Pearson correlation. The relationship's dynamics were uncovered by using a regression analysis. The research discovered that the financial technologies contributed to financial success.

2.5 Conceptual Framework

A conceptual model best explains the anticipated link between the research variables. The following conceptual model demonstrates that mobile financing is linked to the financial sustainability of SMEs in Roysambu Sub-County. The independent variable was mobile lending as measured by credit accessibility, cost of credit, credit terms and credit convenience. The dependent variable sought to explain was financial sustainability of SMEs in Roysambu Sub-county as measured by income over expenditure, cost structure and operating margin ratio.

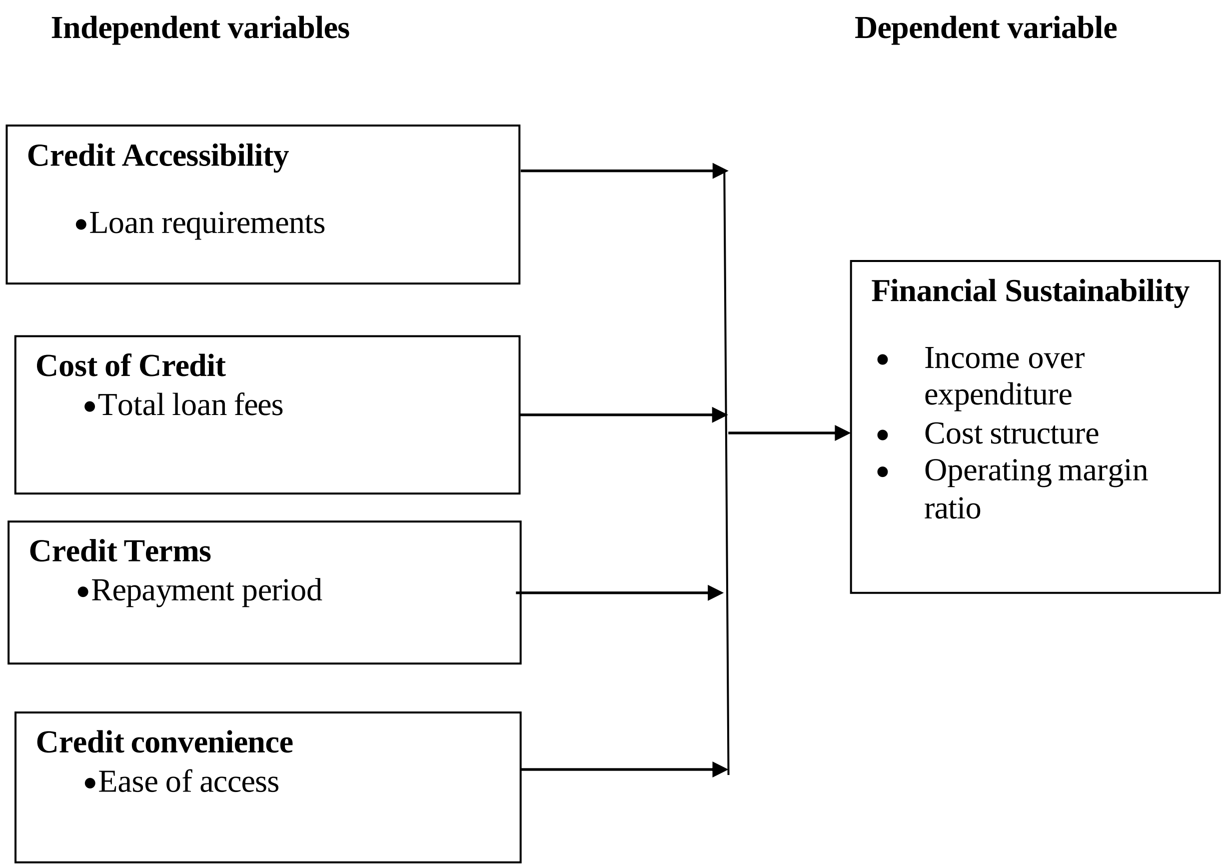

Figure 2.1: The Conceptual Model
Source: Researcher (2021)

2.6 Summary of the Literature Review

The emphasis of this chapter was on the ideas behind this research. The ideas addressed here were: theory of financial intermediation, theory of information asymmetry, and finance led to growth. The chapter also focuses on some variables that affect financial sustainability. Previous research in either these and/or related fields have been conducted and their results have been examined under empirical examination. From an empirical examination, it was apparent that no local research has been undertaken to investigate the impact of mobile loans on the financial sustainability of SMEs in Roysambu Sub-County.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter designates the approaches utilized in accomplishing the research objective which was to determine how mobile lending affects financial sustainability. In particular, the study highlighted the, data collection, the design, diagnostic tests as well as analysis.

3.2 Research Design

To investigate how mobile loans and SMEs' financial sustainability were related, a descriptive design was used. This design was appropriate since the nature of the phenomena was of key interest to the researcher (Khan, 2008). It was also sufficient in defining the interrelationships of the phenomena. As per Cooper and Schindler (2008), this design also validly and accurately represented the variables thereby giving sufficient answers to the study questions.

3.3 Population

Population is an integrated set of event, items, services, and people being studied (Burns & Burns, 2008). The target population should well fit the population under review. Noticeable feature in a research population helps makes inferences. According to Nairobi City County Government (2020) there were 1098 SMEs registered in Roysambu Sub-County.

3.4 Sample Design

Yamane (1967) formula was employed in determining sample size. The formula has been recommended for large populations that exceed 1000. The formula was given below:-

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

Where, n= Sample Size; N = Population Size; e = Error limit. Set at 10% for this study in conformity with Wanyonyi (2015) who contended that 10% was acceptable error margin in social studies.

$$n = \frac{1{,}098}{1+1{,}098(0.1)^2}$$

n =96 respondents

A sample size of 96 SMEs in Royambu Sub-county was the subject of the study. The unit of observation was the owners or their representative. The SMEs that participated in the research were chosen using a simple random selection method.

3.5 Data Collection

The research collected primary data via a structured survey. The structured questionnaire was chosen because it was devoid of partiality and allows respondents sufficient time to provide a thorough response, apart from being appropriate and convenient for a large sample. The questionnaires consisted of closed ended questions.

Closed questions were designed in a specified sequence with response options. The questionnaire was divided into 6 sections, that is, background/demographic information and five sections to capture data for each independent and dependent variable. The researcher administered the questionnaire to one respondent in each company giving total of 96 respondents. Google forms were adopted in the administration of the questionnaire.

3.6 Diagnostic Tests

To ascertain viability of the model, a number of diagnostic tests were done, like normality, stationarity, multicolinearity, homogeneity and autocorrelation. The assumption of normality is that the dependent variable's residual was normally distributed and closer to the mean. This was accomplished by use of the Shapiro-wilk test. In the event that one of the variables had no normal distribution it was adjusted using the logarithmic adjustment methodology. Stationarity test was utilized in determining if the statistical properties like variance, mean and autocorrelation changed with the passage of time. This property was ascertained using the augmented Dickey Fuller test. In the event the data does not meet this property, the robust standard errors were utilized (Khan, 2008).

Autocorrelation is a measure of how similar one time series is when compared to its lagged value across successive timings. The measure of this test was done using the Wooldridge test and in the event that the presumption was breached, robust standard errors were used by the model. Multicollinearity exists when a perfect or near perfect linear relation is made between a number of independent variables. Variance Inflation Factors (VIF) and tolerance levels were utilized. Anyother multicolinear variable was eliminated and a new measurement used in place of the variable that has co-linearity.

Heteroskedasticity confirms if the variance of the errors in a regression lies among the independent variables. This was tested using the Breusch Pagan test test and if data did not meet the homogeneity of variances assumption, robust standard errors were employed (Burns & Burns, 2008).

3.7 Data Analysis

In data analysis, version 24 of SPSS software was used. Tables presented the findings in a quantitative manner. Descriptive statistics were employed in the calculation of central tendency measures as well as dispersion such as mean as well as standard deviation for every variable. Inferential statistics relied on correlation as well as regression. Correlation established the magnitude of affiliation between variables in the research and a regression determined causal and effect among variables. The link between dependent and independent variables was established by multivariate regression.

3.7.1 Analytical Model

Using a multivariate regression technique, it was possible to evaluate the relative significance of each of the explanatory factors with regard to financial sustainability expressed in the form of: $Y= \alpha+ \beta_1X_1+\beta_2X_2+\beta_3X_3+ \beta_4X_4 +\varepsilon$.

Where:

Y=was financial sustainability measured using likert scale questions;

$ß_{0=}$was the regression constant (parameter of the function); $ß_1$ to $ß_4$ are

coefficients of independent variables.

X_1 was credit accessibility measured using likert scale questions

X_2 was cost of credit measured using likert scale questions

X_3 was terms of credit measured using likert scale questions

X_4 was credit convenience measured using likert scale questions

έ was the error term

3.7.2 Tests of Significance

The researcher performed parametric tests to show the statistical importance of the regression equation and that of the individual parameters. In particular, the F-test and the T-test was employed with confidence level of 95%. The F-test and the t-test were used to determine if the regression equation was statistically meaningful and the statistical importance of various parameters accordingly.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND FINDINGS

4.1 Introduction

This chapter entails the study results and interpretation. It includes demographic data as well as general details such as response rate. The part also provides the results of the investigation in relation to the research goals.

4.2 Response Rate

In a study, the response rate is a percentage of total number of answers received by the number of participants. Depicted in Table 4.1 are the study outcomes.

Table 4.1: Response Rate

Response Rate	Frequency	Percent
Returned	96	100
Unreturned	96	100
Total	**96**	**100**

Source: Field Data (2021)

According to Table 4.1, 96 questionnaires were distributed to SME owners who were chosen as the sample size for the current analysis. All the 96 questionnaires questionnaires sent out to respondents were completed and returned, resulting in a 100 percent rate of response. This is above the recommended level of 50% or more, and it agrees with Sekeran and Bougie (2015), who claimed a research having a 50% or more response rate is appropriate for investigation and conclusion drawing.

4.3 Reliability Test Results

Reliability measures if the instrument measures that which it is required to measure every time it is used. It was determined through the use of Chronbach’s alpha which determines the internal consistency of the questionnaire. Data obtained through the questionnaire were imputed into SPPS and Chronbach’s alpha for the items in the questionnaire generated. Those items that had a Chronbach's alpha of less than 0.7 which is the threshold would be eliminated from the questionnaire while collecting data for the main study.

Table 4.2: Reliability Test Results

Variables	Cronbach's Alpha	Critical Value	Conclusion
Credit accessibility	0.812	0.7	Reliable
Cost of credit	0.804	0.7	Reliable
Terms of credit	0.815	0.7	Reliable
Credit convenience	0.792	0.7	Reliable
Financial sustainability	0.856	0.7	Reliable

Source: Field Data (2021)

All variables were higher than 0.7 Chronbach alphas, as Table 4.2 shows. This indicates that the questionnaire utilized in this study was very coherent internally. Therefore, the questionnaire was reliable in assessing the impact of mobile lending on the SME financial sustainability.

4.4 Demographic Analysis

This section provides descriptive data about the respondents' demographic characteristics.

4.4.1 Gender of the Respondent

Those polled were to stipulate their gender. Table 4.3 exhibits the results.

Table 4.3: Gender Distribution

Gender	Frequency	Percentage
Male	56	58%
Female	40	42%
Total	**96**	**100%**

Source: Field Data (2021)

According to the findings, male participants' percentage was 58% whereas females were 42%. This also implies that the study was able to get responses from both genders which enrich the study findings.

4.4.2 Age of the Respondents

The research tried to ascertain the individuals' age. It is essential to understand the age of respondents, since someone's age may affect their research answer. Table 4.4 displays the results.

Table 4.4: Respondents' Age Composition

Age	Frequency	Percentage
Less than 30 years	8	8.33%
31-40 years	27	28.13%
41-50 years	38	39.58%
51 and Above	23	23.96%
Total	**96**	**100%**

Source: Field Data (2021)

Table 4.4 displays that the highest respondent number (39.58%) were between the ages of 41 and 50, 28.13 percent were between the ages of 31 and 40, 23.96 percent were 51 and up, and the smallest percentage (8.33%) were below 30years. According to the findings, SME owners and managers are relatively young.

4.4.3 Highest Education Level

Specific participants were requested to state their highest level of education. Table 4.5 shows the findings.

Table 4.5: Distribution of Respondents by Highest Level of Education

Education	Frequency	Percentage
Secondary	11	11.46
Diploma	51	53.13%
Degree	34	35.41%
Total	**96**	**100%**

Source: Field Data (2021)

The majority of respondents (53.13 percent) had a diploma, while 35.41% had a degree. Only 11.46% had the highest level of education being secondary school. None of the interviewed respondents indicated a different level of education. These findings suggest that owners and managers of SMEs are relatively well educated as all of them had achieved at least secondary education level. High levels of education are essential in a company because they enable an organization to comprehend and resolve its problems.

4.4.4 Age of the Firm

The researcher pursued to find how old the firms were. The results are as shown in Table 4.6.

Table 4.6: Age of the Firm

Firm age	Frequency	Percentage
Less than 1 year	10	10.4
1-5 years	16	16.7
6-10 years	37	38.5
11-15 years	11	11.5
Above 15 years	22	22.9
Total	**96**	**100%**

Field Data (2021)

The results revealed that 38.5% had been in business for between 6 and 10 years, 22.9% for above 15 years, 16.7% for 1-5 years, 11.5% for 11-15 years and 10.4% for those aged below 1 year. This is an indicator that the respondents had been in business for a good period of time to answer questions regarding mobile lending and financial sustainability.

4.5 Analysis of Study Variables

This section presents descriptive results in means, as well as standard deviations for every variable under investigation.

4.5.1 Credit Accessibility

The study sought to investigate the degree of credit accessibility among SMEs in Roysambu Sub-county. Credit accessibility is the first characteristic of mobile lending. Table 4.7 shows the mean and standard for credit accessibility indicators.

Table 4.7: Descriptive Statistics for Credit Accessibility

Statements	N	Mean	Std. Dev
I'm able to access a short-term loan on my mobile phone account	96	4.24	0.55
I am able to borrow mobile loans to boost my business	96	4.21	0.73
I have managed to grow the business by borrowing from the mobile loan applications to meet the high product cost that are often repaid using the proceeds of the business	96	4.45	0.50
My business has grown by the accessibility of the mobile loans with no requirements for access at the times of need	96	4.33	0.53
Overall mean Score	**96**	**4.31**	

Source: Field Data (2021)

The results revealing that most of the participants concurred that they have managed to grow the business by borrowing from the mobile loan applications to meet the high product cost that are often repaid using the proceeds of the business (Mean=4.45, std. dev=0.5). The findings further revealed that business has grown by the accessibility of the mobile loans with no requirements for access at the times of need (Mean=4.33, std. dev=0.53). Respondents further agreed that they are able to access a short-term loan on my mobile phone account (Mean=4.24, std. dev=0.55). Additionally, findings discovered that SMEs in Roysambu Sub-county are able to borrow mobile loans to boost my business (Mean= 4.21, std. dev=0.73). The overall mean was 4.31 implying that credit accessibility is being achieved among SMEs in Roysambu to a great extent.

4.5.2 Cost of Credit

The research sought to establish the extent of cost of credit among SMEs in Roysambu Sub-county. Table 4.8 shows the mean and standard for cost of credit indicators. The findings showed that SMEs in Roysambu Sub-county growth o is attributed by the cheap loans they get from the mobile phone loans due to lack of commission charged on the loans (Mean=4.0, std. dev=0.55). The findings further noted that SMEs in

Roysambu Sub-county have failed to apply for a loan as they considered the cost to be too high (Mean=3.97, std. dev=0.58). Similarly, findings showed that SMEs in Roysambu Sub-county have grown due to low interest rates given by the mobile phone loans (Mean=3.91, std. dev=0.67). The findings further showed that lack of bureaucracy by the mobile phone loans have made the SMEs access the loan at any time at a low cost thus promoting the growth of business (Mean=3.85, std dev=0.78). The overall mean was 3.93 indicating that on average, SMEs in Roysambu Sub-county enjoy low cost of credit to a great extent.

Table 4.8: Descriptive Statistics for Cost of Credit

Statements	**N**	**Mean**	**Std. Dev**
The growth of my business is attributed by the cheap loans I get from the mobile phone loans due to lack of commission charged on the loans	96	4.00	0.55
The low interest rates given by the mobile phone loans have made my business grow	96	3.91	0.67
The lack of bureaucracy by the mobile phone loans have made me access the loan at any time at a low cost thus promoting the growth of my business	96	3.85	0.78
I have failed to apply for a loan as I considered the cost to be too High	96	3.97	0.58
Overall Mean Score	**96**	**3.93**	

Source: Field Data (2021)

4.5.3 Terms of Credit

The research sought to establish the terms of credit among SMEs in Roysambu Sub-county. Table 4.9 displays the mean as well as standard for terms of credit indicators.

Table 4.9: Descriptive Statistics for Terms of Credit

Statements	**N**	**Mean**	**Std. Dev**
Repayment terms for mobile loans are flexible.	96	4.21	0.69
Mobile loans are appealing since they do not security.	96	4.03	0.63
I consider the mobile lending arrangement favorable	96	4.42	0.55
Ability to borrow immediately after paying a loan makes mobile loans attractive	96	4.33	0.68
Overall Mean Score	**96**	**4.25**	

Source: Field Data (2021)

The findings showed that SMEs in Roysambu Sub-County consider the mobile lending arrangement favorable (Mean=4.42, std. dev=0.55). The findings also discovered that ability to borrow immediately after paying a loan makes mobile loans attractive (Mean=4.33, std. dev=0.68). The findings also show that repayment terms for mobile loans are flexible (Mean=4.21, std. dev=0.69). Additionally, findings revealed that mobile loans are appealing since they do not require immovable assets as collateral (Mean=4.03, std. dev=0.63). The overall mean was 4.25 suggesting that SMEs in Roysambu Sub-county consider mobile lending terms of credit to be good to a great extent.

4.5.4 Credit Convenience

The research sought to establish the extent of credit convenience among SMEs in Roysambu Sub-county. Credit convenience is the last aspect of mobile lending considered. Table 4.10 shows the mean and standard for credit convenience indicators.

Table 4.10: Descriptive Statistics for Credit Convenience

Statements	N	Mean	Std. Dev
Time taken to process mobile loans is short	96	4.21	0.73
Mobile banking is easy to use and it takes a few seconds to borrow money.	96	4.03	0.63
Mobile lending enables me to access money anytime anywhere whenever I need it.	96	4.45	0.50
Mobile lending enables me to pay for my raw materials in good time without delay	96	4.33	0.53
Mobile lending saves time compared to other loan options	96	4.25	0.75
Overall mean Score	**96**	**4.25**	

Source: Field Data (2021)

The findings revealed that mobile lending enables SMEs to access money anytime anywhere whenever they need it (Mean=4.45, std. dev=0.5). The findings further revealed that mobile lending enables SMEs to pay for raw materials in good time without delay (Mean=4.33, std. dev=0.53). The findings also revealed that mobile lending saves time compared to other loan options (Mean=4.25, std. dev= 0.75). Additionally, findings discovered that time taken to process mobile loans is short (Mean= 4.21, std. dev=0.73). The descriptive results also revealed that mobile banking is easy to use and it takes a few seconds to borrow money (Mean=4.03, std. dev=0.63). On average, the results revealed that mobile lending to SMEs in Roysambu Sub-County to a greater degree as average mean of 4.5 displays.

4.5.5 Financial Sustainability

The mean as well as standard deviation for precise attributes of financial sustainability are as indicated in Table 4.11.

Table 4.11: Descriptive Statistics for Financial Sustainability

Statements	N	Mean	Std. Dev
The SME yearly expenditure and income statement typically shows a surplus.	96	4.24	0.64
The SME finance is completely diversified when the overall financing of loans does not surpass %	96	4.08	0.55
The organization’s fixed cost is lower than its overall cost.	96	4.00	0.55
The company has a favorable margin of operations.	96	3.91	0.67
Overall Mean Score	**96**	**4.06**	

Source: Field Data (2021)

The findings showed SMEs in Roysambu Sub-county yearly expenditure and income statement typically shows a surplus (Mean=4.24, std. dev=0.64). Similarly, findings showed that the SME finance is completely diversified when the overall financing of loans does not surpass a set % (Mean=4.08, std. dev=0.55). The outcomes also showed that the SMEs organization’s fixed cost is lower than its overall cost (Mean=4.0, std. dev=0.55). The conclusions further noted that the SMEs have favorable margin of operations (Mean=3.91, std. dev=0.67). The overall mean was 4.06 implying that an average, SMEs in Roysambu Sub-county are financially sustainable to a great magnitude.

4.6 Inferential Statistics

This section contains the inferential statistics for all of the variables. Pearson correlations and multiple regressions were used as inferential statistics. All of the variables were correlated using Pearson correlations, and the connection between the mobile lending of SMEs in Roysambu Sub-county and financial sustainability was examined using regression.

4.6.1 Correlation Analysis

The Pearson correlation illustrates the connection between each of the indicated independent factors and the result/related variable. The coefficient r was determined and whether the connection was positive or negative. Table 4.12 displays the findings.

Table 4.12: Correlation Results

	Financial sustainability	
	Pearson 's correlation	P
Credit accessibility	0.918	0.000
Cost of credit	0.650	0.000
Terms of credit	0.660	0.000
Credit convenience	0.566	0.000

Source: Field Data (2021)

According to Pearson coefficients and P-values, the connection between credit accessibility and financial sustainability is positive as well as significant ($r=0.918$, $p<0.05$). This is an indication that credit accessibility leads to improved financial sustainability. The correlation findings too show a strong and significant association between financial sustainability and cost of credit as revealed by a 0.650 Pearson correlation coefficient as well as a 0.000 P-value. This is a sign that better cost of credit lead to higher financial sustainability among SMEs.

Furthermore, the correlation findings reveal a strong and significant link between financial sustainability and terms of credit, as shown by a 0.660 Pearson correlation coefficient as well as a 0.000 P-value. This is an indication that a rise in terms of credit yields an increase in financial sustainability among SMEs. Finally, the correlation findings reveal a significant connection between credit convenience and SME financial sustainability, as shown by a 0.566 Pearson correlation and a 0.000 P value. This is an indication that improvement in credit convenience is linked to an increase in SME financial sustainability.

4.6.2 Regression Analysis

The impact of each of the four chosen predictor variables on SME financial sustainability, as shown in table 4.13, 4.14 and 4.15, was utilized for multiple linear regression analyzes.

Table 4.13: Model Fitness

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.966[a]	.933	.930	.23635

a. Predictors: (Constant), Credit convenience, Credit accessibility, Credit terms, Cost of credit

Source: Field Data (2021)

The R square of 0.933 in Table 4.13 shows that credit accessibility, cost of credit, terms of credit and credit conveniences among SMEs in Roysambu Sub-county account for 93.3%, while the other 6.7% is explained by elements not included in this study. The R value of 0.966 indicates a significant connection between financial sustainability and the predictor factors among SMEs in Roysambu (credit accessibility, cost of credit, credit terms and credit convenience).

Table 4.14: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	70.750	4	17.687	316.630	.000^b
	Residual	5.083	91	.056		
	Total	75.833	95			

a. Dependent Variable: Financial sustainability
b. Predictors: (Constant), Credit convenience, Credit accessibility, Credit terms, Cost of credit

Source: Field Data (2021)

The whole model is statistically significant, as evidenced by a F value of 316.630 and a 0.000 p value in Table 4.14. The extent of the effect of credit accessibility, cost of credit, terms of credit and credit convenience on financial sustainability among SMEs is demonstrated by regression coefficient results.

Table 4.15: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.351	.225		6.011	.000
	Credit accessibility	.500	.084	.410	5.941	.000
	Cost of credit	.297	.060	.393	4.932	.000
	Credit terms	.604	.070	.588	7.197	.000
	Credit convenience	.813	.070	.846	11.549	.000

a. Dependent Variable: Financial sustainability

Source: Field Data (2021)

The multiple regression model used is illustrated below:

$$\mathbf{Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_{3+}\ \beta_4X_4 + \varepsilon,}$$

Where,
Y denoted financial sustainability;

β_0 denoted the constant;

X_1 represented credit accessibility X_2; represented cost of credit; X_3 denoted terms of credit;

X_4 denoted credit convenience; ε was the error term when there was assumed normal distribution

$\beta_1, \beta_2 \beta_3, \beta_4$ denote independent variable coefficients

The regression model was substituted as follows;

$$\mathbf{Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_{3+} \beta_4 X_4 + \varepsilon,}$$

$$\mathbf{Y = 0.351 + 0.500X_1 + 0.297X_2 + 0.604X_{3+} 0.813X_4}$$

Interpretatively, a unit change in credit accessibility, cost of credit, terms of credit and credit convenience will lead to a 0.500, 0.297, 0.604 and 0.813 change in financial sustainability among SMEs in Roysambu Sub-County respectively, whereas variables that were not part of this research remained unchanged. The four factors included in this research were critical for improving SME's financial sustainability. It is evident that the most essential element is credit convenience (β_3=.813) while the least important was cost of credit (β_1=0.297). It was also shown that if the four variables chosen for this research were held constant, financial sustainability would still be significant (β = 0.351, $p < 0.05$). This implies that management and policy makers should ensure they enhance cost of credit,credit accessibility, terms of credit as well as credit convenience as this will improve financial sustainability.

4.7 Discussion of Findings

The results of the research showed presence of positive and substantial association between credit accessibility and financial sustainability. This is a sign that credit accessibility leads to improved financial sustainability. This study finding concurs with Dawood et al. (2016) who studied the influence of mobile lending on alleviation of household poverty in Indonesia. The research showed that mobile lending reduces absolute poverty among families by use of Binary Logistic model and data obtained from 300.000 families by Indonesian National Social and Economic Survey of 2017. Additionally, mobile lending can be a compensation for limited assets, reduced non-agricultural jobs in rural areas, and little education for family heads.

Additionally, it will reduce incentives for poor, to reduce rural-urban migration for low-skilled rural people who seek non-agricultural job opportunities.

The findings also show a strong, positive and significant connection between SME's financial sustainability and cost of credit. This is an indication that improved cost of credit leads to increased financial sustainability among SMEs in Roysambu Sub-county. These findings support a study by Mutisya (2016) who performed a research in the Kitui County on the impact of mobile banking in developing small and medium businesses and concluded that low cost of credit gives rise to an upsurge in performance of SMEs.

Moreover, the results of the correlation indicate a strong, positive and substantial connection between SME's financial sustainability and terms of credit. This shows that increased terms of credit leads to an increase in financial sustainability. These findings corroborate with Thuranira (2019) who conducted a report on the variables affecting SMEs financial sustainability behavior: A Mombasa County Survey, Kenya. The research demonstrates that terms of credit influence the degree of financial sustainability amongst SMEs.

Finally, the correlation findings reveal a positive connection between credit convenience and SME financial sustainability. This indicates that improved credit convenience is related to an increase in SME financial sustainability. This finding is in accordance with Maswili and Kariuki (2019) who in their quest to determine how performance of pharmaceutical manufacturing firms in Nairobi was influenced by mobile lending; held that credit accessibility, cost of credit and credit convenience all influenced performance positively.

CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The research findings are provided for the study in this chapter. The section also covers conclusions of the study and recommendations. This part also includes the consequences and recommendations of the future study.

5.2 Summary of Results

The primary research objective was to evaluate the effect of mobile lending on financial sustainability of SMEs in Roysambu Sub-county. The research was backed by three theories: namely; financial intermediation theory, information asymmetry theory and finance growth theory. Likert scale questions were used to represent financial sustainability, which was a dependent variable. Credit accessibility, cost of credit, terms of credit and credit convenience were the independent variables. Descriptive research design was applied. 96 SMEs comprised the study sample. Descriptive and inferential analyses were conducted. The findings are discussed in this section in line with research objectives.

The first objective of this research was to evaluate the effect of credit accessibility on financial sustainability among SMEs in Roysambu Sub-county. The results revealed that SMEs in Roysambu Sub-county access mobile credit to a large degree. The correlation outcomes exhibited a positive as well as significant connection between credit accessibility and financial sustainability. The findings of the regression showed that a unit change in credit accessibility would have a significant positive effect on financial sustainability.

The second objective evaluated the effect of cost of credit on financial sustainability among SMEs in Roysambu Sub-county. The descriptive analysis revealed that SMEs in Roysambu Sub-county have a favorable cost of credit to a great extent. The link between cost of credit and financial sustainability was studied using correlation analyzes and the findings showed that the two variables were positively and significantly related. Regression results revealed that an improvement in cost of credit resulted in improved financial sustainability. This shows the significant effect of cost of credit on financial sustainability among SMEs.

The third objective was to determine the effect of terms of credit on financial sustainability of SMEs in Roysambu Sub-county. The descriptive findings show that SMEs in Roysambu Sub-county enjoys favorable terms of credit to a great extent. The findings of a correlation research showed a strong and significant connection between terms of credit and financial sustainability. The findings of the regression analyzes revealed a significant positive effect of terms of credit on financial sustainability. The results indicate an upsurge in terms of credit bolsters financial sustainability.

The study's fourth goal was to assess how credit convenience among SMEs in Roysambu Sub-county influenced financial sustainability. The results of the descriptive analysis revealed that SMEs in Roysambu Sub-county enjoys credit convenience to a large extent. Credit convenience has a connection with financial sustainability, according to the correlation analysis. The relationship was also strong and statistically significant. Regression analysis reveals a positively substantial effect of credit convenience on financial sustainability. SME financial sustainability increases as a result of an increase in credit convenience.

5.3 Conclusions

From the results of this research, it can be stated that credit accessibility has a favorable effect on financial sustainability among SMEs in Roysambu Sub-county. According to the results of regression and correlation there is a favorable connection between credit accessibility and SME financial sustainability. According to the research results, SME cost of credit had a positive impact on financial sustainability. The research indicates that SME favorable cost of credit bolsters financial sustainability. The findings are confirmed by regression and correlation analyses, showing a favorable connection between SME financial sustainability and cost of credit.

The research also indicates that terms of credit among SMEs has a positive impact on financial sustainability. Regression and correlated results corroborate the findings that demonstrate a positive link between the terms of credit and SME's financial sustainability level. The research also found that credit convenience among SMEs has a favorable effect on financial sustainability. The results of correlation and regression show a strong positive link between credit convenience and financial sustainability.

5.4 Recommendations for Policy Practice

The results show that the SME practice of credit accessibility has a beneficial impact on the financial sustainability. The research recommends the need for financial institution consisting of banks and other loan providers should continue offering mobile loans and increase their scope to reach more SMEs as this will enhance their sustainability and have a spiral effect in the entire economy. Policy makers such as governments and other bodies such as CBK need to formulate policies that enhances credit accessibility among SMEs.

According to the findings, SME cost of credit had a positive effect on financial sustainability. The study recommends that it is necessary for mobile loan providers to offer the loans at a favorable cost as this will boost the financial sustainability of SMEs and the growth of the economy as a whole. Policy makers should come up with controls regulating the maximum rate that can be charged on mobile loans.

Financial sustainability among SMEs was positively influenced by terms of credit, according to the findings of this study. The research recommends the need for financial institution consisting of banks and other loan providers to offer reasonable terms of credit that will make it easy for SMEs to be financially sustainable as this will have a spiral effect in the entire economy.

Financial sustainability among SMEs was positively influenced by credit convenience, according to the study findings. The research recommends the need for financial institution consisting of commercial banks and other loan providers to offer convenient credit to SMEs as this will enhance their sustainability and have a spiral effect in the entire economy

5.5 Limitations of the Study

Primary data was utilized in this study. To minimize the number of likely outliers, a structured questionnaire was used in the research. This may, however, pose the issue of biased data collecting because the respondents in question are restricted in how and how much they should provide. In this respect, the researcher made sure that the data collecting instrument enables complete data gathering which meets study aims as easily as feasible.

In addition, several of the respondents were skeptical about participating in the research. The researcher rectified this issue by obtaining required permission, authorization and permissions from the authorities concerned, including but not limited to the SMEs and the University. In addition, ethical concerns were taken into account.

Finally, the researcher stated willingness to share the study with interested participants.

5.6 Suggestions for Further Research

The R^2 showed a variation of 93.3% which implies that other variables not considered in this study explains 6.7% of changes in financial sustainability. As a consequence, future study may concentrate on other variables that are likely to influence financial sustainability such as taxation and location. Policymakers would be able to devise and firmly implement an effective apparatus to improve financial sustainability by determining how each of the factor influences financial sustainability.

The research aimed to identify factors that influence financial sustainability among SMEs in Roysambu Sub-county. Similar investigations may be carried out in other sub-counties. A cross-sectional research may also be performed for comparative reasons among many firms in a certain industry or across sectors.

Finally, this research relied on a multiple linear regression, that has its own set of drawbacks, such as misleading results and errors when a variable is changed. Future academics should investigate the many relationships between legacy stems cost management practices adoption and firm performance using models like the Vector Error Correction Model.

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APPENDICES

Appendix I: Introduction Letter

Dear Sir/Madam,

My name is Mary Mwangi. I am a student at the University of Nairobi of admission number D61/19280/2019 and currently undertaking an academic research project on*;*

*"**EFFECT OF MOBILE LENDING ON FINANCIAL SUSTAINABILITY OF SMALL AND MICRO ENTERPRISES IN ROYSAMBU SUB-COUNTY, NAIROBI**"***.** This research is a requirement for the award of Master of Business Administration of University of Nairobi, School of Business.

A questionnaire has been developed to assist gathering relevant information for this study. I will ask you a few questions to assist in completion of this study. Any details you give will be kept completely private and used only for academic reasons. It is entirely up to you whether or not you choose to take part in the research.

Many thanks for your acceptance with regards to participation in this study.

Yours Faithfully,

Mary Mwangi

Appendix II: Questionnaire

The purpose of this survey was to collect information on the effect of mobile loans on the financial sustainability of SMEs in Nairobi's Roysambu Sub-county. Please take the time to read the questions prudently and fill in with honestly. Collected information would only be utilized for academic study and would be maintained in absolute confidentiality.

Instructions

1. Fill in the blanks or check the relevant boxes in the box.

2. Please feel free to provide any additional research-related information.

PART A: BACKGROUND INFORMATION

1. Gender

1) Male ( ) 2) Female ( )

2. What is your age bracket?

1) Less than 30 years ( )
2) 31 - 40 years ( )
3) 41 – 50 year ( )
4) 51 years and over ( )

3. What is your highest level of education?

1) Secondary Education ( )
2) Middle Level College ( )
3) University Degree ( )
4) Postgraduate ( )
5) Others (Please specify)____________________

4. How long has your organization been in existence?______

1) Less than 1 year ( )
2) 1 – 5 years ( )
3) 6 – 10 years ( )
4) 11 -15 years ( )
5) More than 15 years ( )

PART B: MOBILE LENDING COMPONENTS

Component One: Credit Accessibility

Please check (X) the option that best reflects the degree of agreement with each of these assertions.

Use 1-strongly in disagreement, 2-disagreement, 3-moderately, 4- agreement, 5-strongly in agreement.

Statement	1.	2.	3.	4.	5.
I'm able to access a short-term loan on my mobile phone account					
I am able to borrow mobile loans to boost my business					
I have managed to grow the business by borrowing from the mobile loan applications to meet the high product cost that are often repaid using the proceeds of the business					
My business has grown by the accessibility of the mobile loans with no requirements for access at the times of need					

Component Two: Cost of Credit

Please check (X) the option that best reflects the degree of agreement with each of these assertions.

Use 1-strongly in disagreement, 2-disagreement, 3-moderately, 4- agreement, 5-strongly in agreement.

Statement	1	2	3	4	5
The growth of my business is attributed by the cheap loans I get from the mobile phone loans due to lack of commission charged on the loans					
The low interest rates given by the mobile phone loans have made my business grow					
The lack of bureaucracy by the mobile phone loans have made me access the loan at any time at a low cost thus promoting the growth of my business					
I have failed to apply for a loan as I considered the cost to be too high					

Component Three: Credit Terms

Please check (X) the option that best reflects the degree of agreement with each of these assertions.

. Use 1-strongly in disagreement, 2-disagreement, 3-moderately, 4- agreement, 5-strongly in agreement.

Statement	1	2	3	4	5
Repayment terms for mobile loans are flexible.					
Mobile loans are appealing since they do not need the use of immovable property as security.					
I consider the mobile lending arrangement favorable					
Ability to borrow immediately after paying a loan makes mobile loans attractive					

Component Four: Credit Convenience

Please check (X) the option that best reflects the degree of agreement with each of these assertions.

Use 1-strongly in disagreement, 2-disagreement, 3-moderately, 4- agreement, 5-strongly in agreement.

Component	1.	2.	3.	4.	5.
Time taken to process mobile loans is short					
Mobile banking is easy to use and it takes a few seconds to borrow money.					
Mobile lending enables me to access money anytime anywhere whenever I need it.					

Mobile lending enables me to pay for my raw materials in good time without delay					
Mobile lending saves time compared to other loan options					

PART C: FINANCIAL SUSTAINABILITY

To what extent do you agree on financial sustainability in your firm? Rate your agreement with the following statements using the likert scale below: 1- Very low extent, 2-Low extent, 3-Moderate extent, 4- Great extent, 5- Very great extent (Please tick appropriately)

Component	**1**	**2**	**3**	**4**	**5**
The SME yearly expenditure and income statement typically shows a surplus.					
The SME finance is completely diversified when the overall financing of loans does not surpass %					
The organisation's fixed cost is lower than its overall cost.					
The company has a favorable margin of operations.					

THANK YOU