

**EFFECT OF FINANCIAL LITERACY ON UPTAKE OF DIGITAL CREDIT
AMONGST PROPRIETORS OF MICRO-ENTERPRISES IN KIAMBU
COUNTY**

BY

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18/01365

**A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE AWARD OF DEGREE OF MASTER OF
SCIENCE (DEVELOPMENT FINANCE) IN THE SCHOOL OF BUSINESS
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DECLARATION

I declare that this dissertation is my original work and has not been previously published or submitted elsewhere for award of a degree. I also declare that this contains no material written or published by other people except where due reference is made and author duly acknowledged.

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I do hereby confirm that I have examined the master's dissertation of

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And have certified that all revisions that the dissertation panel and examiners recommended have been adequately addressed.

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Dr. Peter Kariuki

Dissertation Supervisor

ABSTRACT

Different scholars have emphasized the importance of financial literacy to shareholders and stewards of micro-enterprises. Financial literacy is the mastery of financial concepts namely knowledge, attitudes towards money and behaviors. The study aimed to establish the effect of financial literacy on the uptake of digital credit amongst micro-enterprise proprietors in Kiambu County, Kenya. Specifically, the study aimed was to establish the effects of financial knowledge, financial behavior, and financial attitude on the uptake of digital credit among proprietors of micro-enterprises in Kiambu County, Kenya. The study adopted a correlational research design. The target population for the study was 12,460 Micro Enterprises in Kiambu County, from which a sample of 201 respondents was randomly selected. The study collected primary data by administering questionnaires. Quantitative data gathered was analyzed through descriptive and inferential statistics and presented in form of frequencies, percentages, sample means and standard deviations. The information was presented by use of pie charts, tables and in prose form. The study applied multiple regression analysis models to establish the strength and direction of the association between the predictor and independent variables. The study established a moderate positive correlation between financial knowledge and uptake of digital credit by micro-enterprise proprietors in Kiambu County. However, no significant relationship between financial behaviour and financial attitude on uptake of digital credit amongst the proprietors of micro-enterprises in Kiambu county was noted. The model was found to be moderately significant with an $R^2=0.247$, which implies that 24.7% of the variation of uptake of digital credit by micro-enterprises in Kiambu County is attributed to financial literacy. The findings of this study are relevant to the proprietors of micro-enterprises, policy makers, academicians, and scholars. The study recommends that the proprietors of micro-enterprises should formulate and implement effective strategies of financial literacy to enhance the uptake of digital credit by micro-enterprise proprietors in Kiambu County additionally, recommends further studies on the research topic in different counties and seek exploration on other factors impacting to a larger extent uptake of digital credit.

DEDICATION

I dedicate this dissertation to my family members for their unwavering support and inspiration to accomplish my master's degree.

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LIST OF ABBREVIATION AND ACRONYMS

ATM	Automated Teller Machine
CBA	Commercial Bank of Africa
FinTech	Financial Technology
FSD	Financial Sector Deepening
GPS	Global Positioning Systems
GSMA	Global System for Mobile Communication Association
KCB	Kenya Commercial Bank
M-Pesa	Mobile Pesa
PDA	Personal Digital Assistant
SMEs	Small Medium Enterprises
SPSS	Statistical Package for Social Sciences
TTM	Trans-Theoretical Model
USD	United States Dollars

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The drive to access credit has been necessitated by the need to overcome liquidity constraints and undertake some social investments (Zerihun & Makgoo, 2019). This has led to an increase in demand for credit. Digital credit providers have partly bridged this demand. Digital credit is issued or accessed via Automated Teller Machine (ATM), Internet banking and mobile banking. According to Hoehle et al. (2012), through digital technologies individuals can be able to access an array of services such as mobile banking and online banking.

Ozili (2018), noted that customers can access a diverse banking service, including digital loans, account transfers, bill payment, stock exchange transactions, and more online. PCs and laptops are the usual entry points. With M-Banking, customers can use their smartphones, tablets, or other mobile devices to complete nearly all of the same banking tasks that are available via traditional internet banking. According to Gupta and Yadav (2017), "mobile banking" is "the process by which a customer establishes an electronic connection with a financial institution using a mobile device," such as a smartphone or personal digital assistant (PDA).

In 2019, the widespread availability of smartphones fueled a surge in mobile banking use that reached 1.8 billion users. De la Mano and Padilla (2018) predict that by 2022, 2.8 billion individuals will use mobile banking. Global System for Mobile Communication Association Intelligence (2018) found that out of a total of 5 billion subscribers, 3.3 billion were also using mobile internet. The majority (3.7 billion) of these 5 billion, the paper adds, come from emerging markets. As a result, financial institutions

can't ignore mobile banking. Gupta and Yadav (2017) observed that in emerging economies, a larger proportion citizenry own mobile phones compared in contrast to those holding bank accounts. Cash transactions are the norm in these types of economies.

Several platforms employ mobile phones and designated applications to offer financial products and services. In some Asian, Latin and African countries, it is no longer a pilot test but an increasingly popular service. Mobile banking is therefore evolving, becoming a fundamental distribution channel for banks and a strategy that provides some sort of competitive advantage. Mobile banking has the potential of becoming the primary channel that increases the uptake of digital credit or loans (Thakur, 2014). There has been an on-going debate on whether financial intermediaries should acquire, co-operate, or compete with the FinTechs. The FinTechs have seen a global investment increase from USD 4.05billion in 2015 to 12.21 billion in 2017 (FSD, 2019) which portrays the growing trend (Ayubjon o'gli, 2022).

Digital finance entails the electronic services in the financial sector, e.g., home banking, electronic exchange systems, credit and chip cards and ATMs. Recently, mobile and app services have been added on this list (Muia, 2017). Generally, Digital finance can provide access to bank services such as credits and payment systems, especially in countries that have poor bank infrastructure. The combination of financial services and technology has stimulated a revolution in lending (Campanella et al., 2017). Kenya has been credited with being the first country to introduce mobile money lending which was launched in 2012 (Financial Sector Deepening Kenya, 2019). Credit lending maybe put

under mobile banking and there are other countries which have embraced mobile banking especially in Asia, Latin America, and Africa.

Lewis and Lindley (2015) observed in their research on financial education, financial inclusion and financial tailored regulation and guidelines in the United Kingdom that notwithstanding 20 years of developing policies geared towards addressing financial inclusion, the challenges emanating from similar issues persist. Their study revealed that a significant number of individuals, particularly those in vulnerable situations, encountered difficulties in accessing financial products and services that were both suitable for their requirements and affordable. The telecommunications sector in Pakistan has expanded greatly and now meets international safety standards. Initially available only to the wealthy, the telecommunications industry is now within the financial reach of the average person (Glavee & Shaikh, 2017). Pakistan is ranked number eight in the world in terms of mobile subscribers and \$322M in annual mobile revenue. In 2009, m-banking was launched in Pakistan as a result of the widespread use of cellular networks there. Since the inception of online banking in 2003, there has been a continuous struggle to attract new customers. At this time, mobile banking has surpassed its online counterpart (Menne et al., 2022). Mobile banking has rapidly become a popular alternative to traditional bank branches. Both banks and mobile phone companies in the nation see this as an opportunity.

The growth of mobile money services can be seen at least in every country in the world. The progress is not the same and there are regions which it has been very significant (Groupe Special Mobile Association (GSMA), 2021). Africa is one of the regions which are in the lead in terms of mobile money services. Most of Africa is still unbanked, despite

the fact that nearly 80% of adults there do not have bank accounts. Financial inclusion is greatly aided by mobile money. Financial inclusion is a critical indicator economic progress for any nation (Fanta & Mutsonziwa, 2021).

Due in large part to its closeness to Kenya, where the immensely popular M-Pesa money transfer service was founded, Tanzania has one of the greatest penetrations of mobile money services in the world. The percentage of adults in Tanzania who utilized a mobile phone money facility in their daily transactions by sending or receiving cash was deemed the second highest in Africa, closely behind only Kenya (FinTech News, 2019). About 60% of adults, according to a report by the European Investment Bank, have access to mobile money, while only 15% have a traditional bank account. This affords Tanzania the chance to become a leader in the global mobile money industry. Since Tanzania has implemented payment across multiple networks, it may have surpassed Kenya. It has even progressed to the point of providing loans and savings products through mobile.

Fanta and Mutsonziwa (2021) report that since Vodacom launched M-Pesa and M-Pawa for smaller loans, borrowers had borrowed a total of USD 19.5 million. There are as many as 4.8 million M-Pawa users now, according to estimates from FinTech News (2019) and Fanta and Mutsonziwa (2021). And now, thanks to mobile operator Tigo, who has introduced a lending business offering loans with average values of USD 5 (FinTech News, 2019), Tanzanians may store money in their mobile money accounts and earn interest on that money. Safaricom, the biggest telecommunications provider in Kenya, introduced a digital system called M-Pesa that enables customers to convert fiat currency into electronic currency that can be saved, delivered electronically, and withdrawn from the system via

agents. Since then, the number of nations offering mobile money services has increased rapidly, reaching at least 90 in total, and there are now more than 270 of them. (FSD, 2019).

In the developed world, bank accounts are more common than mobile money which does not relate to Africa where mobile money ownership was far far as compared to ownership of a bank account. In Kenya, the introduction of mobile money has been linked with reduction in poverty levels and improved risk-coping (Gubbins, 2019). Nevertheless, many scholars and policy makers believe that mobile financial services will play a significant role in improving accessibility to financial services especially in poor countries (Gupta & Yadav, 2017).

Digital credit products can be described as loans, which are automated, instant and can be accessed with minimal or reduced physical human interaction (Hoehle et al., 2012). For the little time this innovation has been in existence, it has been lauded for distributing liquid capital to the financially marginalized groups (Ozili, 2018). Due to technology, the data collected from mobile use, mobile money transactions have benefitted the providers of digital credit and the consumers (Zerihun & Makgoo, 2019). By examining the credit information such as the digital data, the providers are able to know the consumers credit worthiness and hence lend out to such groups that cannot fit in the conventional credits markets (Ozili, 2018).

In November 2012, M-Shwari was launched by Safaricom in collaboration with the Commercial Bank of Africa (CBA). The users had the opportunity of earning interest and additionally would secure loans from CBA. This was one of the first digital credit product in Sub Saharan Africa. M-Pesa had 2 million subscribers by the end of its first two months

and this built a solid base for the 1.8 million active users on M-Shwari with US\$277.2 million of loans dispersed by end of 2014. Gubbins (2019) suggests that 76% of the Kenyan population, who have applied for a loan, applied it on mobile money providers.

Commercial banks working closely with mobile money network operators offered the first digital loans, but with time, start-ups offering loans have also emerged (Ebong & Babu, 2020). For instance, Tala and Branch use social network data, call logs and GPS to advance loans to borrowers. The prominent available apps or avenues for digital loans include Timiza (Barclay), Eazzy loan (Equity Bank), Tala (M-Kopa Rahisi), M-Shwari (CBA), Branch, M-Co-op cash and KCB M-Pesa. The FSD (2019) report reveals that 82.9 per cent of individuals are able to access financial services courtesy of the growth in mobile money accounts and lending applications. The study also reveals that the more the coverage of individuals the more they tend to use financial services such as saving, borrowing and transacting. Individuals with unstable and low income tend to use services provided by FinTechs to cover the financial gaps that exist between objectives and their actual finance.

According to Prior research conducted on digital credit to a greater proportion they acknowledge the enormous opportunities of this category of digital finance growing exponentially due to its ease of access even by those in inaccessible rural areas including its efficiency and availability when need arises (Robinson et al., 2022; Munyegera & Matsumoto, 2018). Notwithstanding the ingenious possibility for the digital credit addressing the financing gaps of loans requirements of masses in rural and peri urban areas, the digital credit is and continuous to be out of reach or inaccessible. This is mostly by

vulnerable and disfranchised groups in particular those earning their income through agricultural activities and casual works (Kaffenberger & Totolo, 2018).

1.1.1 Financial Literacy

In order to make sound financial choices, such as saving, investing, and saving for retirement, financial literacy is essential (Menike, 2018). Financial literacy, as described by Widhiyanto et al. (2018), includes familiarity with and competence in managing one's financial resources. According to Zerihun and Makgoo (2019), financial literacy is the capability to make informed choices in a variety of financial domains for instance in housing, taxes, insurance, savings, investments, and retirement. Financial planning, compounding earned interest, credit card application and dynamism, beneficial savings strategies, consumer rights, and time worth of money are only few of the financial concepts that need to be understood well (Ngumi, 2014).

Tita and Aziakpono (2017) acknowledges that financial inclusivity extends beyond the mere enhancement of credit accessibility. It encompasses the facilitation of savings access, the augmentation of risk management, and the assurance of the establishment of a well-organized financial structure that facilitates individuals and enterprises to fully contribute to the economy and promote safeguarding user rights. Furthermore, it was observed that attaining access to financial products and services and their real utilization are distinct phenomena. Certain individuals may have access but opt not to utilize it because of cultural, religious, or other fundamental factors. This voluntary financial exclusion can arise through indirect use curtesy family associates or decreased of demand for financial products and services. Equally, some persons may have a pressing urgency

for financial products and services but face considerable physical hindrances to access resulting to them being involuntary excluded.

Numerous governments are working to improve their citizens' financial literacy (Zerihun & Makgoo, 2019), a reflection of the importance they place on the issue. According to the definition, financial literacy refers to the ability to manage one's financial resources effectively, allowing for more informed decision-making. Financial literacy is crucial on both the personal and professional levels, as Menike (2018) points out. The ability to understand and manage one's own finances is the result of financial literacy. These choices allow people to save enough for retirement, invest in opportunities that are likely to provide acceptable returns, and generally improve their financial situation (Cornelli et al., 2021). Kenyan residents, for example, would benefit greatly from financial literacy. This will facilitate country's women and youth make better use of the funds set up by government with the goal of improving their financial wellbeing.

Turegano and Herrero (2018); Park and Mercado (2015) examined the influence of financing inclusion on the reduction of income disparity in the Asian region. Park and Mercado (2015) developed a financial inclusion matrix to analyze the association exhibited by poverty levels and incomes disparity among emerging Asian economies. The findings demonstrated that financial inclusivity played a crucial role in alleviating poverty and promoting income equality. Furthermore, the results indicated that financial services and products inclusion had a positive impact on income equalness, thereby enhancing fiscal policies impact and scaling economic development and growth (Tita & Meshach, 2017).

Tambunlertchai (2015) examined financial inclusion in Thailand by taking an institutional analysis designed approach. The study considered the anticipated outcomes, service suppliers and facilitating agencies. Regulatory policies and framework influence the provision of financial services in Thailand. The exploration highlighted that importance should not be pegged fully on services supplied and their accompanying costs, but quality of financial products and services including service and products providers in helping the financial inclusion objectives. Lastly, the study emphasized the importance of effective regulations and regulatory practices to ensure the proper functioning of the financial inclusion system. In examining the accomplishment of desired results in terms of financial inclusion, the study furthermore addressed the role of financial regulations and financial capacity building which provide the context of financial products and accompanying services.

Menike (2018) argues that financial knowledge tests are standards for gauging individuals' financial literacy. These are time value of money, interest charged on diversified loans, compounded interest, portfolio diversification, risk management and inflation make up factors vital in gauging a person's financial literacy. According to Zerihun and Makgoo (2019), one may gauge one's level of financial literacy by observing their actions and perspectives. As a result, financial knowledge, behavior, and perspective will form the basis of this research.

1.1.2 Uptake of Digital Credit

The use of cell devices and digital sites to secure brief credit is referred to as digital credit (Ebong & Babu, 2020). For the last one-decade, digital credit has been steadily increasing in Kenya. One of the planks of increasing economic progress is increasing access to credit,

which has been shown to boost economic growth and fight poverty (Levine et al., 2000, Clarke et al., 2006). Kamau (2021) observes that money digitization and facilitating transactions particularly in low and middle-income countries has changed the paradigm of how households access credit.

Mobile money creates a platform that allows economical financial transfers and capturing borrowers' behavioral data that can be relied on in predicting their loan remits and their repayment ability (Björkegren & Grissen, 2018). Growth and diversification of digital credit products by multiple players has increased borrowing opportunities in particular for consumers and households who have minimal likelihood of accessing credit from the conventional credit markets. The surge in digital credit usage, combined with rising interest rates for all debtors, has raised worries about the quantity of knowledge that digital loan users must gather to help them make credit decisions. For most digital debtors, they are unable to make prudent decisions owing to a lack of financial literacy, such variables are critical (Scott et al., 2017).

1.1.3 Financial Literacy and Uptake of Digital Credit

Low financial literacy, combined with higher loan interest rates among those who use digital credit, has heightened financial security worries, and pushed more people into debt. Because of the identified hazards, additional information is being emphasized to aid digital borrowers in making borrowing decisions (Wu, 2019). Financially competent persons are less likely to take out digital loans than those with little or no financial mastery, according (Wamalwa et al., 2009). This is because digital loans have a short maturity period and high interest rates, which are immediately recognizable by those who have mastery of financial concepts.

Financial knowledge significantly impacts the usage of available digital credit facilities. To make credit-usage decisions, the financially literate employ their knowledge to examine loan specifications in terms of suitability and convenience in terms of their conditions (Al-Dmour et al., 2021). They are more likely to interpret harsher terms and conditions on the digital credit they haven't taken yet. Digital credit is accessible and useful for meeting unforeseen needs, but its high incidental cost, short repayment period, and ease of access may exacerbate debt problems, especially if the borrowed funds are spent frivolously (Dermine, 2017).

1.1.3 Micro Enterprises in Kiambu County

In emerging economies, both small and micro companies are a vital driver of economic development. Service, agriculture, commercial, and manufacturing industries are the four sorts of microenterprises (Saula et al., 2023). In Kenya, they outnumber medium and large enterprises and employ more people. This entails competitive pressures, constant improved technology, and shifts in consumer trends, Shiu and Walker (2007). Micro firms are among the most important components in economic development, as they help produce revenue for both employees and business owners, as well as the government (Cornelli et al., 2021).

Kiambu County, an almost cosmopolitan county bordering Nairobi County on the north, is rich in agricultural resources and has a strong business spirit among its residents. The county is roughly 43 percent rural and 57 percent urban, with the Kikuyu being the most populous tribe in the area. The county has a population of about 2,400,000 people, according to the national census of 2019. Kiambu has a total of 302 trading centers, with

more than 5800 enterprises registered. The amount of people who run small businesses carries the county's significance (County Government of Kiambu, 2023).

The majority of Kiambu County's residents rely on earnings from urban agriculture (17% in total) (CGSIAR, 2020). When considering employment, food security, income, and total social and economic impact, it is the most significant sector. There is a wide variety of grocery stores, dairy shops, and fruit and vegetable vendors. Micro enterprises have a greater role in ensuring that employment possibilities are made known to its aids, as Kenya is one of several African countries experiencing employment challenge.

Street sellers, shoemakers, small farmers, plumbers, and independent mechanics are among the micro firms that control this county. In this location, there is a significant trend toward entrepreneurial conduct, with the youth seizing the opportunity to correlate to the possibilities of earning money. However, due to a lack of seed capital, poor marketing information, a lack of role models, and a lack of awareness of business possibilities, these young entrepreneurs are far more disadvantaged than their adult counterparts are when it comes to starting an enterprise (Nyokabi, 2016). As a result, micro firms do not grow into enormous corporations. According to Nyokabi (2016), most micro firms in Kiambu County are focused on the selling of agricultural products and used clothing, followed by furniture, beauty salons, barbershops, and food and beverage sales.

1.2 Statement of the Problem

The financial literacy possessed by proprietors of any venture is extremely essential in facilitating firms to achieve better performance. It gives an entrepreneur an upper hand in making financial or investment decisions. Microenterprises act as key catalyst of economic

progress, growth and creation of employment opportunities, creation of market linkages across multiple sectors, encourage innovation, alleviate poverty, and contribute to gross domestic product growth in both high-income and developing economies (Cole et al., 2010). However, in today's dynamic and digital business ecosystem entrepreneurs are confronted by many challenges which can be addressed to a greater level by acquiring financial knowledge by learning and practice. The ability of a company to raise capital, long terms, and short terms credits to meet investments needs impacts their financial performance and ability to survive in the ever-competitive business environment.

Lack of access to sufficient capital for financing and running operations is one of the major challenges encountered by micro firms. Inadequate supply of credit to micro companies in the market as expounded by Gubbins (2018) hamper their ability to grow. Due to stringent lending conditions imposed by banking institutions, micro firms in Kiambu County are not able to access sufficient credit for investment and financing their operations. This leaves micro businesses with no alternatives but to seek funding from sources that are not conventionally oversights by government agencies. Unlike banking institutions regulated Central Bank of Kenya (CBK), some lenders in the market regulated by any specific regulations or legislation. Shylocks (pawnshops), savings groups, and online lenders are all examples of unregulated creditors who charge prohibitive interest rates (Hansen & Courtney, 2018).

To bridge liquidity gaps businesses have been forced to turn their attention to digital credit suppliers which presents diversified options capital sources. According to exploration done on digital lending by Financial Sector Deepening Kenya (FSD) (2019), the nation is home to 49 different digital credit providers. However, the monthly interest

rates charged by players in the online lending marketplaces range from 4.5% to 7.5%. Loans with high interest rates are extremely costly hence less appealing to potential borrowers. This is due to the fact that those who already have loans are left with less money after paying the high interest (Misiga, 2019). Borrowers are less likely to engage in high-risk spending and investment, which reduces the demand for loans overall.

Studies on the topic credit uptake and financial literacy are moderate. Karina (2017) looked into how millennials at USIU-Africa handled their own funds after learning the significance of financial literacy. The impact of financial literacy on the success of SMEs in Sri Lanka was analyzed by Menike (2018). Widhiyanto et al. (2018) analyzed the effect of interest subsidies on the availability of microcredit to farmers. Zerihun and Makgoo (2019) evaluated the impact of financial literacy on the results of young working adults' money administration. Fanta and Mutsonziwa (2021) researched on the role played by financial literacy in stimulation and promotion of financial inclusion primarily in Kenya and her neighbor Tanzania. Additionally, Muriithi (2020) on the implications of financial literacy on the expansion of micro firms supported by the Uwezo fund focusing on Nairobi County, Kenya.

In order to examine emerging technology driven financial products and how they impact today's entrepreneurs in setting up and sustaining their ventures. This research will major on financial literacy and adoption of digital credit, the study focuses on the Kiambu County. Since no studies covered both financial literacy and adoption of digital credit from the reviewed studies, they have prompted a conceptual void. To address this unanswered issue arising from technology advancement which have impacted on supply of credit, the

researcher aims to conduct an in-depth analysis of the relationship between financial literacy and the use of digital credit among micro-enterprises in Kiambu county in financing their investments and address operations liquidity shortfalls.

1.3 Research Objectives

1.3.1 General objective

The main objective of the study was to assess the effect of financial literacy on uptake of digital credit amongst proprietors of micro-enterprises in Kiambu County.

1.3.2 Specific Objective

- i. To establish the effect of financial knowledge on uptake of digital credit amongst proprietors of micro-enterprises in Kiambu County.
- ii. To determine the effect of financial behaviour on uptake of digital credit amongst proprietors of micro-enterprises in Kiambu County.
- iii. To evaluate the effect of financial attitude on uptake of digital credit amongst proprietors of micro-enterprises in Kiambu county.

1.4 Research Questions

- i. What is the effect of financial knowledge on uptake of digital credit amongst proprietors of micro-enterprises in Kiambu County?
- ii. What is the effect of financial behavior and uptake of digital credit amongst proprietors of micro-enterprises in Kiambu County?
- iii. What is the effect of financial attitude and uptake of digital credit amongst proprietors of micro-enterprises in Kiambu County?

1.5 Justification of the Study

The listed state and non-state stakeholders may accrual benefits from this study, proprietors of micro-enterprises, scholars and academicians including national and local governments policy developers.

1.5.1 Owners of Micro Enterprises

The study outcomes will considerably inform owners and administrators of micro firms. This is by enhancing understanding of financial literacy field and how it can increase the capacity and capability of micro enterprises proprietors access digital credit readily in supply. The owners of micro businesses will obtain financial knowledge and insights by learning hence facilitate them operate their ventures professionally yielding higher results.

1.5.2 Policy Makers

The study findings may be considered and consequently add value to federal and local government policy makers. This is by giving insights on the degree of influence of financial literacy on uptake of digital credit amongst proprietors of the numerous micro enterprises in different running in various localities. The study will provide policy makers with vital insights to guide them in formulating and rolling out comprehensive strategies for educating proprietors of micro and small businesses on values of financial literacy.

1.5.3 Academicians and Scholars

The study adds knowledge and lessons learnt on impacts of financial literacy on adoption and uptake of digitally supplied credit products in the market amongst owners and entrepreneurs of micro ventures. Researchers and academicians will gain extra knowledge and techniques in the field of financial literature.

1.6 Scope of the Study

The study evaluated the effect of financial literacy on uptake of digital credit amongst proprietors of micro-enterprises. It precisely explored predictor variables financial knowledge, financial behavior and financial attitude and dependent variables uptake of digital credit amongst proprietors of micro-enterprises. The research focused on microbusinesses operating in Kiambu County, Kenya. The study was conducted for 4 months from May to August 2023.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter outlined the theories relevant to the study. Additionally discusses studies on financial literacy and how they influence digital credit uptake. Finally, it summarizes the reviewed literature and brings forth the gap that the study envisioned to fill. Lastly, the chapter gives the conceptual framework used in the study.

2.2 Theoretical Review

2.2.1 Financial Literacy Theory

Lusardi and Mitchell's (2014) idea of financial literacy is an emerging theory that integrates insights from several fields to better understand how people make financial decisions. The Jumpstart alliance for personal financial literacy promoted the concept of financial literacy in the first ever research of the topic amongst high school learners (Hastings et al., 2013). For the purposes of making wise financial related decisions and engaging in responsible financial behaviors like financial planning, financial literacy was hypothesized as a multi-faceted construct in academic literature (Wise, 2013).

Money management, debt and saving habits, retirement planning, asset ownership, and involvement in financial markets were all shown to be strongly correlated with higher levels of financial literacy in the first works on the topic (Yang et al., 2020). Retirement planning and asset ownership, according to economic psychologists, are influenced by a number of economic and psychological variables (DeVaney et al., 2007). The study of financial literacy and financial behaviors has also made use of a wide range of behavioral theories.

The authors Hilgert et al. (2003) developed a financing practice index founded on self-beneficial behavior in credit management, cash-flow administration, saving and investments practices. It established a positive association between financial literacy scores and financing practices index scores, proving the two are intertwined. Online shopping, investing, and debt reduction are just a few examples of the many areas where the theory of planned behavior was applied (Xiao, 2008) in an effort to better understand and anticipate people's actions. The trans-theoretical model of change was applied in saving and debt reduction habits in order to better understand how consumers break bad habits and pick up good ones (Xiao et al., 2004).

Several financial behaviors and outcomes have been linked to financial literacy, including on-time bill payment, tracking expenses, creating a budget, paying off credit card balances in full each month, setting aside a portion of every pay for savings, keeping an emergency kitty and diversification of investments portfolio (Hilgert et al., 2003). Subsequent studies have confirmed that a higher level of financial literacy is associated with better retirement preparation, savings and wealth accumulation, market engagement, and portfolio diversification. The adoption of digital credit is only one example of the results that will be studied in light of financial literacy theory.

2.2.2 Piaget's Cognitive Theory

The cognitive mechanisms that mediate between an externally observable stimulus and an outcome in behavior are of particular interest to cognitive theorists. Based on his observations of children's thought and behavior, Piaget (1983) proposed that the sensitivity to the stimuli and the way individuals think are equally responsible for eliciting a reaction

(Byrnes, 2008). Piaget's approach revolves on his belief that human beings acquire knowledge by their direct, hands-on engagement with the world around them. According to the notion, a person can only really know an item through interacting with it and therefore changing it.

Cognitive theorists are interested in the mental processes that mediate between an externally seen stimulus and a result in behavior. Piaget (1983), basing his theory on studies of children's mind and behavior, suggested that both stimulus sensitivity and individual cognition have a role in generating an effect (Byrnes, 2008). Piaget bases his method on the idea that people learn best via active participation in the world. This idea states that in order to really know something, one must alter it via use.

There is no unified explanation of what factors influence people's financial choices within any one perspective. Each of these hypotheses bases its explanations for people's varying information-use patterns on observed disparities in decision-making. Emotional, cognitive, behavioral, physiological, and cultural factors are all confirmed, albeit to varying degrees and with varying emphasis, by the integration of ideas (Durusu-Ciftci et al., 2017). The rational best choice may not always be obvious because people factor in their own values, misconceptions, anxieties, and community-wide ambitions.

2.2.3 Goal Setting Theory

This idea was established by Locke and Latham (1968), who argued that success may be attained by the pursuit of well-considered objectives and a strong motivation to succeed. People who know what they want and aren't afraid to go after it are more likely to achieve their goals, as explained further by Locke and Latham (1990). Goal-setters, according to

Kapoor et al. (2004), are certain to achieve their objectives so long as they stick to their original plans.

The motivation for such actions, according to Kapoor et al. (2004), lies in the individual's short- and long-term goals. It's a smart strategy since it aids in making the most of one's resources, but one's social environment and history might have an impact on such choices (Kapoor et al., 2004). According to research published by Hilgert et al. (2003) in the journal *Household Financial Management*, people who are financially savvy make more informed decisions about their money's use, allocation, and future commitments.

The theory is relevant to the research because it supports the importance of financial planning as a component of financial literacy and provides an explanation of how people make use of their resources and set aside some future prosperity. A person's ability to use his or her resources while keeping the future in mind is a key factor in making wise financial choices. Simply stated, they plan for the future by allocating resources to satisfy both immediate and long-term demands.

2.3 Empirical Review

2.3.1 Financial Knowledge and Uptake of Digital Credit

Kim and Yuh (2018) looked at the relationship between consumer financial literacy and household savings. Data from the 2016 SCF Survey was used for the analysis. The chance of saving money was shown to increase with both actual and perceived financial literacy, as determined by a hierarchical model. When variables measuring financial literacy were introduced to the regression models, the models were much more informative.

The impact of financial literacy (FK) on the success of women-owned farms in Kenya was studied by Cherotich et al. (2019). Cost reductions and profit margins are used as indicators of success. Primary data from 384 farmers in three Kericho County, Kenya, sub-counties is used for this research. To account for any selection bias and estimate the effect of FK on the productivity of women-owned farms, this study makes use of the propensity score matching (PSM) method. According to the data, women-owned agricultural businesses benefit enormously from high levels of FK. In particular, a greater quantity of savings and business margins were linked to responders with a higher degree of FK.

According to Lakuma et al. (2019), their study on financial inclusion and the growth of micro, small, and medium enterprises (MSMEs) in Uganda presented novel evidence regarding the impact of finance and the investment climate on firm growth in the country. The findings indicated that the limited availability of finance and the presence of a weak business environment tend to impede the growth of MSMEs while favoring the expansion of large firms. Moreover, the results demonstrated a positive correlation between enhanced access to finance and the growth of MSMEs compared to their larger counterparts. Bowen et al. (2009) observed that more than 50% of SMEs experience a decline in performance, with three out of every five SMEs failing within the first months of being launched. Only 2.5% of the respondents reported their businesses as highly successful. The authors revealed that 49.5% of individuals who received education in their respective business fields reported favorable performance. This led to the inference that appropriate training

and education is positively correlated with business success. This highlights the importance of SME owners acquiring training in areas relevant to their business operations.

Osinde et al. (2013) noted that entrepreneurs who availed themselves of business development services experienced an improvement in sales growth and market share across their various business ventures. The study also found that individuals who participated in training sessions witnessed improvements in their businesses in terms of sales growth and profitability. Specifically, 83.3% of respondents who consistently attended training reported good profit growth, as compared to the 41.2% who failed to participate in the training. In a study on financial literacy in SMEs conducted by Barte (2012), it was similarly revealed that financial literacy directly impacts performance. The research employed a descriptive survey design and employed descriptive statistics and simple regression analysis for data analysis. The study uncovered that entrepreneur displayed low levels of financial literacy, as evidenced by the lack of financial records, limited monitoring of profits and losses, and insufficient cash management practices. Additionally, the vendors were found to be reliant on high-interest loans. However, the study failed to establish the precise influence of financial literacy on these Small and medium Enterprises (SMEs).

Kunaifi and Akbar (2019) examined the gap between millennials' financial literacy and their investment practices in Indonesia. A descriptive research strategy was used for this investigation. The results of the multivariate study showed a favorable relationship between financial literacy and investing habits. The findings indicate that demographic characteristics, such as age and gender, influence financial decision-making. Younger

people and women are more likely to hold a savings or investment account or a unit in a mutual fund.

Zerihun and Makgoo (2019) evaluated the impact of South African financial management expertise on the bottom line. Both inferential and descriptive statistics were used to analyze the study's variables. This research demonstrates a favorable and statistically significant association between financial knowledge, gender, educational achievement, living standards, and financial management results. It was also shown that there is a negative correlation between the size of the household and the quality of financial management.

Jain (2021) looked into the research on Gen Z's financial literacy and habits in Haryana. The investigation was conducted using quantitative methodology. The OECD survey database served as the primary resource for the study of financial literacy. The responder receives 1 point for each question answered correctly, 0 points for each question answered incorrectly, and a total score from 0 to 10 is determined. The questionnaire asks respondents to identify their gender and describe their approach to making financial decisions. The results of the survey confirmed what many other studies have found: males in Generation Z are no more versed in personal finance than women. The research also demonstrated generation Z's illogical behavior in deciding where to get the assistance they need when making important financial choices, despite the fact that they themselves lack financial literacy.

Financial literacy was investigated by Fanta and Mutsonziwa (2021) as a potential factor in expanding access to banking services in East African countries like Kenya and

Tanzania. A sample size of 6029 people were surveyed in a 2016 study that took place in Kenya and Tanzania. Inferential statistics were used to evaluate the study's variables. Regression research showed that economic literacy significantly influences access to banking services. This means that measures to increase financial literacy are needed in tandem with initiatives to expand access to financial services in both nations. It was also found that young people have difficulty making sound financial decisions, with teenage girls in particular faring poorly financially because of their limited financial literacy and reliance on their parents or spouses.

Acquiring the necessary skills to access banking services involves the ability to identify, select, and effectively utilize the credit facilities offered by various banks (Germain, 2009). Lusardi and Michell (2006) posit that financial literacy is essential for establishing measures of financial proficiency, which entails staying well-informed about financial matters. These individuals who possess financial literacy are more actively engaged in financial markets due to their knowledge of financial affairs. Lusardi and Bassa Scheresberg (2013) conducted an examination on the relationship between financial literacy and the high costs faced by borrowers. The findings revealed a clear correlation between financial literacy and borrowers who face lower costs. It was observed that most borrowers who face high costs demonstrate low levels of financial literacy and a lack of understanding of fundamental financial concepts, which ultimately impacts their performance in business. Tamimi and Kalli (2009) conducted a study on the impact of financial literacy on financial knowledge. The results displayed that fields of specific activities influence the level of financial literacy, with those who invest in financials

awareness possessing higher levels of financial literacy. The study also found that males tend to exhibit higher levels of financial literacy.

Mabhandu (2016) delved into the repercussions of financial illiteracy on SMEs, despite various interventions aimed at promoting the growth of these enterprises. The respondents in the research were purposefully chosen in accordance with the qualitative research approach employed for data analysis. The researcher utilized a qualitative research approach, employing documents reviews and analysis, focus groups discussion, face-to-face interviews, and open-ended questionnaires. The study revealed several factors namely deficiency in financial education, inadequate managerial skills, insufficient budgeting technical skills, a dearth of business information, subpar decision-making, and lack of business behavior. The study also unveiled a significant minimal level of financial literacy amongst entrepreneurs, this had far-widespread effects in the management of their firms. These factors have exacerbated the state of small and medium business entities in Zimbabwe. Consequently, the study recommended the government, shareholders, commercial banks, other financial institutions, and individuals implement financial literacy programs aiming to restart and enhance viability including sustainability of SMEs.

2.3.2 Financial Behavior and Uptake of Digital Credit

Riyazahmed (2021) investigated how one's financial habits might affect their financial security. A total of 150 people filled out a standardized questionnaire to provide this data. The FMBS (Financial Management Behaviour Scale) is used to assess fiscal habits in this research. To determine the impact of personal finance habits on economic security, researchers use factor analysis and multiple regression. The study's results reveal that, in

the Indian context, an individual's financial well-being is significantly affected by all behavioral determinants except credit commitment, including future security, savings and investments, credit indiscipline, and financial awareness.

Htwe (2019) analyzed the effect that organizational culture has on the personal financial decisions of women traders in the North Okkalapa township of Myanmar. Financial habits and actions were the primary foci of the research. Two hundred people were picked at random and given questionnaires in order to gather primary data for a descriptive survey. Regression analysis was applied in examining the collected data. It was discovered that the majority of women business owners understood money and had sound financial planning habits. Women business owners' access to finance is also greatly influenced by their financial security. Women shop owners often exhibit sound fiscal habits. North Okkalapa Township residents' access to credit may be enhanced if financial institutions provided new product loans with adjustable interest rates, longer repayment terms, and less restrictions on the types of collateral that could be used as security.

MabhanMorgan and Trinh (2019) conducted a study to examine the relationship amongst financial literacy and individuals' knowledge of financial technology products such as mobile banking in Laos. In order to gauge financial literacy, the researchers utilized measures such as individuals' understanding of financial concepts namely interest rates levied on loans, time value of money and compounding interest, their financial behaviors which included savings, household budgeting, bills settlements and purchases, and attitudes towards long-term financial planning. The findings of the study provided evidence

implying that higher financial literacy correlates positively and statistically significantly impact individuals' awareness of financial technologically rendered products.

Karina (2017) examined the impact of millennials' financial habits on their money management at USIU-Africa. Publications spanning 2010–2015 were analyzed and included in the study's literature evaluation. The studies were arranged into four categories based on their study themes: financial literacy and personal financial management behavior; financial literacy and financial inclusion; financial management and its consequence. Gender, age, educational achievement, income, rural/urban location, ethnicity, and work position were all shown to be significant predictors of financial literacy. Finally, the research found that those with strong abilities in personal financial management tend to act in a financially responsible manner.

In his study, Dawuda (2015) discovered that small-scale businesses in Ghana face challenges in maintaining proper financial records due to an inadequate education including the astronomical cost of employing competent workforce. The owners of these businesses often perceive the establishment of a finance and accounting department, staffed with qualified personnel, as a waste of time and resources taking into account the magnitude of operations. However, this perspective may only hold true for businesses with limited revenue generation. It can be argued, based on this evidence, that the behavior of SME owners in maintaining records is influenced by the volume and value of their transactions. Sagana (2014) conducted a study in Nairobi County, Kenya, focusing on the financial literacy of entrepreneurs, financial access, transaction costs, and the performance of microenterprises. The study utilized a cross-sectional research design and included

registered micro-enterprises operating in the County of Nairobi. A sample made up of 396 micro-businesses was chosen. A questionnaire was the primary research instrument and had a Likert-scale questions pertaining to the study variables. The gathered data was analyzed by computing descriptives and inferential statistics. The study showed that an entrepreneur's financial literacy significantly influenced enterprise performance levels. Thereby supporting the hypothesis that financial literacy does affect enterprise level of performance.

The exploration conducted by Muriithi (2020) explored the impact of financial behavior on the growth of microenterprises supported by the Uwezo fund in Nairobi County, Kenya. A survey was administered to a total of 156 employees from various companies in Nairobi town, employing a descriptive approach to ascertain their demographic characteristics and determine the average score for their financial behavior and development. Furthermore, quantitative data was utilized to examine the correlation between economic actions and growth. Specifically, the research discovered that proficiency in budgeting skills positively and significantly influenced the expansion of Uwezo Fund-funded microenterprises in Nairobi County, as did debt financing behavior. In the research overseen by Namusonge et al. (2019) regarding the impact of enterprise size on financial services inclusion amongst commercial financial banks and providers of mobile services and products in Kenya. Financial inclusivity is defined as processes that guarantee availability, improve access, and use of the formal and regulated financial systems by the majority in an economy. In a broader sense, it entails providing finance access and financial related services to all individuals in a reasonable, open and fair manner

at a competitive price. Kamunge et al. (2014) determined that poor access to credit financing is universally viewed as one of the major barriers faced by SMEs. Credit access limitations are exhibited in different forms in Kenya. Infant capital markets compel investors to rely on personal financing or borrow advances from friends, this inadequacy hinders SMEs ability to carry operate optimally. Limited supply of long-term credit products tailored for micro and small businesses forces them to opt for expensive short-term credit facilities. Inadequate credit poses hindrance equitable to lack of finance, this hinders small business' ability to expand and modernize operations with the aim of efficiently and effectively meeting customer orders timely.

Jayantilal (2017) conducted a study on the personnel of Bank of Baroda Limited operating in Kenya to analyze the influence of financial behavior on personal finance management. In order to derive conclusions regarding the associations between the variables of interest, the study utilized inferential techniques such as the Pearson correlation and regression models. Based on the findings of the survey, it appears that Bank employees possess an average level of understanding regarding effective money management. The research on financial behavior has resulted in enhanced personal financial management among the peoples working in Bank of Baroda Limited doing business in Kenya, as evidenced by increased investment activity, diversified savings, and reduced debt.

Waweru & Ngugi (2014) researched on the effect of financial management habits on performances of micro and small businesses in republic of Kenya. The study determined financial innovations substantially influence operational and performance of MSEs in

Kenya. Additionally, it was noted that the main motive for organizational adoption of innovations is profit and wealth generation. Financial innovation plays a crucial role in ensuring long-term stability, and its implementation necessitates technological competences within the firm. Additionally, the study found that customers' perception of novelty requires a shift in consumer behavior to accommodate the usage conditions of new products. Furthermore, the study emphasized the importance of investment, which involves redirecting resources from present consumption to future benefits. The establishment of effective and efficient businesses support systems are essential for the success of investment capacity building. To promote Investments in MSEs, proven business support agencies of state and non-state entities should penetrate and offer services to this sector.

2.3.3 Financial Attitude and Uptake of Digital Credit

Menike (2018) explored the influence of financial mindset on the success of small and medium enterprises operating in Sri Lanka. Out of the total sample size of 250 participants, a total of 232 individuals completed the questionnaires that were personally delivered to them. The collected data was analyzed via descriptive statistics. Pearson's Chi-square tests were utilized to establish connections between the research inquiries. Although the findings suggested a positive correlation between financial attitude and firm performance, no statistically significant association was discovered between financial attitude and SME performance.

Young Malaysian adults' knowledge, attitude, and behavior about money were examined by Yong et al. (2018). The test subjects were a r sample of the Klang Valley's young working people (n = 1915). Structural equation modeling was employed to analyze

the data. The findings showed that both financial attitude and behavior were strongly related to the level of formal financial education received. The relationship between knowledge and action was moderated, in part, by one's outlook. The importance of planning ahead and resisting impulse purchases was uncovered in the realm of financial outlook, while the importance of keeping tabs on spending and setting money aside was found in the realm of financial routines.

Financial literacy among farmers and its effect on the availability of microcredit benefiting from interest subsidies was studied by Widhiyanto et al. (2018). Although multiple regression analysis was used, only 146 participants filled out questionnaires for analysis. The results were broken down by the proportion of successfully completed surveys. It was determined that most people had a moderate degree of financial literacy, with education levels, age of the individual and distances to the capital regent region, banks accounts ownership, annual income, and experiences in financial education, all these playing a pivotal role. Income derived from agriculture activities, securities held, cultivated land size, financial literacy index, interest rate levied, legal status of established farmer groups and loan sizes sought are a few elements that influence availability of KKP-E. Financial literacy strongly influence the ability to obtain KKP-E.

Basavaraj (2019) investigated what variables influence customers' perceptions of mobile apps that provide financial services. Consumers' perspectives on their preferred digital financial service were gleaned through an in-depth questionnaire in this research. 137 online banking customers were randomly picked from the United States and Europe. We did a multiple regression to see whether our theory about client happiness held up. A

substantial and optimistic financial outlook concerning digital financial services was uncovered in this report. Castro-González et al. (2020) investigated how one's mentality about money affects their economic security. Empirical data for a sample of 8554 Spanish people mainly confirms the given assumptions, and the research used Structural Equation Modelling and Process Procedure for SPSS to accomplish so. Indeed, it hints that people's financial attitudes affect their actual financial behavior, which in turn affects people's financial well-being, alongside people's planning horizons and their levels of comfort with taking risks.

The impact of financial outlook on retail investors' trading behavior during the COVID-19 pandemic was studied by Talwar et al. (2021). The ANN technique was employed in evaluating the data gathered from 404 participants. The findings showed that trade activity was positively affected across all six dimensions, with interest in financial concerns having the greatest impact. As a result, the study provides crucial insights for future scholars and business leaders. Financial performance primarily impacts on the firm's growth. The business firm growth is twofold quantitative and qualitative. Growth strongly linked to enterprise overall accomplishment and endurance (Johannisson, 1993). Therefore, growth measure levels of performance (Ochieng, 2012). Schayek (2011) contends that the majority of SMEs shareholders or managers are extremely sensitive when disclosing information on firms' financial performance. Watson (2007) argues that given small and medium enterprises are not obligated by law to report nor publish their financial performance reports, it is challenging to get directly, their financial data relating sales metrics and profitability indicators of most micro, small and medium firms.

Researchers Sachdeva et al. (2021) looked at how people's mentality about money affected their decisions about personal finance. A total of 325 retail investors in the Delhi-National Capital Region were surveyed for this study. To investigate the interplay of these factors, we have used Structural Equation Modeling. The findings of this article show that retail investors' financial management behaviors during the pandemic are significantly affected by their attitudes about money. Individual Investors in the Jaffna District of Sri Lanka were studied by Kengatharan and Ravindran (2021) to see whether their financial outlook affected their level of contentment with their financial situation. The study examined the relationship amongst investors' financial attitudes and their levels of financial happiness in the Jaffna District of Sri Lanka's Colombo Stock Exchange (CSE). Two hundred people who attended an investing awareness workshop hosted by CSE between May and June of 2020 filled out the survey. According to the regression findings, one's financial outlook significantly affects their level of contentment with their financial situation. According to the data, those who have shifted their focus to the stock market have been rewarded monetarily for their cautious yet strategic approach.

Wathome (2020) researched on the effect of digital credit on the inclusion of young individuals in the financial sector in Kenya. Moreover, the study established both a positive and a negative impact of digital credits on financial inclusion. The imploration relied on M-shwari digital credits product metrics. The findings of the study revealed that the majority of individuals engaging in digital borrowing were males between the ages of 18 and 25. Additionally, most young individuals reported that digital credit has enhanced their access to financial resources. Furthermore, 39 percent of the youth had obtained a digital

loan from multiple providers. In this particular study, M-shwari was employed as an indicator of digital credit.

Kimani (2020) conducted a similar analysis on the impact of financial technology (FinTech) on poverty and financial inclusion. The author indicated that the youth in Kenya have been affected by predatory lending and gambling facilitated by financial technology. For example, some digital lenders charge an annual interest rate exceeding 500 percent, compared to the approximate 13 percent charged by traditional banks. This study relied on the analysis of secondary data. The present study expected to collect primary data from the outlook of buyers. Wamalwa et al. (2019) carried out an examination of financial literacy, digital credit, and their influence on household debt levels. The research gauged financial literacy by assessing respondents' understanding of collaterals and levied interest rates. According to the research, financially informed proprietors were to a greater extent inclined to utilize digital credit as opposed to conventional credit. Furthermore, the study concluded that households experiencing debt distress were those financing multiple digital loans. Nevertheless, households were in a better position when utilizing digital credit rather than having no access to it.

2.4 Conceptual Framework

Conceptual framework is a diagrammatic representation of variable interrelations. It depicts the understanding of how the study variables relate with each other. The conceptual framework in this study provided an insight of the predictors and dependent variables. The predictor variables were financial knowledge, financial behaviour and financial attitude

while the dependent variable was the uptake of digital credit amongst proprietors of micro-enterprises in Kiambu County.

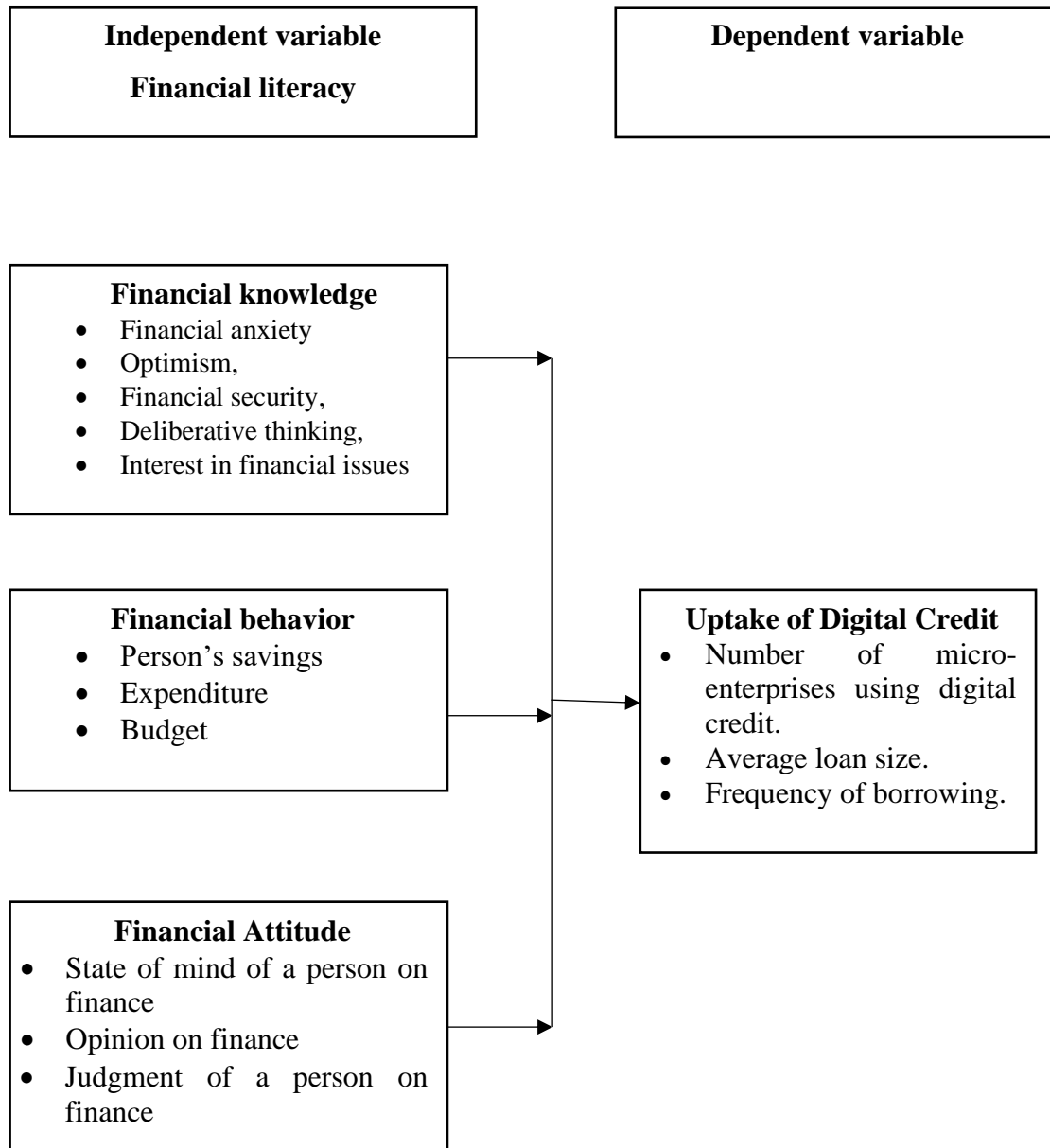


FIGURE 1
Conceptual Framework

TABLE 1**Operationalization of Variables**

	Variables	Measures	Measurement scale	Questions
Financial literacy	Financial knowledge	<ul style="list-style-type: none"> • Financial anxiety • Optimism, • Financial security, • Deliberative thinking, • Interest in financial issues 	5 point Likert type scale	Section B Question i
	Financial behavior	<ul style="list-style-type: none"> • Person's savings • Expenditure • Budget 	5 point Likert type scale	Section B Question ii
	Financial Attitude	<ul style="list-style-type: none"> • State of mind of a person on finance • Opinion on finance • Judgment of a person on finance 	5 point Likert type scale	Section B Question iii
Uptake of Digital Credit	Implementation of digital credit	<ul style="list-style-type: none"> • Number of micro-enterprises using digital credit. • Average loan size. • Frequency of borrowing. • Loan utilization. • Repayment rates. • Default rates. 	5 point Likert type scale	Section B Question iv

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methodology that was adopted in the study facilitating collecting and data analysis. The chapter covers research design, study population, the sample frame, sampling methods and techniques including the sample size obtained from the study population. The chapter additionally describes the methods used in collection of data, the instruments relied upon, their validity and reliability. Finally, the chapter details the data analysis methods that were used in facilitating answer the study objectives.

3.2 Research Design

As pointed out by Creswell (2014), a researcher's study design encompasses the comprehensive approach of collection, analysing, interpretation, and reporting on the data analysed. According to Bickman et al. (2009), a research design provides a framework for conducting specific observations and analyses, along with the underlying reasons and methods for doing so. The methodological approach employed in this investigation was correlational in nature. The decision was made due to the study's objective of examining the correlation between financial knowledge, financial behavior, financial attitude and the uptake of digital credit amongst micro-enterprise proprietors in Kiambu county. As defined by Fraenkel and Wallen (2009), correlational research seeks to establish the relationship between two or more variables and their causal influence.

Further supporting this perspective, Creswell (2012) asserted that a correlation represents a statistical examination of the consistent variation or pattern between two or more variables in a data sets. In agreement with Creswell, Ary et al. (2010) elucidate that correlational research seeks to identify either a positive or negative relationship or correlation between variables, with the correlation coefficient determining the magnitude of the relationship. The identification of any correlation among variables was based on the value of their correlation coefficient. This study's methodology elucidated the extent of noted association between the dependent and predictor variables studied.

3.3 Target Population

Ghuri et al. (2020) observes that a population consists of all the individual elements that are of interest to research, whereas an element is the thing being measured. According to Thomas et al. (2015), a population is "the complete set of all things" that includes the variables of interest in research. The study targeted a population 12,460 micro-enterprises operating Kiambu County. This research was as per Kenya National Bureau of Statistics report (2022). The target population was stratified within wards as displayed in table 2 below.

TABLE 2
Target Population

Kiambu Constituency ward	Target Population
Tingángá	1,231
Ndumberi	2,312
Riabai	3,453
Township	5,464
Total	12,460

Source: Kenya National Bureau of Statistics (2022)

3.4 Sampling and Sampling Procedure

3.4.1 Sample Size

The term "sample size" refers to the total number of objects from which a representative subset will be taken. One of the major reasons for choosing and adopting a sample size is because of the costs that are involved (Creswell, 2006). Patten (2017) asserts that a sample is precise if it represents the population. For this study, factors such as time and cost were taken into consideration in arriving at a befitting sample size.

Yamane's (1967) formula was applied in this study to determine the sample size.

Yamane formula: $n = N/(1 + N(e^2))$

Where n = sample size required, N = population under study, and e = alpha level the margin error, i.e., $e = 0.07$ if the confidence interval is 93%.

Sample size = $12460/(1 + 12460(0.07 * 0.07)) = 201$

TABLE 3
Sample Size

No.	Wards	No. of Micro enterprises	Proportion	Sample
1	Tingángá	1231	9.9%	20
2	Ndumberi	2312	18.6%	37
3	Riabai	3453	27.7%	56
4	Township	5464	43.9%	88
	Total	12460	100%	201

3.4.2 Sampling Technique

The goal of every sampling process is to produce a subset of a population that is statistically representative of the whole (Pickard, 2013). The goal is to have a sample of elements that are representative of the larger population from which they were drawn. The research focused on one kind of microbusiness in Kiambu county. The research employed both cluster sampling and simple random sampling. The target sample was partitioned into tiny, homogeneous groups termed as clusters using cluster sampling approach.

Then simple random sampling was employed in choosing the respondents. The sampled population had an equal probability of being chosen by application of the simple random procedure. The population of the study was divided into clusters for the research, from which simple random selection was utilized to choose participants. This method removed prejudice and give additional justification for its use (Etikan & Bala, 2017).

3.5 Research Instrument

To collect the necessary and pertinent data, the research employed semi-structured questionnaires with both closed and open-ended questions. Direct and exact responses were required for the closed-ended questions. Responses to open-ended questions provided additional information that was useful to the research. Since it could be completed at any time, a self-completion questionnaire was simple to complete and convenient for the majority of respondents (Talmy, 2010). The questionnaire was divided into pieces, with the first portion containing questions about respondents' demographics and the subsequent sections made up of questions about the study's goals. A Likert scale was used to grade

each objective's questions, with a Likert scale ranking as 1 = No Extent, 2 = Little Extent, 3 = Moderate Extent, 4 = Great Extent, and 5 = Very Great Extent.

3.6 Validity and Reliability of the Instrument

According to Mugenda (2012), a researcher ensures an instrument's validity by determining how well a representative sample of test objects represents the target construct. Creswell and Creswell (2017) explained that validity shows the degree to which a research instrument measures what it is supposed to measure. It is the extent to which differences found with a measuring instrument reflect actual differences among those being tested. Bryman and Bell (2011) highlighted that validity is the most significant criterion for research. In this study, the validity of the instruments was measured through a small sample of thirty-eight micro enterprises which agreed with Mugenda & Mugenda (2003) proposition. The thirty-eight micro enterprises were selected from the neighboring Kinoo ward.

In this study, reliability of research instrument was assessed. Reliability is exhibited by a measure if it produces replica results when repeat measurements are conducted under similar conditions. The greater the variability is observed, the less dependable the measures are (Kenneth & Bordens, 2010). Variables emanating from applied test tools are only deemed reliable if they provide steady and dependable responses over a repeat test administered (Santos, 1999). Cronbach's Alpha values were used to test whether the exploration tool was dependable or not. In order to be considered a reliable exploration tool, a Cronbach's Alpha value of 0.7 and above is required (Taber, 2018). Thirty-eight

participants were surveyed, and each received a measurement questionnaire after within intervals of one week.

3.7 Data Collection Procedure

According to Talmy (2010), research procedures are all actions taken by the researcher over the course of the investigation. This research was conducted only for academic reasons and any information shared was held in the strictest confidence. A letter of introduction was obtained from the university. The total number of questionnaires required in the study was 201. The researcher printed all the questionnaires with the aid of two research assistants administered them as per the stratum created. The researcher, together with the assistants, elaborated on the purpose of questionnaire and clarification on questions not well understood by the respondents.

3.8 Data Processing and Analysis

Data analysis is the process of analyzing, cleaning, transforming, and modeling data, which is usually collected from a sample or a population with the aim of getting the required information for the study to anchor any recommendations thereof (Cooper et al., 2006). Data received from the respondents was cleaned, coded appropriately and entered into Statistical Package for the Social Sciences version 26 for statistical analysis. Both descriptive and inferential statistics were examined. Variables were summarized using their central tendency primarily mean, median and mode. The relationship between the study variables was assessed by use of regression analysis. The study findings were displayed in the form of charts and tables. The data was analyzed by multiple linear

regression to find whether there is a correlation in existence between the dependent and predictor variables.

3.8.1 Analytical Model

The Multiple regression model was used is as follows:

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

Where:

Y = Level of uptake of digital credit

β_0 = constant term (coefficient of intercept)

β_1 , β_2 , and β_3 = Beta coefficients.

X_1 , X_2 , X_3 = financial knowledge, financial behavior, financial attitude respectively

; ε = Error term

3.8.2 Model Specification Tests

Diagnostic tests were performed to examine if the assumptions of linear regression held. The assumptions tested were normality, multicollinearity, homoscedasticity, and linear relationship. Linearity was tested by applying a scatter plot and measuring any significant deviation from the linearity for the study variables. A normality test to determines whether the dataset was modelled for normal distribution were performed by adopting the Shapiro-Wilk test due to the study's small sample size. Lastly multicollinearity was tested by computing predictor variables tolerance value and their variance inflation factor (VIF).

If the regression assumptions are violated, the confidence intervals and other scientific insights derived from the regression model, could be regarded as misleading, inefficient or biased. Consequently, the inferences derived are not capable of being generalized on other data.

Inferential statistics of correlation and regression analysis were performed in the study. Pearson R measures were applied to determine the strength and the direction of linear relationship in existence between study variables. A greater correlation indicates a strong relation existence amongst the variables. Multivariate regression analysis was tested by ANOVA), to assess the relationship between independent variables. Finally multiple regression models were fitted to the data in order to determine how the predictor variables affect the dependent variable. Multiple regressions analysis was employed in this study because more than one independent variable was explored namely financial knowledge, financial behaviour, and financial attitude and how they influenced dependent variable uptake of digital credit.

3.8.3 Significance Tests

A 95% degree of certainty will be used in the research. For an independent variable to significantly affect a dependent variable, the p-value must be less than the significance threshold (0.05), which is reflected by a 95% confidence interval.

CHAPTER FOUR

PRESENTATION, ANALYSIS, AND INTERPRETATION OF DATA

4.1 Introduction

This chapter presents an analysis of the data, interpretation of the results, presentation, and discussion of the findings of the study. The chapter includes a discussion of the response rate, the results of the pilot test, demographic information, and descriptive statistics. Additionally, the chapter encompasses the use of inferential statistics, such as correlation and regression analyses. The aim of this study was to investigate the impact of financial literacy on the adoption of digital credit by micro-enterprise owners in Kiambu County. More specifically, the study aimed to explore the influence of financial knowledge, financial attitude, financial behaviour, and the adoption of digital credit among micro-enterprise owners in Kiambu County.

4.2 Response Rate

The sampling frame utilized in this study consisted of 201 respondents who were identified as the ward proprietors of micro-enterprises in Kiambu County. Each respondent was individually administered a questionnaire by the researcher. The findings obtained from this study have been presented in Table 4.

TABLE 4
Response Rate

Questionnaires	Frequency	Percent
Returned	164	81.59%
Unreturned	37	18.41%
Total	201	100.00%

From the 201 questionnaires, a total of 164 were completed and returned, thus yielding a response rate of 81.59%. This response rate was deemed appropriate for drawing inferences from the gathered data. According to Metsamuuronen (2017), a response rate exceeding fifty percent is generally considered sufficient for the purposes of data analysis and reporting, while a response rate surpassing 70% is classified as exceptional. Therefore, the response rate observed in this study fell within the acceptable range for deriving conclusions and formulating recommendations.

4.3 Pilot Test Results

Kothari (2004) emphasized the importance of conducting a preliminary investigation of the questionnaires prior to utilizing them as a means of data collection. This practice serves to unveil any potential weaknesses inherent in the questionnaires, and the knowledge acquired through this process can be utilized to effect positive enhancements. Tayie (2005) postulates that a common practice in pretesting measurement instruments is to utilize samples ranging from 25 to 50. In this study, the pilot study was conducted by engaging 38 micro-enterprises of the population within the Kinoo ward.

4.3.1 Reliability

The reliability of a measure is defined by its ability to generate similar results when repeat measurements are carried out in identical circumstances. As the level of variability observed increases, the measure becomes less reliable (Kenneth & Bordens, 2010). The reliability of a measure scale signifies its freedom from random error. Variables derived from test instruments are deemed reliable solely when they offer consistent and dependable responses during repeat test administrations (Santos, 1999). Cronbach Alpha was used to test reliability of the study questionnaire. The reliability coefficient ($\alpha = \alpha$) ranges from

0 to 1, with 0 representing an instrument replete with error and 1 signifying complete absence of error. According to Groves (1987) a reliability coefficient (alpha) of 0.70 or higher is deemed as acceptable reliability coefficient. Nonetheless, the pilot test data was excluded from the study. Additionally, the researcher ensured the test instrument relied upon generated reliable study data.

According to the findings, the adoption of digital credit exhibited an average Cronbach's reliability alpha of 0.789; financial knowledge showcased a Cronbach's reliability alpha of 0.803; financial behavior demonstrated an average Cronbach's reliability alpha of 0.805, and financial attitude possessed a Cronbach's reliability alpha of 0.813. This demonstrates that the study questionnaire satisfied the reliability criteria of $\alpha > 0.7$.

TABLE 5
Reliability Test Results

Variable	Cronbach's Alpha	Interpretation
Uptake of digital Credit	0.789	Reliable
Financial Knowledge	0.803	Reliable
Financial Behaviour	0.805	Reliable
Financial Attitude	0.813	Reliable

4.3.2 Validity

Validity, as postulated by Creswell and Creswell (2017), refers to the extent to which an instrument effectively measures the construct it intends to measure. It signifies the degree to which the observed differences produced by the measuring instrument truly reflect the underlying differences among the individuals under investigation. According to Bryman

and Bell (2011), validity assumes paramount importance in the context of research. In this particular study, the researchers sought to enhance content validity by seeking expert opinions from individuals well-versed in the specific field of study, in particular the supervisors. Furthermore, the researchers were able to enhance the face validity of the research instrument by conducting a pilot test and making necessary revisions to the study questionnaire for clarity on any ambiguous or unclear questions.

4.4 Demographic Information

In this segment, the study displays the general data of the respondents. The fundamental demographic information of the survey participants encompassed variables such as age, level of educational, professional experience and duration of engagement in micro-enterprises within the geographical boundaries of Kiambu County. The outcomes were visually illustrated by means of graphical representations.

4.4.1 Level of Education

The study respondents were requested to specify their levels of education. The emerging results are shown in Figure 2.

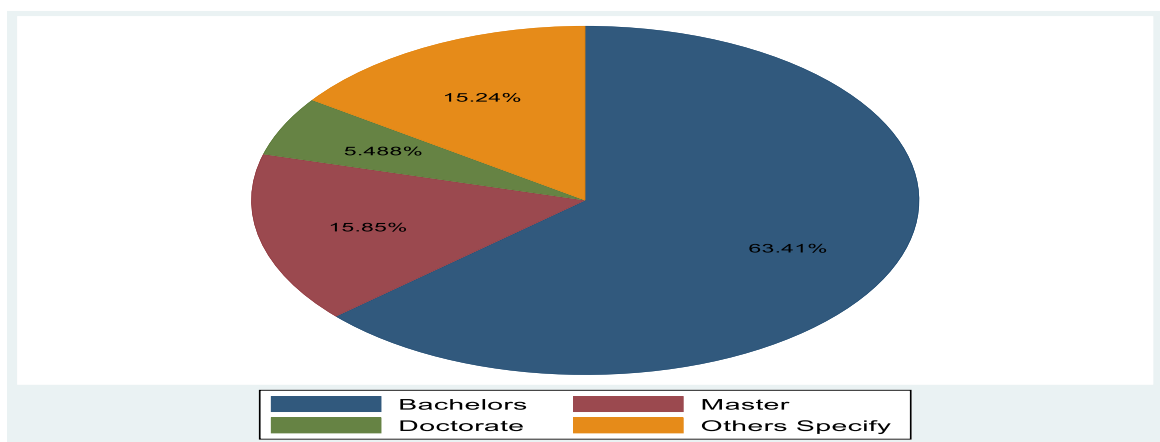


FIGURE 2
Level of Education

From the findings, it was established that a significant majority of the participants in the micro-enterprises located in Kiambu County possess a bachelor's degree (63.41%). The second highest proportion of respondents held master's degrees, accounting for 15.85%, while other certifications were represented by 15.24%. The respondents with doctorate qualifications had the lowest response rate at 5.488%. This suggests that the management of micro-enterprises in Kiambu County is primarily overseen by individuals who exhibit considerable expertise this is because the majority hold a bachelor's degree and a master's qualification.

4.4.2 Age of the Respondents

The respondents indicate their appropriate age group. The results are shown in Figure 3.

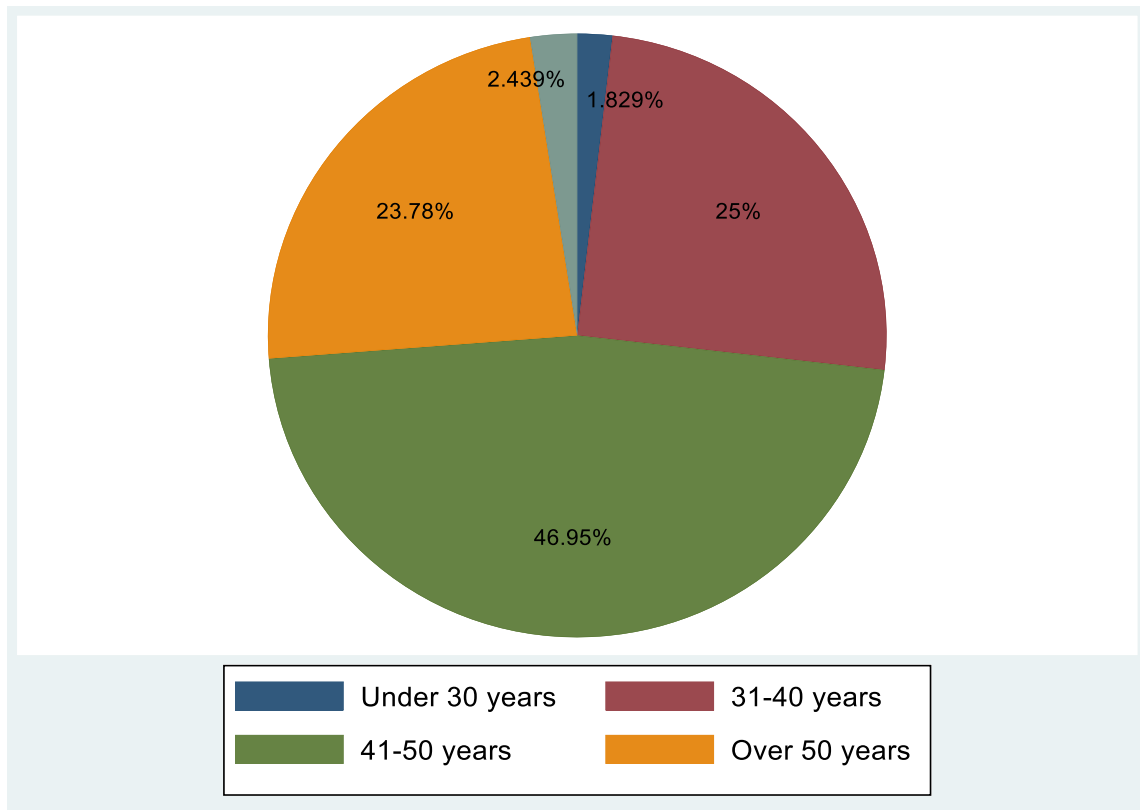


FIGURE 3

Age of the Respondents

The study's findings indicate that a significant majority of the respondents stewarding the micro-enterprises located in Kiambu County belonged to the relatively older age brackets of 41-50 years which constitute 46.95% of the total respondents. Following behind was the age range of 31-40 years accounting for 25%. The age range of over 50 years ranked third with a proportion of 23.78%. In contrast, the respondents under 30 years formed a minority group, representing a mere 3.2% of the respondents. Consequently, it can be inferred that the micro-enterprises in Kiambu County are primarily characterized by a proprietors and workforce consisting of experienced individuals who possess a perceived wealth of knowledge in the industry.

4.4.3 Experience

The respondents were requested to indicate their years of experience working in micro-enterprise space. The results are shown in table 6.

Table 6
Years of Experience

		Frequency	Percent	Cumulative Percent
Valid	Between 2-5 Years	22	13.4	13.4
	Between 6-10 Years	117	71.3	84.7
	Above 10 Years	25	15.3	100.0
	Total	164	100.0	

From the findings, the investigation discovered that a majority of the respondents who are stewarding the micro-enterprises located in Kiambu County have been in the industry for a period of 6-10 years (71.3%). The remaining groups, comprising of 2-5 years and over ten years, accounted for 13.4% and 15.3% respectively of the responses. This

suggests that a substantial number of the respondents have accumulated sufficient experience in the micro-enterprises thereby adequately enabling them to provide sufficient information on the significance of financial literacy and the adoption of digital credit among micro-enterprise owners in Kiambu County.

4.4.4 Existence of Micro-Enterprises

The respondents' results on the length of service of their respective micro-enterprise in Kiambu County are shown in table 7.

TABLE 7
Years of Operation

		Frequency	Percent	Cumulative Percent
Valid	Below 5 Years	13	7.9	7.9
	5-10 Years	18	11.0	18.9
	10-15 Years	29	17.7	36.6
	Above 15 Years	104	63.4	100.0
Total		164	100.0	

The participants indicated range of the duration their micro-enterprises had operated in Kiambu County. The majority of the respondents, comprising 63.4%, indicated that their micro-enterprises in Kiambu County had operated for more than 15 years. A smaller proportion of the participants, comprising 17.7%, maintained the conviction that their micro-enterprises have been in operation for a period of between 10-15 years. Additionally, 11.0% subset of the respondents asserted that their micro-enterprises in Kiambu County have been in existence for a period of between 5-10 years. Only 7.9% of the respondents implied that their micro-enterprises have operated for less than 5 years.

This implies that the micro-enterprises operating Kiambu County possess long-standing operating scope to offer a comprehensive viewpoint on financial literacy and their level acceptance and utilization of digital credit in addressing their ventures financial needs.

4.5 Descriptive Statistics Analysis

This section presents descriptive statistics on financial knowledge, financial behavior, Financial Attitude, and the uptake of digital credit among Micro-enterprises in Kiambu County. The Likert scale questions answered by the respondents for each study constructs were evaluated using sample mean and standard deviation and the occurring results presented in this segment.

T 5-point Likert scale where 1 - No Extent, 2 - Little Extent, 3 - Moderate Extent, 4 - Great Extent and 5 - Very Great Extent. The mean (M) score value of 0.5 to 2.4 was interpreted as Little Extent, 2.5 to 3.4 as moderate extent, 3.5 to 4.4 great extent and 4.5 to 5.0 as very great extent. Additionally, the standard deviation (Std. Deviation) values display the magnitude of variation in respondent's responses. Standard deviation values greater than two means that the respondents had differing opinions while a value less than 2 is low and implies that the respondents had related opinions. The resulting statistics are displayed in sections below.

4.5.1 Uptake of Digital Credit Amongst Proprietors of Micro-enterprises in Kiambu County.

The respondents were asked to express the degree to which they agreed / disagreed with enumerated statements pertaining to the update of digital credit by micro-enterprises in Kiambu County. Table 8 presents the findings obtained.

TABLE 8**Uptake of Digital Credit Amongst Proprietors of Micro-enterprises in Kiambu County**

Variables	Mean	Std. Deviation
Have you taken digital credit before	4.31	.976
I have taken loans repeatedly, not just one-time	4.20	1.056
I have increased capital from the loans	4.38	.895
My business has expanded due to digital credit utilization	4.32	.863
The repayment rates for digital credit are friendly	4.37	.947

From the findings, the respondents agreed to a greater extent that the owners of micro-enterprises in Kiambu County experienced increased capital base resulting from acquisition digital credit in the market to bridge financing shortfalls. This assertion was substantiated by a mean value of 4.38 (standard deviation = 0.895). Additionally, the participants concurred to a greater extent, as evidenced by a mean value of 4.37 (standard deviation = 0.947), that repayments rates associated with digital credit taken by micro-enterprise proprietors in Kiambu County were friendly. Furthermore, the respondents largely agreed that utilization of digital credit in financing their micro-enterprises contributed to the expansion of their businesses. This was backed by a mean value of 4.32 (standard deviation = 0.863). The respondents indicated to a larger extent, as shown by a mean value of 4.31 (standard deviation = 0.976), that they had previously take a digital credit facility to finance their business operations. Moreover, study respondents agreed to a greater extent that they had borrowed digital loans to finance their enterprises on multiple occasions as denoted by a mean value of 4.20 (standard deviation = 1.056).

4.5.2 Financial Knowledge and Uptake of Digital Credit Amongst Proprietors Micro-Enterprises in Kiambu County

One of the specific objectives of this research was to investigate the impact of financial knowledge on the uptake of digital credit amongst proprietors of micro-enterprise in Kiambu County. The respondents were asked to express the level to which they agreed/disagreed with various statement regarding financial knowledge and the uptake of digital credit by micro-enterprises in Kiambu County. Table 9 presents the findings obtained.

TABLE 9
Financial Knowledge and Uptake of Digital Credit Amongst Proprietors of Micro-Enterprises in Kiambu County

Variables	Mean	Std. Dev.
Financial anxiety	3.128	1.194
Being optimistic	3.341	1.221
Financial security	4.232	1.037
Deliberative thinking	3.683	1.356
Interest in financial issues	3.378	1.402

From the findings, the respondents agree to great extent that the capacity of micro-enterprise owners in Kiambu County to avail themselves for a Digital Credit facility in the market is influenced by their financial security. This assertion was supported by a mean score of 4.232 (standard deviation = 1.221). In addition, as shown by a mean score of 3.683 (standard deviation = 1.356), to a greater extent the respondents agrees that the ability of micro-enterprise owners in Kiambu County to partake a digital credit product in the market is influenced by their deliberative thinking. Likewise, the study respondents, to a moderate

extent, concurred that for proprietors of micro-enterprise in Kiambu County, their interest in financial matters influenced their capacity of acquiring Digital Credits in the Market. This is evidenced by a mean score of 3.378 (standard deviation = 1.402).

The respondents agree to a moderate extent that the ability of micro-enterprise owners in Kiambu County to obtain Digital Credit supplied by various firms is influenced by their optimism levels. This is evidenced by a mean score of 3.341 (standard deviation = 1.221). Additionally, the mean score of 3.128 (standard deviation = 1.194) exhibited that the respondents to a moderate extent agree that the capacity of micro-enterprise owners in Kiambu County to access digital credit in the Market was influenced by their financial anxiety.

4.5.3 Financial Behaviour and Uptake of Digital Credit Amongst Proprietors of Micro-Enterprises in Kiambu County

The second objective of the study was to ascertain the influence of financial behaviour on the uptake of digital credit amongst proprietors of micro-enterprises in Kiambu County. Participants were asked to express their level of agreement/disagreement with various statements pertaining to financial behaviour and the uptake of digital credit by micro-enterprises proprietors in Kiambu County. Table 10 presents the results obtained.

TABLE 10**Financial Behaviour and Uptake of Digital Credit Amongst Proprietors of Micro-Enterprises in Kiambu County**

Variables	Mean	Std. Dev.
I get cash advances from my credit card.	3.25	1.488
Budgeting and tracking expenses.	3.646	1.346
Contributing to a savings account	4.299	.921
Ability to forecast income.	3.878	1.333
Ability to forecast budget	4.39	1.012

From the findings, the respondents agree to a greater extent that their ability to forecast enterprise budget impact on their ability to access digital credit products in the Market. This assertion is supported by a mean score of 4.39 (standard deviation = 1.012). Additionally, the respondents demonstrated a similar level of agreement, as indicated by a mean score of 4.299 (standard deviation = 0.921), that their ability to contribute to a savings account impact the extent they access the digital credit in the Market. Furthermore, the respondents largely concurred that their ability to forecast income significantly affect their ability to access the digital credit products. This assertion is as supported by a mean score of 3.878 (standard deviation = 1.333).

Additionally, the respondents to a greater extent agree that budgeting and tracking expenses impact on their enterprise ability to access digital credit products in the market within Kiambu County. This is evidenced by a mean score of 3.646 (standard deviation = 1.346). The research respondents to a moderate extent acknowledged that obtaining cash advances from their credit card influences their ability to access digital credit in the market to plug finance shortfalls in their micro-enterprises. This affirmation is supported by a

mean score of 3.25 (standard deviation = 1.488).

4.5.4 Financial Attitude and Uptake of Digital Credit Amongst Proprietors of Micro-Enterprises in Kiambu County

The third specific objective of the study was to determine the role of financial attitude on uptake of digital credit by proprietors of micro-enterprise in Kiambu County. The respondents were requested to indicate their level of agreement / disagreement to various statements relating to financial attitude on the uptake of digital credit by proprietors of micro-enterprises in Kiambu County. The responses obtained were analysed and the results presented in Table 11.

TABLE 11
Financial Attitude and Uptake of Digital Credit amongst Proprietors of Micro-Enterprises in Kiambu County

Variables	Mean	Std. Deviation
State of mind of a person in finance	4.41	.850
I feel in control of my financial situation	4.45	.737
Judgment of a person in finance	3.58	1.535
I am aware of investments such as stocks	3.43	1.453
I like talking to my peers about money management issues	4.12	1.267

From the findings of the study, the respondents, to a greater extent, concurred that the sense of control over their financial situation impact on their capacity to obtain a digital credit facility in supply the market. This assertion is supported by a mean value of 4.45 (standard deviation = 0.737). Also, as evidenced by a mean of 4.41 (standard deviation = 0.850), the respondents to a greater extent expressed that their individual state of mind

regarding finance matters influences their ability to acquire a digital credit product in the market. Additionally, the respondents exhibited a higher level of agreement on the notion that discussing money management issues with their peers affects their ability to acquire a digital credit facility in the market. This is demonstrated by a mean of 4.12 (standard deviation = 1.267). The respondents also concurred to a greater extent that a proprietor judgment on financial matters affects their ability to acquire a digital credit facility in their immediate market. This was supported by a mean score of 3.58 (standard deviation = 1.535). To a moderate extent, the study respondents acknowledged their awareness of investments in securities such as stocks, which impact their ability to acquire digital credit facilities in the market to address financing needs of their micro-enterprises. This is supported by a mean of score of 3.43 (standard deviation = 1.453).

4.6 Diagnostic Tests

The diagnostic tests were performed to evaluate the hypotheses of linear regression. The hypotheses evaluated included normality, multicollinearity, homoscedasticity, and linear association. Violation of linear regression assumptions will lead to confidence intervals and other scientific observations obtained from the regression model will be considered misleading, biased, or ineffective. Subsequently, the conclusions drawn will not be generalized to other data.

4.6.1 Linearity Test

Significant deviation from linearity asserted in multiple regression model where the predictor variables have a significant impact on the response variable. Where the value of the significant deviation from linearity is less than 0.05, then the association between the predictor and the response variable is insignificant. In Table 4.9, the significance for the

Deviation from Linearity is $0.557 > 0.05$, implying linearity between Digital Credit and Financial Behavior and Financial Attitude. However, for Financial Knowledge, the significance for the Deviation from Linearity is $0.004 < 0.05$, implying non-linearity between Digital Credit and Financial knowledge.

4.6.1.1 Coefficients of Linearity Test

ANOVA
Table 12

			Sum of Squares	df	Mean Square	F	Sig.
Digital credit * Financial Knowledge	Between Groups	(Combined)	90.642	7	12.949	4.546	0
		Linearity	33.722	1	33.722	11.839	0.001
	Within Groups	Deviation from	56.92	6	9.487	3.33	0.004
		Linearity					
		Total	444.358	156	2.848		
Digital credit * Financial Behavior	Between Groups	(Combined)	41.57	11	3.779	1.164	0.317
		Linearity	0.111	1	0.111	0.034	0.854
	Within Groups	Deviation from	41.459	10	4.146	1.277	0.248
		Linearity					
		Total	493.43	152	3.246		
Digital credit * Financial Attitude	Between Groups	(Combined)	13.515	6	2.253	.678	.667
		Linearity	.371	1	.371	.112	.739
	Within Groups	Deviation from	13.144	5	2.629	.791	.557
		Linearity					
		Total	521.485	157	3.322		

4.6.2 Normality Test

Normality test of research data is employed to determine whether a dataset being analysed conforms to normal distribution or not. Ali et al. (2016) emphasized that the assumptions

and application of statistical tools including performing suitability of the tests are essential aspects for statistical examination. According to Kothari & Garg (2014) normality test of data determines if data is modelled by a normal distribution and compute the chance that underlying random variable(s) is normally distributed. Normally distributed data assume a symmetrical or bell-shaped curve with higher frequency of scores at the midpoint and lower frequencies towards the extremes.

In the study normality test was conducted by employing Shapiro-Wilk test due to the small sample size. The null hypothesis test postulated that the data followed a normal distribution. The Prob - W value, indicated in the output, represented the p-value. The test postulates that if the selected significance level (alpha) is 0.05 and p-value is less than alpha, the null hypothesis is rejected, this implies the data significantly deviates from a normal distribution. However, if the p-value is greater than alpha, the null hypothesis is accepted, suggesting that the data is consistent with a normal distribution. As presented in Table 13, the p-values obtained for study variables financial knowledge, financial behaviour and financial attitude were greater than alpha value of 0.05 thus affirming the normality of the data analysed.

TABLE 13
Normality Test

Variable	Obs	W	V	z	Prob>z
Financial Knowledge	164	0.92223	1.299	0.510	0.30494
Financial Behaviour	164	0.92945	1.179	0.321	0.37427
Financial Attitude	164	0.96644	0.561	-1.127	0.87020

Dependent Variable: performance

Source: Researcher, 2023

4.6.3 Multicollinearity Test

Multicollinearity refers to existence of a linear relationship between study explanatory variables which may possibly cause biasness of the regression model (Gujarati, 2003).

Variance inflation factor (VIF) and the tolerance values statistic calculated for each variable in the model were used to test Multicollinearity in the study. According to Gujarati (2003) a theoretical VIF value greater than 5 may suggest that the concerned variable is multicollinear with others in the model and may need to be excluded from the model.

Therefore, tabularized on Table 14 the VIF values results show there was no collinearity among the predictor variables. Additionally, a tolerance level exceeding 0.2 signifies non-existence of multicollinearity. Tolerance of predictor variables and their VIF results reveal absence of collinearity among independent variables. This consequently implies that the results obtained from the multiple regression equation are not misleading since the independent variables of the study within the equation are not highly correlated.

TABLE 14
Multicollinearity Test Statistics

Variables	Tolerance	VIF
Financial Knowledge	0.788	1.251
Financial Behaviour	0.800	1.237
Financial Attitude	0.766	1.290

Dependent Variable: performance

Source: Researcher, 2023

4.7 Inferential Statistics

Any probable relationship existing amongst the study variables was proven by computing inferential statistics namely correlation analysis and multiple regression analysis. Correlation analysis was depended upon to determine the strength of the relationship while regression analysis determined the befitting relationship between the dependent variable. These are dependent variable uptake of digital credit amongst proprietors of micro-enterprise in Kiambu County and independent variables financial knowledge, financial Behaviour, and financial Attitude.

4.7.1 Correlation Analysis

Pearson R correlation analysis was used to determine the strength and direction of the association between independent variables and the dependent variable. Pearson R correlation coefficient ranges between zero and one, where the strength of association increases with the increase in value of correlation coefficients. The study employed Taylor's (2018) correlation coefficient ratings where 0.80 to 1.00 depicts a very strong relationship, 0.60 to 0.79 is strong, 0.40 to 0.59 is moderate and 0.20 to 0.39 is weak.

TABLE 15

Correlation Coefficients

Variables	(1)	(2)	(3)	(4)
(1) Digital credit Uptake	1.000			
(2) Financial Knowledge	0.41**	1.000		
(3) Financial Behaviour	0.88**	0.639***	1.000	
(4) Financial Attitude	0.714*	0.195**	0.192**	1.000

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Source: Researcher, 2023

The findings of the study presented in table 15, financial knowledge had a positive moderate relationship with the adoption of digital credit amongst proprietors of micro-enterprise in Kiambu County ($r = 0.41$). The significance of this relationship was established by the p-value of 0.1, which was lower than a 1% significance level. These results align with the research conducted by Cherotich et al. (2019), which determined that women-led agricultural businesses greatly benefit from a high level of financial literacy. Specifically, a higher degree of financial knowledge was linked to a greater amount of savings and business profits among the participants.

Additionally, the analysis revealed financial behaviour had a positive very strong positive relationship with uptake of digital credit by micro-enterprise proprietors in Kiambu County ($r = 0.88$). This relationship was deemed significant based on the p-value of 0.05, which was below a 1% significance level. These findings agree with the results obtained by Muriithi (2020), who observed a positive association between financial behaviour and the growth of micro-firms in Kenya. Muriithi's study focused on the Uwezo fund in Nairobi County and involved a total of 156 employees from various companies in Nairobi County. Particularly, the research established that proficiency in budgeting skills had a positive and significant impact on the expansion of Uwezo Fund-supported microenterprises in Nairobi County.

Also, the results indicated financial attitude had a strong positive relationship between with the uptake of digital credit by micro-enterprise proprietors in Kiambu County ($r = 0.714$). The significance of this relationship was supported by the p-value of 0.01, which was lower than a 1% significance level. These findings resonate with the research

conducted by Menike (2018), who identified a positive association between financial attitude and the performance of small and medium-sized enterprises (SMEs) in Sri Lanka.

4.7.2 Multiple Regression Analysis

Multiple regression models were fitted to the data to facilitate understand how the study predictor variables affect the dependent variable. Multiple regression models aided quantification of the relationship between the researched variables and determine existence of any causative association.

The regression model was $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon$

Where: Y = Level of uptake of digital credit, β_0 = constant term (coefficient of intercept), β_1 , β_2 , and β_3 = Beta coefficients of predictor variables. X_1 , X_2 , X_3 = financial knowledge, financial behavior, financial attitude respectively and ε = Error term. Regression analysis results were displayed in tables and explained as highlighted below.

4.7.2.1 Model Summary

The model summary was used in the research to determine the scale of variation in the dependent variable that can be explained by changes in the predictor's variables. In this study, model summary was used to determine the amount of variation in uptake of digital credit amongst proprietors of micro-enterprises in Kiambu county attributable to changes in financial knowledge, financial behaviour and financial attitude. Table 14 presents the results obtained.

TABLE 16
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.254 ^a	.064	.047	1.76868

a. Predictors: (Constant), Financial Attitude, Financial Knowledge, Financial Behaviour

The results obtained show that the value of R square is 0.064 which suggests that 6.4% variation in uptake of digital credit amongst proprietors of micro-enterprises in Kiambu county can be attributed to changes in financial knowledge, financial behaviour and financial attitude. The remaining 93.6% suggest there are other factors that contribute to changes in uptake of digital credit that were not included in this model. The results further point out that the variables under investigation were weakly and positively correlated as denoted by correlation coefficient (R) value of 0.254.

4.7.2.2 Analysis of Variance (ANOVA)

The ANOVA was applied to establish whether the model was a good fit for the data. It establishes the significance of the model. For this study, the significance of the model was tested at 5% level of significance.

TABLE 17
Analysis of Variance
ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	34.483	3	11.494	3.674	.014 ^b
Residual	500.517	160	3.128		
Total	535.000	163			

a. Dependent Variable: Digital credit

b. Predictors: (Constant), Financial Attitude, Financial Knowledge, Financial Behavior

From the results presented in table 15, the p-value of 0.014 was less than the chosen level of significance (0.05) suggesting that the model was significant. This therefore suggest that financial knowledge, financial behaviour and financial attitude can be used to predict uptake digital credit amongst proprietors of micro enterprises.

4.7.2.3 Beta Coefficients of the Study Variables

Beta coefficients from the coefficients table were fitted on the modeled regression

$$\text{equation: } Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon$$

Where: Y = Level of uptake of digital credit, β_0 = constant term (coefficient of intercept), β_1 , β_2 , and β_3 = Beta coefficients of predictor variables. X1, X2, X3= financial knowledge, financial behavior, financial attitude respectively and ε = Error term.

TABLE 18
Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	18.368	3.060		6.002	.000
Financial Knowledge	.247	.075	.253	3.298	.001
Financial Behavior	-.024	.066	-.028	-.361	.718
Financial Attitude	-.031	.098	-.024	-.314	.754

a. Dependent Variable: Digital credit

From the results presented in table 16, the following regression equation was fitted.

$$Y = 18.368 + 0.247X_1 - 0.024X_2 - 0.031X_3 + \varepsilon$$

The equation above reveals that keeping all variables to a constant zero, uptake of digital credit will be at a constant value of 18.368. These study findings were employed to respond to the study's research questions.

The first objective of the study was to establish the effect of financial knowledge on uptake of digital credit amongst proprietors of micro-enterprises in Kiambu County. From the findings, financial knowledge had a positive influence on uptake of digital credit ($\beta=0.247$). Further, the influence of financing knowledge on uptake of digital credit was significant as indicated by p-value (0.001) less than selected level of significance (0.05). Therefore, financial knowledge is seen to have a positive moderate influence on uptake of digital credit amongst proprietors of micro-enterprises in Kiambu County. This means that a unit increase in finance knowledge results to an increase in uptake of digital credit by 0.247 units.

These findings align with the research conducted by Cherotich et al. (2019), who discovered that women-led agricultural businesses greatly benefit from a high level of financial literacy. Specifically, a higher degree of financial knowledge was linked to increased savings and business profits among the respondents.

The second objective of the study was to determine the effect of financial behaviour on uptake of digital credit amongst proprietors of micro-enterprises in Kiambu County. The findings showed that financial behaviour had a weak negative influence uptake of digital credit ($\beta=-0.024$). The findings further showed that financial behaviour has no significant influence uptake of digital credit since the p-value obtained (0.718) was greater than the selected level of significance (0.05).

These findings suggest that financial behaviour has a negative and no significant influence on uptake of digital credit amongst proprietors of micro-enterprises in Kiambu County. These findings contradict the results obtained by Muriithi (2020), who observed a positive and significant association between financial behavior and the growth of micro

enterprises funded by Uwezo Fund in Nairobi County. Muriithi's study focused on the Uwezo fund in Nairobi County and involved a total of 156 employees from various micro companies in Nairobi town. Notably, the research established that proficiency in budgeting skills had a positive and significant impact on the expansion of Uwezo Fund supported microenterprises in Nairobi County.

Lastly, the study sought to determine the effect of financial attitude on uptake of digital credit amongst proprietors of micro-enterprises in Kiambu county. From the findings, financial attitude was found to have negative influence on uptake of digital credit amongst proprietors of micro enterprises ($\beta=-0.031$). The findings further showed that financial attitude had no significant influence on uptake of digital credit as indicated by p-value (0.754) greater than the selected level of significance (0.05). These findings suggest that financial attitude has a negative and no significant influence on uptake of digital credit amongst proprietors of micro-enterprises in Kiambu county.

These findings do not resonate with the research conducted by Menike (2018), who identified a positive association between financial attitude and the performance of small and medium-sized enterprises (SMEs) in Sri Lanka. In addition, the findings do not agree with Sachdeva et al. (2021) study that looked at how people's mentality about money affected their decisions about personal finance. The findings indicated retail investors' financial management behaviours during the pandemic were significantly affected by their attitudes about money.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of findings, conclusions drawn from the findings, recommendations and suggestions for further research following the findings of the study. Conclusion and recommendations addressed the main objective of the study which was to assess the effect of financial literacy on uptake of digital credit amongst proprietors of micro-enterprises in Kiambu County. Specifically, this study endeavoured to assess the influence of financial knowledge, financial behavior, and financial attitude on the adoption of digital credit by proprietors of micro-enterprise in Kiambu County, Kenya.

5.2 Summary of Findings

In this section, the study presents summary of findings based on the specific study objectives which were; to establish the effect of financial knowledge on uptake of digital credit amongst proprietors of micro-enterprises in Kiambu County; to determine the effect of financial behaviour on uptake of digital credit amongst proprietors of micro-enterprises in Kiambu County and to evaluate the effect of financial attitude on uptake of digital credit amongst proprietors of micro-enterprises in Kiambu county.

5.2.1 Financial Knowledge and Uptake of Digital Credit Amongst Proprietors of Micro-Enterprises in Kiambu County

The study established a moderate positive correlation between the level of financial knowledge and the uptake of digital credit amongst proprietors' micro-enterprise in Kiambu County as per correlation coefficient = 0.247. The significance of this relationship was confirmed by the p-value of 0.001 which less than a 0.05 significance level of the

study. Based on the findings, the respondents to a greater extent agreed that the financial security of micro-enterprise owners in Kiambu County significantly impacts their ability to access digital credit in the market. This assertion is supported by a mean score of 4.232 (standard deviation = 1.037).

Furthermore, the respondents to a great extent agreed that the ability of micro-enterprise owners in Kiambu County to access digital credit in the market is influenced by their deliberative thinking, as indicated by a mean score of 3.683 (standard deviation = 1.356). Additionally, the respondents moderately agreed that their interest in financial matters plays a role in their ability to access digital credit in the market, which is demonstrated by a mean score of 3.378 (standard deviation = 1.402). Furthermore, the respondents acknowledged to a moderate extent that being optimistic affects their ability to access digital credit in the market, as evidenced by a mean score of 3.341 (standard deviation = 1.221). Lastly, the respondents moderately agreed that financial anxiety has an impact on the ability of micro-enterprise proprietors in Kiambu County to access digital credit in the market, with a mean score of 3.128 (standard deviation = 1.194).

5.2.2 Financial Behaviour and Uptake of Digital Credit by Proprietors of Micro-Enterprises in Kiambu County

The research conducted revealed a weak negative correlation between financial behavior and the uptake of digital credit by micro-enterprise proprietors in Kiambu County ($\beta = -0.024$). This relationship was deemed not significant given that the p-value of 0.718 was greater than 5% study level of significance. Additionally, the findings revealed that, the respondents overwhelmingly concurred to a greater extent that their ability to anticipate and plan their budget had a profound impact on their utilization of digital credit available

in the Market. This assertion was substantiated by a mean score of 4.39 (standard deviation = 1.012).

Similarly, the respondents to a great extent acknowledged that contributing to a savings account significantly influenced their access to digital credit available in the market, as evidenced by a mean score of 4.299 (standard deviation = 0.921). Moreover, the respondents to a greater extent expressed that their capacity to project income had a bearing on their ability to obtain digital credit available in the Market. This is demonstrated by a mean score of 3.878 (standard deviation = 1.333). Furthermore, the respondents to a greater extent agreed that budgeting and tracking expenses impacted on their utilization of digital credit available in supply in Kiambu County indicated by a mean score of 3.646 (standard deviation = 1.346). To a moderate extent, the respondents agreed that obtaining cash advances from their credit card affected their ability to uptake digital credit available in the market. This assertion is supported by a mean score of 3.25 (standard deviation = 1.488).

5.2.3 Financial Attitude and Uptake of Digital Credit by Proprietors of Micro-Enterprises in Kiambu County

The study revealed a weak negative correlation between financial attitude and the uptake of digital credit by micro-enterprise proprietors in Kiambu County signified by a correlation coefficient = -0.031. There was no significance relationship given that the p-value of 0.754 was greater than 5% study level of significance. Contrary to the finding, the respondents to a very great extent acknowledged that a sense of financial control greatly influences their ability to access a digital credit facility in the market. This assertion is substantiated by a mean score of 4.45 (standard deviation = 0.737). Furthermore, the respondents to a great extent concurred that an individual's state of mind regarding finance

impacts their desire to obtain a digital credit facility in the market, this is evidenced by a mean score of 4.41 (standard deviation = 0.850).

The respondents moderately concurred that discussing money management issues such as investment in securities, with peers impacted to considerable bearing on their ability to secure a digital credit facility. This viewpoint is supported by a mean score of 3.43 (standard deviation = 1.453). The respondents to greater extent notable their individual's judgment in financial matters influences their ability to uptake a digital credit facility, as indicated by a mean score of 3.58 (standard deviation = 1.535). Lastly, the respondents to a moderate extent acknowledged their awareness of investment instruments such as stocks impact their ability to access a digital credit facility in the market, as reflected by a mean score of 3.43 (standard deviation = 1.453).

5.3 Conclusions

The research concludes that there exists a positive moderate correlation between financial knowledge and the uptake of digital credit by proprietors of micro-enterprise in Kiambu County. The investigation unveiled that the uptake of digital credit by micro-enterprise proprietors in Kiambu County is influenced by financial anxiety, optimism, financial security, deliberative thinking, and interest in financial matters.

Additionally, there is no significant relationship between financial behavior and the uptake of digital credit amongst proprietors of micro-enterprise in Kiambu County. However, the study revealed that the uptake of digital credit by micro-enterprise owners in Kiambu County is affected by individuals' savings, expenditure, and budget.

Lastly, the research concludes there is no significant relationship between financial attitude and the uptake of digital credit by proprietors of micro-enterprise in Kiambu County. The

investigation unveiled that the uptake of digital credit by micro-enterprise proprietors in Kiambu County was influenced by individuals' financial state of mind, opinion, and judgment.

5.4 Recommendations

The study found that financial knowledge had a moderate positive correlation with update uptake of digital credit by micro-enterprise proprietors in Kiambu County. Therefore, this study recommends that the proprietors of micro-enterprises should formulate and implement among others, effective strategies to acquire financial literacy to enhance their capacity to uptake digital credit to finance their micro-enterprise whenever need arise.

This study concludes that financial knowledge pointers namely financial anxiety, optimism, financial security, deliberative thinking, and interest in financial issues influences the uptake of digital credit by micro-enterprise proprietors in Kiambu County. Therefore, this study recommends that the national and county government should design financial literacy policies and programs geared towards enhancing financial knowledge of management and proprietors' micro-enterprise in Kenya. This will equip them with financial knowledge to rely on when acquiring credit facilities. This will lead to growth and improved performance of micro ventures in the economy.

5.5 Suggestions for Further Studies

This research endeavour was centred on comprehensive examination of the critical role played by financial literacy in the adoption of digital credit amongst proprietors of micro-enterprises in Kiambu County. The scope of this study was confined solely to micro-enterprises within the geographical boundaries of Kiambu County in Kenya. Consequently,

the outcomes and conclusions derived from this study should not be generalized to encompass the financial literacy levels of micro-enterprises proprietors in other Counties.

Consequently, the researcher recommends that further investigations be undertaken to in other counties in Kenya additionally exploration of other factors such as the influence of financial literacy of management of micro-enterprise specifically in Kiambu County influence the uptake of digital loans.

Furthermore, the findings of this study divulged that the independent variables; namely financial knowledge had a moderate relationship with uptake of digital credit, both financial behavior and financial attitude had no significant relationship in the uptake of digital credit among micro-enterprises proprietors in Kiambu County. Therefore, this study strongly advocates for additional research endeavours that delve into these and other factors that impact the uptake of digital credit by owners of micro-enterprises in Kiambu County.

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APPENDICES

APPENDIX I: QUESTIONNAIRE

The questionnaire will aid to gather statistics on how financial literacy influence the uptake of digital credit amongst proprietors of micro-enterprises in Kiambu Constituency. Kindly reply to the queries by ticking in the boxes given or by writing a brief statement as is appropriate. The information you have provided will be managed as discrete and at no case will your name be revealed in this study.

SECTION A: DEMOGRAPHIC INFORMATION

1. Please indicate the highest level of education attained (Mark \surd)

- | | | | |
|------------------|-----|-----------------|-----|
| Diploma | () | Bachelor Degree | () |
| Master Degree | () | PhD | () |
| If not the above | () | | |

2. Age bracket

- | | | | |
|----------------|-----|---------------|-----|
| Under 30 years | () | 31-40 years | () |
| 41-50 years | () | Over 50 years | () |

3. Length of continuous service within the micro enterprise?

- | | | | |
|---------------------|-----|---------------|-----|
| Less than two years | () | 2-5 years | () |
| 6-10 years | () | Over 10 years | () |

4. How long has this micro enterprise been in existence? (Mark \surd)

- | | | | |
|---------------|-----|----------------|-----|
| Below 5 Years | () | 5 – 10 Years | () |
| 10 – 15 Years | () | Above 15 Years | () |

SECTION B: FINANCIAL LITERACY AFFECT UPTAKE OF DIGITAL CREDIT

Kindly indicate to what extent you agree with each of the statements on how it affects your ability to take of digital credit product available in the market.

Use a scale of 1-5 where; 1 = No Extent, 2 = Little Extent, 3 = Moderate Extent, 4 = Great Extent and 5 = Very Great Extent.

Statement	1	2	3	4	5
i. To what extent does Financial Knowledge Element Influence your ability to take Digital Credit in the Market.					
1. Financial anxiety					
2. Being optimistic					
3. Financial security					
4. Deliberative thinking					
5. Interest in financial issues					
ii. To what extent does Financial Behavior Highlighted affect your ability to Take Digital Credit available in the Market.					
6. I get cash advances from my credit card					
7. Budgeting and tracking expenses					
8. Contributing to a savings account					
9. Ability to forecast income					
10. Ability to forecast budget					
iii. To what extent does the Financial Attitudes listed affect Your ability to acquire a digital credit facility in the Market.					

11. State of mind of a person on finance					
12. I feel in control of my financial situation					
13. Judgment of a person on finance					
14. I am aware of investments such as stocks					
15. I like talking to my peers about money management issues					
iv. Uptake of Digital Credit					
16. Have you taken digital credit before					
17. I have taken loan repeatedly, not just one time					
18. I have increased capital from the loans					
19. My business has expanded due to digital credit utilization					
20. The repayment rates for digital credit are friendly					

APPENDIX II: TIME SCHEDULE

Activity	August – Dec 2022	Jan - April 2023	May 2023	June 2023	August - October 2023
Development and Pilot Study					
Adjustments of the proposal					
Data collection					
Data Coding and Analysis					
Report Writing and Compilation					

APPENDIX III: BUDGET

Particular Cost Elements	Kshs
Stationery	21,145.25
Proposal typing including Printing	33,790.30
Transport (Taxi hire & reimbursements)	11,240.00
Questionnaires Printing and distribution	7,515.00
Research assistants (Enumerators) Fees	21,400.00
Airtime (Communication Allowance)	4,250.00
Miscellaneous expenses	6,550.00
Total	105,890.55