EFFECT OF FINANCIAL INCLUSION ON MICRO, SMALL AND MEDIUM ENTERPRISES' FINANCIAL PERFORMANCE IN BARINGO COUNTY, KENYA

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DECLARATION

Declaration by the Candidate

This thesis is my original work and has never been presented for the award of an academic degree in any other university and should not be copied, or reproduced in any format without written authority from the author and/or University of Eldoret.

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DEDICATION

I dedicate this thesis to my parents Mr. John Ngetich and Mrs. Elizabeth Ngetich for their tireless support, both financially and emotionally, during the entire period of my studies. I also dedicate this thesis to my daughter Tatiana Peace, my sister Ruth and brothers Caleb and Claudius, besides other close relatives for their moral support and follow-up on the progress of my studies.

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ABSTRACT

Financial sectors that mobilize savings and allocate resources for economic purposes play a pivotal role in fostering financial inclusion (FI). FI provides essential information and discipline for economic agents, enabling effective resource allocation and risk management. This, in turn, influences financial performance. Despite its significance, financial institutions in Baringo County, Kenya, are underperforming, depriving micro, small, and medium enterprises (MSMEs) of the benefits of FI. Consequently, this study aimed to address these challenges by analyzing the effects of financial access, financial usage, clients` bank loans, and clients' awareness of financial products on MSME performance. The study adopted descriptive and cross-sectional survey designs, guided by Financial Inclusion and Credit Access theories. The target population comprised MSMEs registered and licensed by the Baringo County government. Data were collected from 111 MSME owners/managers across six sub-counties using purposive, stratified, and simple random sampling techniques. A structured questionnaire was used to gather primary data through face-to-face interviews. Data analysis involved descriptive and inferential statistics. Results on financial access indicate that the mean interest rate was 18.5%, while the number of lending institutions and distance to the lending institutions were 4 and 2.46 km, respectively, while 86.5% were requested for collateral, 38.7% had entrepreneurship skills and finance infrastructure. Results on bank loan usage indicate that the mean saving balance was Kshs 67,030, while the number of daily bank transactions and the number of electronic payments to banks were 4 and 6, respectively. Results on the bank loan capacity of clients indicate that financial institutions could meet 86.5% of clients' needs and offer services to 61.3% of clients, with various financial institutions available for lending to MSMEs, while most MSME owners/managers obtained loans from group contributions, accounting for 39.6%. Results on clients' financial product awareness showed that 91% of the MSME owners/managers were aware of the financial products, 78.4% received guidance on credit access, and 51.4% underwent financial skill training on credit risk management. Regression results on financial access revealed that the number of lending institutions and the entrepreneurial literacy level positively increased performance by 46.5% and 95.1%, respectively, while interest rates decreased performance by 33%. Results on bank loan usage showed that savings balances and the number of daily bank transactions positively increased MSME performance by 98.7% and 108.6%, respectively. Additionally, results on the effects of clients' bank loan service quality and the range of options available to clients positively influenced financial performance by 182.08% and 156.8%, respectively. Lastly, regression results on the effect of clients' financial product awareness on MSME performance indicated that guidance on credit access and financial skill training on credit risk management increased performance positively by 258.6% and 144.5%. Therefore, it is recommended that financial institutions implement targeted interventions to address these factors. There is a need for training entrepreneurs to gain financial literacy to assist them in managing MSMEs. Additionally, there is also a need for entrepreneurs to receive training in financial literacy to aid in the management of MSMEs.

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LIST OF ABBREVIATIONS AND ACRONYMS

BBL	Biashara Boresha Loan
BCIDP	Baringo County Integrated Development Plan
CDO	Community Development Officers
CFO	Chief Finance Officer
COGs	Cost of Goods sold
DBK	Development Bank of Kenya
DMBs	Deposit Money Bank
FI	Financial Inclusion
Fintech	Financial Technology
GDP	Gross Domestic Product
GoK	Government of Kenya
HRD	Human Resource Development
IDBK	Industrial Development Bank of Kenya
IMF	International Monetary Fund
KCB	Kenya Commercial Bank
KES	Kenya Shillings
KIE	Kenya Industrial Estates
km^2	Squared kilometer
KNBS	Kenya National Bureau of Statistics
KWFT	Kenya Women Finance Trust Deposit/ Kenya Women
LSMS	Living Standards Measurement Study
MFIs	Microfinance Financial Institutions
M-PESA	M for mobile, PESA is Swahili for money
MSME	Micro Small and Medium Enterprise

MSMEs	Micro, Small and Medium Enterprises
OECD	Organization of Economic Cooperation and Development
POSB	Post Office Savings Bank
ROI	Return on Investment
SACCO	Savings and Credit Cooperative Society
SME	Small and Medium Enterprises
UN	United Nations
VEO	Village Extension Officers
WECPR	Wealth and Employment Creation for Poverty Reduction

OPERATIONAL DEFINITION OF TERMS

Collateral	Property or resources that a borrower offers a bank as a security for an advance (Rubio, 2024).
Credit Access	It is the possibility and the chance of eligibility of a person or a business for cash-related services such as protection in the form of insurance, credit or deposits (Simatele & Maciko, 2022).
Financial Inclusion (FI)	Financial Inclusion means making available required financial services reliably and conveniently to small and medium enterprises by the financial institutions (Eton et al., 2021).
Financial Performance	This refers to a general measure of an organization's policies and activities in monetary terms over a given timeframe (Alecsoiu et al., 2022).
Medium Enterprises	Is a business that employs more than 50 people but less than 100 people and has a turnover between KES 5 million and KES 800 million (Safaricom, 2022).
Micro Credit Access	Is the ability of the borrower to get credit facilities from microfinance institutions (Kagan, 2024).
Micro Enterprises	Is a small business employing nine people or fewer (Millers & Gaile-Sarkane, 2021).
Small Enterprise	Is a firm that employs between 5 and 50 persons (Karlsson, 2020).
Gross profit	Is a financial metric that represents the revenue of a company minus the cost of goods sold.

CHAPTER ONE

INTRODUCTION

1.1 Overview

This chapter presents the background information of the study, the statement of the problem, research objectives, research hypothesis, justification, significance, scope, limitations, and the study assumptions.

1.2 Background Information of the Study

Financial inclusion (FI) has gained immense recognition in many growing economies as well as at the international level as far as policy is concerned (Lestari et al., 2022). FI refers to the process of accessing and using diverse, convenient, and affordable financial services. It is viewed as the ability of individuals to access and use basic financial services such as savings, loans, and insurance, which are designed to be reasonably convenient, flexible, and reliable (Fuad, 2020). FI has taken center stage in economic growth and development as a means of creating wealth among citizens of developing countries (Lestari et al., 2018). It is an important financial literacy initiative that enhances communities' ability to utilize formal financial services, thereby improving citizens' standards of living and economic fundamentals the major indicators of financial inclusion (Dalkilic & Kirkbesoglu, 2015).

FI is a critical force and indicator of economic growth. Cole et al. (2013) documented that FI is a fundamental parameter influencing GDP, personal and societal well-being, and business development and growth, especially among micro, small, and medium enterprises (MSMEs). More than ever before, businesses and individuals need consistent access to practical and reasonably priced financial products and services,

including payments, transactions, savings, credit, and insurance. Collins et al. (2009) further noted that the ability to send and receive payments as well as save money makes having access to a transaction account the first step toward greater financial inclusion.

Technology plays an important role in enhancing financial inclusion efforts (Chauvet & Jaolin, 2017). Mobile technology and its large-scale penetration have expedited FI efforts globally. Originating from Kenya, M-Pesa is a popular financial technology (Fintech) innovation that has actualized FI access in developing and underdeveloped countries, especially in Africa. M-Pesa is a straightforward mobile banking platform that facilitates monetary transactions among individuals or companies and enables users to make purchases online or physically. Since its inception about two decades ago, M-Pesa has experienced tremendous growth and penetration in Kenya, becoming a model for mobile-based financial services (Chauvet & Jaolin, 2017). In 2007, for instance, the average daily M-Pesa registration was 5,000; by 2009, subscriptions had increased to 7.9 million verified clients. The adoption of M-Pesa in Kenya marked a paradigm shift from cash-based transactions to digital payments, reducing theft risks. Its introduction brought numerous benefits, including increased demand for mobile banking agents and job creation (Chauvet & Jaolin, 2017).

Beyond such fintech innovations as M-Pesa, FI mitigates poverty and inequality through improved investment opportunities, smoother consumption, and better financial risk management. Different financial service arrays are essential for individuals across all income groups (Cole et al., 2013). Nevertheless, many low-income individuals still rely on informal financial services (Collins et al., 2009).

Access to formal financial services allows individuals to conduct safe and efficient financial transactions, enabling low-income earners to climb out of poverty through investments in education and business (Chauvet & Jaolin, 2017). FI also helps people manage economic shocks such as job loss or the death of a breadwinner. Payments from corporations or governments to individuals, as well as between individuals and businesses, can be made more efficiently and transparently by switching from cash to accounts. Although there is limited data to draw firm conclusions, access to formal financial systems and suitable financing can encourage investment in businesses and education, ultimately promoting economic growth and productivity (Kostov et al., 2013).

Over the past 20 years, much research on household finance and economic growth has focused on the effects of microcredit. Microcredit, once hailed as a successful development tool, was the foundation of the 2006 Nobel Peace Prize (Kostov et al., 2013). However, attention has recently shifted toward account ownership and the savings and payment services such accounts offer, as evidence has shown mixed effects of microcredit on low-income individuals (Schoof, 2006). Millions of people in developing countries still lack access to banking services due to cost, geographic, or educational barriers. These individuals lack safe means for fund transfers, savings, insurance, or credit access (Kostov et al., 2013). Access to these four services is vital for micro-enterprises, and ensuring access is a key goal of FI (Cole et al., 2013). Credit allows consumers to use future income for current needs or investments, while savings provide a safe place to store funds for future use.

Indicators of financial inclusion include access, usage, quality, and impact. Access refers to the penetration of bank branches or point-of-sale devices in rural areas, as well as barriers such as costs or information gaps. Usage involves measures such as average savings balances, number of transactions per account, and number of electronic payments (Achanga et al., 2014). Quality describes how well financial products meet clients' needs, the range of available options, clients' awareness, and understanding of financial products. It also evaluates the impact of FI on enterprise outcomes such as performance and human capital investments (World Bank, 2013).

Achanga et al. (2014) define micro, small, and medium enterprises (MSMEs) based on capital investment, number of employees, and sales turnover. MSMEs may also be classified by asset value or employment size, though definitions vary across countries (Gombarume & Mavhundutse, 2014).

In most economies, particularly developing ones, MSMEs play a significant role (Dorfleitner & Roble, 2018). MSMEs account for about 90% of businesses globally and contribute more than half of all jobs (Gombarume & Mavhundutse, 2014). They generate around 40% of national income (GDP) in emerging economies, and the inclusion of informal MSMEs raises this figure even higher (Fuad, 2020). By 2030, 600 million jobs will be required to accommodate the growing global workforce, making MSME development a top priority (Adewuyi & Emmanuel, 2018).

However, access to capital remains a major obstacle to MSME growth in emerging markets and developing countries (Gombarume & Mavhundutse, 2014). Small businesses are less likely than large ones to obtain bank loans and must often rely on internal funds or support from family and friends (Dorfleitner & Roble, 2018).

According to the International Finance Corporation (2019), 65 million MSMEs in developing countries about 40% of all MSMEs face an annual financing gap of $5.2 trillion, or 1.4 times the current global MSME lending level.

East Asia and the Pacific account for the largest portion of this gap (46%), followed by Latin America and the Caribbean (23%) and Europe and Central Asia (12%) (Iman, 2018). Regions like Latin America, the Caribbean, the Middle East, and North Africa face the highest funding shortfalls relative to demand, with deficits of 87% and 88%, respectively (Iman, 2018). Approximately half of all formal MSMEs lack access to credit, and this gap is even wider when informal businesses are included (Adewuyi & Emmanuel, 2018). Africa's credit deficit for MSMEs is estimated at $331 billion (IFC, 2018).

MSMEs are the backbone of African economies, and investment in this sector can significantly boost job creation and wealth generation (Iman, 2018). The informal sector contributes 38% of Sub-Saharan Africa's GDP, yet 51% of its formal MSMEs lack adequate financing. Banks often demand substantial collateral and conduct strict credit checks, which many MSMEs cannot meet (Dorfleitner & Roble, 2018). For example, in Zambia, while 95% of MSMEs have bank accounts, only 16% have loans or credit lines (ACET, 2017). Although many banks engage with the MSME sector, few provide financing. Multilateral financial institutions and development banks have begun offering concessionary loans, but uptake remains slow (Adewuyi & Emmanuel, 2018).

In Kenya, MSMEs are regarded as engines of economic growth and innovation (Fuad, 2020). Most rely on personal savings or family support for financing. However, small enterprises continue to face economic challenges, particularly after the COVID-19 pandemic (Fuad, 2020). Banks remain reluctant to extend credit to MSMEs, favoring only the most creditworthy borrowers (Kongolo, 2010). According to Adewuyi and Emmanuel (2018), 60% of MSMEs in Kenya were denied funding in the last three years, primarily due to a lack of collateral. Debt financing, provided mainly by banks and microfinance institutions, remains the most preferred option (Adewuyi & Emmanuel, 2018).

According to Sessional Paper No. 2 of 2005 (Republic of Kenya, 2005), the development of MSMEs for Wealth and Employment Creation for Poverty Reduction (WECPR) is the official policy framework for MSMEs in Kenya. This policy was meant to serve as the foundation for the MSME Act, which institutionalized MSME policy in the country. Key topics covered in the policy include the legal and regulatory environment, markets and marketing, business relations, taxation, skills and technology, and financial services. The policy framework serves as the basis for the Micro, Small and Medium Enterprises Bill 2011 (Van Hove & Dubus, 2019), which has since been debated with several clauses implemented.

Kenya's Vision 2030 aims to make Kenya a newly industrializing middle-income country capable of providing a high quality of life for all its citizens by 2030. The country's competitive advantage lies in agro-industrial exports (Adewuyi & Emmanuel, 2018). For the superior performance of the manufacturing sector, one strategy includes strengthening MSMEs to become key future industries. Van Hove

and Dubus (2019) noted that Vision 2030 can be achieved by improving MSME productivity and innovation. The blueprint also recommends enhancing science, technology, and innovation in the sector through increased investment in research and development. Vision 2030 highlights the establishment of MSME Parks as a major strategy for MSME development in Kenya. Therefore, achieving Kenya's development objectives under Vision 2030 requires creating an enabling framework for MSME growth.

The Big Four Agenda (2017–2022) recognized the critical role of MSMEs in the manufacturing pillar, viewing them as vital drivers of industrialization, innovation, and job creation. Similarly, the Bottom-Up Economic Transformation Agenda (BETA) positions MSMEs at the core of economic development. The Big Four Agenda—focused on manufacturing, affordable housing, universal health coverage, and food security—offers numerous opportunities for MSMEs (Ibor et al., 2017). Its multiplier effects on employment and resource flows are expected to stimulate local, regional, and international economic growth. According to Kamunge et al. (2018), implementing the Four Pillars will require substantial investment, thus creating immense opportunities for MSMEs to participate and contribute to national development.

Government projections estimate that manufacturing will grow its GDP share from 9% to 15% within five years (Devolution Hub, 2018). The Big Four strategy seeks to establish 1,000 MSMEs in the agro-processing sub-sector, creating 200,000 new jobs within five years. MSMEs can also invest in light industries such as leather, textile, and food processing (Ibor et al., 2017). To support this effort, the government aims to

consolidate industrial financing agencies, including Kenya Industrial Estates, the Development Bank of Kenya (DBK), the Industrial Development Bank of Kenya (IDBK), Uwezo Fund, and the Youth Enterprise Development Fund. Additionally, the "Buy Kenya, Build Kenya" policy encourages public institutions to source at least 40% of their procurement locally. To remain competitive globally, proactive participation of MSMEs is crucial (Chauvet & Jaolin, 2017). The government must prioritize prompt payment of MSME contractors to sustain liquidity, enhance tax compliance, and boost national revenue (Chauvet & Jaolin, 2017).

In Baringo County, MSMEs play a crucial role, accounting for about 70% of employment and significantly contributing to financial development and growth. They span various sectors, with a focus on services such as wholesale, retail trade, manufacturing, and hospitality. The county government and financial institutions like KCB have supported MSMEs through initiatives such as the Hustler Fund. However, Samuel, Nyakundi, and Osodo (2019) report that three out of five MSMEs in Baringo County fail within the first three years of operation. About 46% collapse within one year, while 15% close after the first year. For example, fish farming, one of the key MSME sectors in Baringo County, has performed poorly.

MSMEs face numerous constraints in accessing credit and are often perceived as high-risk borrowers by commercial banks. Most rely on personal savings or informal sources of funding such as family and friends. Banks remain inflexible, extending credit only to the most creditworthy borrowers, thereby excluding many MSMEs (Muguchu, 2013). According to Chelimo and Sopia (2012), MSMEs with microcredit access and proper bookkeeping experience enhanced profitability and business

expansion, particularly in Kabarnet Town. Komen (2014) noted that MSMEs face barriers to accessing microcredit due to a lack of formal business training, while Wachira (2012) observed that few women-owned enterprises borrow from financial institutions due to collateral requirements. Interest rates also affect enterprise performance by influencing revenues, growth, and profitability. The poor performance of MSMEs in Baringo County, therefore, remains a major concern for researchers and policymakers.

1.3 Statement of the Problem

MSMEs in Kenya have been underperforming, limiting their potential to drive national economic growth. Toromo (2020) found that socio-cultural factors, limited skills, lack of information access, and inadequate collateral negatively affect financial inclusion and credit access. High interest rates further restrict access to credit, impacting MSME profitability (Gichuki, Njeru & Tirimba, 2014). In Baringo County, most MSMEs struggle with profitability and growth despite their potential to enhance economic empowerment. Chelimo and Sopia (2014) observed that in Mogotio, many MSMEs had limited start-up capital, averaging KES 50,000, with most earning profits below KES 20,000 — insufficient for collateral, thereby limiting access to credit. Similarly, Toromo (2020) noted that high interest rates in Eldama Ravine Town reduced profits and revenues among MSMEs. Many enterprises do not deposit daily revenues in banks, leading to misuse of funds and profit loss (Wachira, 2012). Despite their critical role, there is limited knowledge on how financial inclusion influences MSME financial performance in Baringo County. This study, therefore, seeks to analyze the effect of financial inclusion on MSMEs' financial performance in Baringo County, Kenya.

1.4 Objectives of the Study

This study was guided by one general objective and four specific objectives.

1.4.1 General Objective

The main objective of this study was to analyse the effect of financial inclusion on Micro, Small and Medium Enterprises (MSMEs) financial performance in Baringo County, Kenya.

1.4.2 Specific Objectives

(i) To analyse the effect of access on the MSMEs' financial performance in Baringo County.

(ii) To determine the effect of usage on the MSMEs' financial performance in Baringo County.

(iii) To examine the effect of clients' bank loans on the MSMEs' financial performance in Baringo County.

(iv) To examine the effect of clients' financial product awareness on MSMEs' financial performance in Baringo County

1.5 Research Hypotheses

H_{01}: Access bank branches or point-of-sale devices in rural areas has no significant effect on MSMEs' financial performance in Baringo County.

H_{02}: Financial usage has no significant effect on MSMEs' financial performance in Baringo County.

H_{03}: Clients' bank loans do not significantly affect MSMEs' financial performance in Baringo County.

H_{04}: Clients' awareness of financial products does not have a significant effect on MSMEs' financial performance in Baringo County.

1.6 Significance of the Study

Any scientific research is significant for navigating an ever-changing world (Chauvet & Jaolin, 2017). Without insights from scientific research, researchers would rely on opinions, intuition, and luck, making it more challenging to navigate the world (Chauvet & Jaolin, 2017). Therefore, this study will play a critical role in providing an objective understanding of the effects of financial inclusion on MSMEs' financial performance. Furthermore, this research will have a transformative impact on various areas, such as improving MSMEs' access to finance, which is essential for boosting performance and productivity in the country. The findings of this study will also benefit MSMEs, financial institutions, and other finance-related entities in the country's financial sector. It will help enhance the quality of financial inclusion services for their clients and identify shortcomings so they can offer services that add value and gain a competitive advantage. The findings will also provide financial institutions with insights into the challenges arising from credit provision to MSMEs. This study's findings will furnish policymakers with vital information to formulate development and poverty alleviation policies through MSMEs. Moreover, the study results will be valuable to community welfare organizations focused on improving livelihoods. The findings will highlight the financial challenges facing MSMEs, enabling them to address these issues more effectively. Scholars and academics may be encouraged to explore studies on the effects of financial access on MSMEs, based on the gaps identified by this research. Consequently, this study's findings will contribute to accelerating employment creation and improving the quality of life in

line with the Sustainable Development Goals (SDGs) and the country's economic vision for 2030. Finally, the resultant thesis from this research will serve as reference material.

1.7 Scope of the Study

This study was carried out in Baringo County, and the research subjects (units of analysis) were the formally registered MSME owners based in the county. Data was collected between July 2023 and November 2023. This study focused on the effects of financial inclusion on the financial performance of MSMEs in Baringo County. As such, the study used MSMEs and financial inclusion statistics and literature in Kenya to quantify performance as a function of financial inclusion.

1.8 Limitations of the Study

The present study was not free from limitations. Best and Khan (2008), defined limitations as factors that the researcher has no control over and that may place shortcomings on the findings of the study and their applicability in different situations. Firstly, the study had difficulties with the target audience's response rate. This was remedied by informing the participants that the study was primarily conducted for academic purposes and that any data would be kept strictly confidential. Secondly, limited research exists regarding financial inclusion on MSME's performance in Baringo County. However, this challenge was overcome by reviewing published and unpublished articles in the library. Moreover, it was also expected that the respondents in this study would fail to submit their responses to questionnaires in time due to their busy schedules.

1.9 Study Assumptions

The study assumed that respondents fully understood the questions and provided truthful answers. It also assumed that perceptions of financial inclusion are shaped by personal experience and mediated through the researcher's interpretation. Finally, the study assumed that the data provided by respondents was accurate.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the theoretical framework, empirical evidence conceptual framework and the knowledge gap associated with the present study.

2.2 Theoretical Literature

The study adopted the public money theory, the special agent theory of financial inclusion, theory of financial inclusion and the theory of credit access

2.2.1 Public Money Theory of Financial Inclusion

According to the "public money theory of financial inclusion," financial inclusion programs ought to be financed with public monies (Ozili, 2020). This idea holds that the federal government should provide funds for financial inclusion projects and activities. The public money hypothesis has the following advantages (Ozili, 2020). To start, the government can tax the rich to generate funds for universally beneficial financial inclusion programs. The impoverished and marginalized groups will benefit from this redistribution of wealth and reduction of income inequality. Second, raising public funds to promote financial inclusion initiatives is inexpensive, if not free. Thirdly, dishonest persons will be prevented from utilizing the cause for their own selfish aims if financial inclusion goals are financed with public monies (Ozili, 2020).

However, there are a few drawbacks of public money theory. A key issue with public spending is improper planning, to start with (Ozili, 2020). Without proper planning, financial inclusion projects may wind up costing too much money, which would

ultimately result in inefficiencies. Second, employing public funds for financial inclusion programs might result in unneeded delays in reaching the excluded people, such as delays in funding disbursement, delays brought on by lobbying, and delays brought on by political events (Ozili, 2020). Thirdly, governments with a lack of resources will be pushed to borrow money to support financially inclusive projects, which could increase the government's debt load (Ozili, 2020). Last but not least, when the responsibility for attaining financial inclusion is given to a subordinate or contractor who lacks the necessary expertise, improper delegation of authority may result (Ozili, 2020). Governments frequently assign one of their capable agencies the task of achieving financial inclusion goals in order to save money rather than forming a new agency (Kung'u, 2011). However, such a competent body may already be overwhelmed to ensure financial inclusion due to its existing statutory obligations (Ozili, 2020). These types of incorrect delegation of authority are widespread in many nations and can fail to meet the goals of financial inclusion. Overall, this theory is relevant in this research because it provides a better strategy for attaining financial inclusion by complementing the public good school of thought on financial inclusion.

2.2.2 Special Agent Theory of Financial Inclusion

The special agent theory of financial inclusion states that specialized agents are needed to provide financial inclusion to those in excluded communities because technicalities and problems pertaining to the community's geography, residents, or composition can make it difficult to provide financial inclusion to the excluded population (Demirguc-Kunt & Singer 2017). The theory states that the special agent should be highly qualified and specialized, understand the distinctive features of the excluded population, comprehend the existing informal financial system in the

communities where the excluded members of the population live, spot opportunities for innovation and improvement, and devise a plan to integrate the local financial system into the formal financial sector (Demirguc-Kunt & Singer 2017).

According to Demirguc-Kunt and Singer (2017), the special agent is thought to be exceptional, highly skilled, and capable of integrating the excluded people into the formal financial sector so they can obtain formal financial goods and services. A special agent relationship exists between the principal and the special agent, according to this perspective (Nimbrayan et al., 2018). The principal is often the national government, a foreign government, or foreign organizations, and the special agents are often local banks, non-bank institutions, or other special institutions created specifically to achieve financial inclusion (Demirguc-Kunt & Singer 2017). Additionally, financial institutions and tech companies such as financial technology (Fintech) organizations may use special agents.

There are certain advantages to the special agent theory of financial inclusion. To start, it works with specialist agents to encourage financial inclusion across the nation (Nimbrayan *et al*., 2018). The government would be able to concentrate on other crucial and urgent national concerns by using the services of professional agents to promote financial inclusion in the nation. Second, there is a lot of faith in the special agents' capacity to bring financial inclusion to the excluded group (Nimbrayan *et al*., 2018). The special agents are made up of knowledgeable people and specialists who are connected to or working with other specialized organizations to achieve the shared objective of increasing financial inclusion. Thirdly, the goals for financial inclusion are clear, and the special agent's salary has been previously agreed upon (Nimbrayan

et al., 2018). Further, there is no ambiguity because the special agent is aware of the aim, expectations, and commitments, as well as the remuneration they will earn for their performance. Finally, because a special agent works with people rather than money, the principal-agent connection between them is unaffected by the core agency theory of principal-agent issues (Nimbrayan *et al*., 2018). According to agency theory, the principal-agent problem arises when the manager of a company acts as the agent and is motivated by self-interest to appropriate excess financial resources (money) to oneself at the expense of shareholders (Nimbrayan *et al*., 2018).

Nonetheless, there are some drawbacks to the special agent idea of financial inclusion. First off, if the government serves as both the principal and the agent, it may select its agency to serve as the special agent (Demirguc-Kunt & Singer 2017). The goal of the special agency for promoting financial inclusion would be defeated in this situation. Due to the inherent inefficiencies of government agencies in the public sector, the government shouldn't serve as both the principal and the special agent at the same time (Demirguc-Kunt & Singer 2017). Second, a private special agent will terminate the financial inclusion project in the event of a breach of contractual obligations or conditions of service, which may result from the government's failure to adequately compensate the special agent or from its failure to provide the funds necessary to finance the financial inclusion projects as agreed in the contract (Demirguc-Kunt & Singer 2017).

2.2.3 Theory of Financial Inclusion

The Theory of Financial Inclusion (FI) posits that increasing access to financial services, particularly among the underprivileged and marginalized, facilitates

economic growth. According to Kimani and Muturi (2021), access to financial services such as savings, credit, insurance, and payment services enables individuals and businesses to increase their investments, manage risks, and create wealth. By increasing access to financial services, FI promotes economic growth by increasing employment opportunities and reducing poverty. The theory emphasizes the critical role of FI in promoting financial stability and social inclusion, particularly in developing countries.

In addition to promoting economic growth, FI fosters financial discipline among economic agents. Kithae and Kariuki (2021) argue that by providing financial information, education, and tools to individuals and businesses, FI facilitates responsible financial behaviour, including better financial planning, savings, and investment practices. Furthermore, FI helps to reduce informal financial activities and promote formal financial channels, leading to greater transparency and accountability.

To ensure the success of FI, it is necessary to implement policy interventions that address the barriers to access to financial services, such as inadequate infrastructure, lack of financial literacy, and the high cost of financial services. Financial institutions can play a critical role in promoting FI by providing affordable financial services, particularly to low-income individuals and microenterprises, and by leveraging technology to expand access to financial services.

In summary, the Theory of Financial Inclusion highlights the importance of access to financial services in promoting economic growth, reducing poverty, and enhancing financial stability and social inclusion. It emphasizes the need for financial discipline

and the role of formal financial channels in promoting transparency and accountability. Therefore, it is critical to implement policy interventions that address the barriers to access to financial services, particularly in developing countries.

2.2.4 The Theory of Credit Access

The Theory of Credit Access emphasizes the importance of access to credit for promoting economic growth and development. According to Agyapong and Bokpin (2019), the theory argues that access to credit is crucial for individuals and businesses to invest, grow, and create wealth. Moreover, credit access enables individuals and businesses to manage risks, particularly in times of financial hardship or economic shocks.

The theory emphasizes that credit access is particularly important for small and medium-sized enterprises (SMEs) and micro-enterprises, which often face significant barriers to accessing credit. SMEs and micro-enterprises are critical engines of economic growth, particularly in developing countries, and credit access enables them to invest in their businesses, expand their operations, and create jobs.

However, credit access is often limited by market failures, including information asymmetries, collateral requirements, and high transaction costs. According to Demirgüç-Kunt and Klapper (2019), the theory emphasizes the importance of addressing these market failures through policy interventions, including credit guarantee schemes, credit information sharing, and regulatory reforms.

In Ghana, Agyapong and Bokpin (2019) found that access to credit significantly impacted the performance of micro, small, and medium enterprises (MSMEs). Specifically, they found that access to credit enabled MSMEs to increase their sales revenue, improve their profitability, and create more employment opportunities.

In Kenya, Musiega and Bichanga (2020) similarly found that access to credit was positively associated with the growth and performance of SMEs. They argued that access to credit enabled SMEs to invest in their businesses, acquire new equipment and technology, and expand their operations.

In summary, the Theory of Credit Access posits that access to credit is crucial for promoting economic growth and development, particularly for SMEs and micro-enterprises. It emphasizes the importance of addressing market failures that limit credit access through policy interventions, including credit guarantee schemes, credit information sharing, and regulatory reforms.

2.3 Review Relevant Literature

2.3.1 The Concept of MSMEs

Definitions of MSMEs vary across countries (Okafor, Ejelonu & Onyekwere, 2022). For instance, the European Union defines small enterprises as those with fewer than 50 employees and a turnover or balance sheet total not exceeding €10 million, while medium enterprises have up to 250 employees and turnover not exceeding €50 million (Ibor, Offiong & Mendie, 2017). In Great Britain, small-scale enterprises are defined as those with annual sales of less than two million pounds or fewer than 200 employees (Bassey, Amenawo & Enyeokpon, 2017). In Indonesia, micro-enterprises have three or fewer employees, small enterprises employ up to nine, and medium

enterprises employ between twenty and one hundred workers (Okafor et al., 2022). In Kenya, small enterprises employ 5–50 people, while medium-sized businesses employ between 50 and 200 (Okafor et al., 2022).

In Nigeria, MSMEs are categorized based on both assets and employment. Micro-enterprises employ fewer than ten people with assets under five million Naira; small enterprises have 10–49 employees and assets between five and fifty million Naira; and medium enterprises employ 50–199 workers with assets between fifty and five hundred million Naira (Okafor et al., 2022). Globally, MSMEs are key drivers of employment and income generation (Bassey et al., 2017). However, they face challenges such as limited education, lack of collateral, poor infrastructure, and inadequate access to credit and financial markets.

2.3.2 The Concept of Financial Inclusion

Financial inclusion is the capacity of individuals to use and access fundamental financial services, including insurance, loans, and savings, designed to be reasonably convenient, flexible, and reliable. The classical concept of financial inclusion is facilitating usage and access to affordable, timely, and diverse financial services. Financial services use and access is critical drivers of economic development. Importantly, FI covers meaningful, cost-effective, relevant, and sustainable financial assistance for the rural population (financially underserved). According to World Bank (2012), FI is an availability, quality, and range of financial services merited to financially excluded and underserved populations. Besides, financial inclusion provides access to an adequate degree of affordable, convenient, and safe financial services to vulnerable and less fortunate groups, including undocumented, rural, and

low-income individuals who have been excluded or underserved in formal economic sectors. Additionally, FI is concerned about availing a more comprehensive range of financial services to people with access to only routine financial products. Sajuyigbe (2017) describes FI as a state whereby individuals with access to and use financial services are also predisposed to complementary affordable, convenient, and quality financial services.

FI allows individuals to expedite or diversify their household income and provide cash flow or liquidity, absorbing adversity shocks by asset creation that would enable clients to manage losses through consumption smoothing, hence avoiding productive asset sales (Nwanne & Okorie, 2015). Nwanne and Okorie (2015) further opine that in instances where credit is applied for an income-generating activity with the activity giving returns in excess of loan instalment repayments and generating assets when credit-financed investment cannot create significant net profit, FI increases income. To reduce income disparities and poverty and accelerate economic growth, access to safe, affordable financial services and credit for poor and vulnerable individuals or groups, lagging sectors, and disadvantaged areas (Sajuyigbe, 2017; Nwanne & Okorie, 2015).

Socially and economically excluded individuals are integrated better into the formal sectors, where they actively contribute to economic growth through seamless access to a well-functioning financial system (Chakrabarty, 2013). Therefore, FI means to draw the vulnerable and disadvantaged areas of society to the ambit of standardized and formalized financial systems. This statement is true because FI is the process of facilitating access to financial services, including microfinance, basic banking, post-

office schemes, mortgage, insurance, and credit, where there is a need from vulnerable and disadvantaged societies (Sajuyigbe, 2017; Chakrabarty, 2013). Research indicates that to achieve FI five A's of accessibility, adequacy, affordability, awareness, and availability is essential.

Investigating the relationship between FI and mobile banking in Kenya using a descriptive survey approach, Waihenya (2012) found that FI progressively grows with the growth and expansion of agent banking financial services. Other research conducted in the UK and Nigeria using the deductive method to measure FI, accessibility and quality demonstrated that FI was more market-driven regarding customer satisfaction and consumer behaviour towards financial services (Bassey, Amenawo & Enyeokpon, 2017). Different studies also demonstrated full FI as a fundamental requirement for any inclusive economic development agenda or drive (Bertram, Nwankwo & Onwuka, 2016). The plethora of knowledge regarding FI indicates that FI significantly contributes to inclusive economies. Consequently, every initiative promoting easy accessibility, availability, and affordability of formal financial services to every population divide should be backed up to actualize an inclusive economy.

2.4 Empirical Review

2.4.1 Effect of Access to Financial Services

A study on the determinants influencing MSMEs' success in the Jua Kali Industry in Nakuru, Kenya, was conducted by Kinyua (2014). The goal of the study was to assess the variables influencing MSMEs' performance in Nakuru town's Jua Kali area. The study used stratified random simple sampling and a survey research design. 262 study

participants provided primary data using standardized questionnaires. Figures, tables, and percentages were used to display the data after it underwent descriptive and inferential analysis. The Study results showed 62.6% of the respondents reported that to a great extent, lack of financial records made it difficult for MSMEs to access lending proposals, 35.5% reported to some extent while 1.9% reported not at all. 86.6% of the respondents reported that most financial institutions were reluctant to provide long-term credit to MSMEs while 13.4% reported to some extent. 63.3% of the respondents reported that high interest rates, premium costs and other loan processing costs made MSMEs unable to obtain funds from banks, whereas 36.7% reported to some extent. The findings revealed that 44.1% of the respondents reported that firms with intangible assets could only borrow less, 35.1% to some extent and 0.8% not at all. 59.5% of the respondents reported that MSMEs could not afford the required collateral, 39.7% reported to some extent and 0.8% reported not at all. 67.2% of the respondents reported that MSMEs lacked accumulation of sufficient assets, 30.1% reported to some extent and 2.7% did not at all. The findings of the study show that lack of access to finance had the potential to negatively affect the performance of MSMEs.

Mulandi (2013) investigated the elements influencing the Kenyan biogas industry's ability to acquire loans. Using a random sampling technique, a sample of 48 firms was chosen from among all the firms, and 40 of them gave satisfactory answers. A questionnaire with both open-ended and closed-ended questions was used to gather both qualitative and quantitative data. The Statistical Package for Social Sciences (SPSS) was used to analyze the data, and frequency tables were used to display the results of the analysis. Descriptive statistics such as means, frequencies, and

percentages were then used to examine the data (Mulandi, 2013). Credit availability was based on a number of characteristics, including age, size, investments in capital, financial statements, access to information, and risk tolerance. Access level and capital invested had a positive and significant link (b1=0.897, p-value = 0.013). There was a positive and substantial correlation between the degree of access and information availability (b1=1.014, p-value = 0.001). The results showed that bank rules and practices, as well as supply-side issues including a lack of business performance and creditworthiness information on the borrower, impacted access to financing (Mulandi, 2013). Moreover, there was a positive and significant correlation (b1=1.949, p-value = 0.000) between the size of the company and the degree of access. This suggested that compared to small businesses, larger businesses had a higher chance of obtaining finance.

The study's findings about inadequate loan access may be explained by the modest size of the company as represented by descriptive statistics. When compared to performance and other factors, the results showed that size has a significant impact on credit availability, indicating quantitative barriers to credit availability. So, when comparing short-term and long-term loans, the effect of size on credit availability was more pronounced for the latter. Financial records and access level also had a positive and significant link (b1 = 1.328, p-value = 0.006). This suggested that companies having financial documentation had a higher chance of obtaining financing than those without such documentation. According to descriptive statistics, most respondents lacked financial records, which could account for the limited credit availability observed among MSMEs.

2.4.2 Effect of Usage of Financial Services

Kostov *et al*. (2013) investigated the usage of financial services in South Africa. They categorized financial services into three types namely; general accounts and services, investment/savings and insurance/assurance. Considering the interactions between the usage of different types of financial services, they used multivariate simultaneous probit specification (model used to estimate several correlated binary outcomes jointly) to examine the effect of financial usage on performance. Their results suggested that after controlling for the endogeneity of choices and a range of control variables, financial usage is a robust determinant of access to financial services (Kostov *et al*., 2013). The impact of financial perception however reduces and gradually disappears as one moves up the financial usage ladder towards more advanced financial products and services. In a policy context, targeting demand-side factors to increase the use of financial services is advisable. This targeting however can only be successful if it is tuned to specific basic financial services and products.

In order to determine if respondent identity and the use of product-specific cues in questions have an impact on the reported rates of household financial service consumption, Robert and Kinnon (2009) carried out a randomized experiment in Ghana. Information on household savings and loan usage, as well as, less frequently, insurance, was requested of the respondents (Robert & Kinnon, 2009). Surveys for the Living Standards Measurement Study were usually conducted in this manner. They interacted with the control variables and the treatment variables to better understand whether certain household characteristics are responsible for the relatively low usage rates reported by random informants. They then derived a third set by repeating the process for the random informant variable. In what they dubbed the full-interaction

specifications, they added two additional sets of explanatory variables to the initial regressions (Robert & Kinnon, 2009). Random informants and head-of-household informants differed marginally significantly for the indirect access indicator, while random informants and a complete enumeration did not differ significantly. Furthermore, they did not believe that the indirect access indicator was essential to their comprehension of usage. Additionally, their control factors did not adequately explain the limited indirect access that was discovered (Robert & Kinnon, 2009).

Furthermore, it seemed that younger, less informed household members were primarily to blame for the relatively low usage of banking services reported by random informants because the determinants of household use of banking services were similar whether usage was reported by a random informant or calculated from a full enumeration of individuals' use, and because the constant was not statistically different for those two treatment categories in the full-interaction specification (Robert & Kinnon, 2009). In homes where the head was counted under complete enumeration, the use of banking services was substantially higher than in households where the head did not record household usage. That implied that many heads of households educate other members of the home about banking services that enhance their own utilization. However, when questioned, both numerate and innumerate heads demonstrated a reasonable understanding of how households use banking services (Robert & Kinnon, 2009). Lastly, product-based questions for insurance, formal credit, and informal savings were used far more frequently. This trend also held true for the broader sample when region or enumeration area fixed effects were included, and for the limited sample when the question about travel time to the closest bank was included (Robert & Kinnon, 2009).

2.4.3 Effect of Loans on MSMEs Performance

Mwania (2011) investigated how the performance of micro and small business clients was affected by the Biashara Boresha Loan (BBL), which is owned by the Kenya Commercial Bank (KCB), Ruiru branch. The purpose of the study was to investigate and characterize the financial performance metrics that MSMEs in Nairobi County now employ, based on BBL. Information was gathered through semi-structured interviews at the participant's MSMEs. It was shown that when evaluating their financial performance, the majority of respondents use financial ratios, albeit sparingly. None of the participants used models to anticipate bankruptcy. It was suggested that MSMEs make greater use of the six ratios that have been effective for some research participants as well as additional ratios from the literature that have been shown to be the best financial metrics. Additionally, if MSME owners can afford it, they should use financial software programs and train their finance staff in bankruptcy prediction models.

Further, a study by Avortri, Bunyaminu and Wereko (2013) examined factors that affect SMEs in Accra metropolis, Ghana. A stratified sampling technique was adopted in the administration of questionnaires based on consumables, wares and cosmetics, motorcar spare parts, constructional material and stationaries/pharmaceuticals. Regression analysis and descriptive statistics were used to establish an interrelationship between the dependent variable and other independent variables. The chi-square test was used and revealed that there was a positive linear relationship between the number of financial institutions and ease of access to credit. Further, the study pointed out that this could be due to competition. The study revealed that though the availability of credit has improved a large number of the MSMEs do not

source for funds from the financial institutions. As a result, the growth of the sector remains stunted. The Regression analysis established security requirements, difficulty in getting personal guarantors, absence of accounting records and Risk averse as the most significant variables, in the order, which they impede access to credit in the SME sector.

Mwongera (2014) investigated factors influencing the access to microfinance credit by young women entrepreneurs in the Athi River Sub-County. The study was guided by four objectives which were; k among young women entrepreneurs in Athi River. The study employed a descriptive research design. According to Athi-River Municipality (2013), there are 270 enterprises run by women under 35 years. This study adopted Krejcie and Morgan's theory of determining sample size thereby acquiring a sample of 165 respondents. The study relied mostly on primary data where self-administered questionnaires were utilized for gathering data. Data collected purely was quantitative. Quantitative data was coded and entered into Statistical Packages for Social Scientists and analysed using descriptive statistics. The findings were presented in the form of frequency tables and the explanation is in prose. From the findings of the study, most (38%) of the respondents believed that interest rates charged by the microfinance institution influence credit accessibility to a 54-great extent, 25% to a very great extent, 22% to a moderate extent and 15% to a low extent. The study established that the majority of the young women entrepreneurs had borrowed money from the nearby micro-finance institutions the loan accrues interest rate imposed by the financial institutions as well as demand for collateral security and they found it unreasonable.

Using correlation analysis, Muratha (2015) examined the factors affecting credit accessibility among youth entrepreneurs in Kenya. He found out that young entrepreneurs are attracted to low interest on credit. Low-interest credit promotes loan accessibility among young entrepreneurs, which is a positive relationship between interest rates and young entrepreneurs' credit accessibility. The findings on the extent to which market segmentation influences credit awareness during credit accessibility among young entrepreneurs indicated the existence of a similar relationship between credit awareness and young entrepreneurs' credit accessibility. 69.8%% of the respondents demonstrated that market segmentation positively impacts credit awareness, hence, credit accessibility. The findings on the relationship between Market Segmentation Theory and collaterals during credit accessibility among young entrepreneurs revealed that 91.3% of the respondents agreed that collateral value impacts credit accessibility; accessibility increased with low interest rates on credit. Finally, the findings on how the Market Segmentation Theory influences managerial competencies during credit accessibility among young entrepreneurs revealed that managerial influence affects young entrepreneurs' credit accessibility.

2.4.4 Effect of Clients' Awareness and Understanding of Financial Products

Hussain (2013) examined the effects of social and economic factors on the credit demand for rice in Pakistan. The data were analyzed by using multiple regression, *t*-tests, percentages and frequency distributions. Results showed that the average demand for credit was Pakistani rupee 196,562 (Hussain, 2013). From the study findings, among the 248 rice MSME owners, 63% answered "no security", 24% answered "land documents" and the remaining 13% answered "both land and house documents". So, the majority of rice MSME owners who used the credit system are of

the view that they do not need any type of securities but it depends on their relationship with the system. Those who said that they needed securities were those rice MSME owners who were new in rice MSMEs or didn't have good repute in the market. The results also showed that more MSME owners preferred parties instead of banks. The percentage of MSME owners who use both credit sources has also shown a minor increasing trend from 7% to 8% (Hussain, 2013).

Atieno (2001) assessed the role of institutional lending policies among formal and informal credit institutions to determine the access of small-scale enterprises to credit in Kenya. The study used mainly primary data from individual entrepreneurs and MSME owners receiving credit from both formal and informal credit institutions as well as those who did not. The formal financial institutions considered in this study were commercial banks, Post Office Savings Bank (POSB), non-bank financial institutions, savings and credit cooperative societies (SACCOs), and development financial institutions, mainly Kenya Industrial Estates. The study was carried out in market centres in the rural areas of five districts of western Kenya: Kisumu, Siaya, Veiga, Bungoma and Kakamega. Small-scale entrepreneurs engaged in MSMEs, wholesale and retail trade, and primary processing of agricultural products were selected as the units of study. Rural-based enterprises were selected mainly because surveys on microenterprises in Kenya have shown that about 78% of the enterprises are located in rural areas. The study used systematic random sampling to pick subsequent respondents. A sample size of 540 respondents was initially targeted. However, only 334 respondents were successfully interviewed, distributed as follows: Kisumu 158 respondents, Kakamega 68, Siaya 48, Bungoma 30 and Vihiga 30. Ultimately, the study demonstrated that a lack of awareness of credit limited access to

credit by 21% (Atieno, 2001). About 15% of the respondents revealed that they did not require the credit and 4.5% lacked collateral or security, limiting their credit access. To reiterate, lack of information is the major barrier to credit access not only in this study but in other studies as well.

2.5 Literature Review of Models

This subsection provides an overview of the literature on multiple linear regression parameters and their evaluation.

2.5.1 Multiple Linear Regression Model and its Measurements

By fitting a line to the observed data, regression models are used to describe relationships between variables (Cooper & Schindler, 2003). One can estimate a dependent variable's change as an independent variable or set of independent variables changes using regression. Multiple linear regression models are the most often used statistical method in data analysis, and they are the ideal econometric strategy to handle the continuous dependent variable. According to Brown (2009), it is a general statistical method for examining the relationship between a set of continuous dummy variables and a continuous dependent variable as shown in in equation 2.1. It presumes that dependent variables and independent variables have a linear relationship in linear multiple regression.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_k X_k + \mu \quad \text{.....(2.1)}$$

Where Y represents the dependent variable that is linearly related to k explanatory variables and $\beta_1, \beta_2 \ldots\ldots \beta_k$ are the regression coefficients associated with $X_1, X_2, \ldots, X_k$ respectively. μ is the random error term component reflecting the difference between the observed and fitted linear relationships. Such differences can be caused by

numerous factors such as the joint effect of those variables not included in the model, and random factors that cannot be accounted for in the model (Brown, 2009).

Narasimhan *et al*. (2006) study on food production in farm households and household food security in Tanzania used multiple regression analysis to demonstrate how household size, the amount of maize and paddy produced, the number of plots held, and the number of cattle owned greatly influenced the food production and supply in the studied homes. To help MSME households attain food security, it was advised that they switch to drought-resistant food crops, diversify their sources of income off the farm, and increase the involvement of village extension officers (VEOs) and community development officers (CDOs).

Agutu, Ondiek and Bebe (2020) evaluated the associations between intensification interventions and herd productivity in MSME farms in the Kenyan highlands using multiple linear regression. In this research, two regression models were used to explain milk yield and margin per litre with the indicators of ecological, genetic and socioeconomic interventions in the intensification of MSME production. The results from the research indicated that 58% of the variations in milk yield were explained by socioeconomic interventions like concentrate use, milk sales and credit uptake, and genetic intervention (insemination costs) without ecological intervention indicators was also noted. Research also indicates that almost half (45%) of the variations in margins per litre of milk were explained by concentrates use and socioeconomic milk sales, insemination costs under genetics and ecological intervention (manure recycling) indicators. The feasibility showed that a ten per cent increase in concentrate feed would increase milk yield by 0.13% and reduce the margins earned

by 0.09% per litre of milk. Shifting the focus to insemination, however, would marginally reduce milk yield and margins while ten per cent more milk sales would increase margins by 9.16%.

Ordinary Least Squares Multiple Regression estimates were used in analysing the creditworthiness and loan repayment performance among farmer co-operators in the Owerri agricultural zone of Imo State, Nigeria, Osondu *et al*., (2015). After the analysis, it was evident that educational level, loan size, household size, and farm size were positive and significant at varied critical levels. On the other hand, the interest rate was negative and significant at various critical levels. Resolutions after the analysis included; the government providing larger loan amounts to farmer cooperatives which would increase the beneficiary farmer's access to essential inputs and improve farm management opportunities, subsidizing inputs like fertilizers, offering a ready market for farm outputs, reducing per-unit cost, higher income and higher repayment of borrowed funds.

The multiple regression analysis was also used in a study on the farm household's food production and household food security status in Tanzania by Ngongi and Urassa (2014). The results of the feasibility show that the total annual income, the amount of maize and paddy produced, household size, the number of plots owned, and the number of cattle owned were the key pillars in households' food production and supply. To increase production and supply, some measures, like adopting drought-resistant food crops, diversify into off-farm income-generating activities. Village extension officers (VEOs) and community development officers (CDOs) will be employed to assist MSME owners in production.

Omaore and Oyediran (2020) analyse factors affecting rice MSMEs practices among MSME owners in Ogun and Niger States, Nigeria, using student *t*-tests and regression analysis. From the findings, it was clear that there is a significant difference in the farm practices of the rice MSME owners (t = 8.39, $p \leq 0.05$), and there are factors affecting rice MSME practices such as extension services (β = -0.13, $p \leq 0.05$) were significant. The study recommended agricultural extension services, particularly in Ogun State, should speed up action in organising training that can facilitate the adoption of better MSMEs practices which will lead to an increase in rice production and income generation for the rice MSME owners and availability of affordable fertilizer to MSME owners.

2.6 Identification of Knowledge Gap

Conceptual, contextual and methodological gaps are evident from the findings in the previous empirical studies conducted by Mwania (2011); Kinyua (2014); Mulandi (2013); Kostov *et al*. (2013); Robert and Kinnon (2009); Avortri, Bunyaminu, & Wereko (2013); Hussain (2013); among others. Firstly, studies still need to be done to address the effects of financial inclusion on the performance of MSMEs in the current study area of Baringo County. Studies conducted earlier interpreted concepts from a different perspective by using different theories and variables to make deductive arguments which cannot be generalized in this study. Secondly, each study focused on different contextual environments and sectors, which cannot be generalized with this study. Most of the studies focused on different areas like SACCOs but still need to address the financial inclusion of MSMEs.

In addition, some studies addressed different variables like marketing and human resources, which are different from the variables of this study. Thirdly, methodologies adopted by different researchers varied widely in terms of research design, population, sampling design, and research instruments and data analysis methods, resulting in mixed outcomes and recommendations. Consequently, this study will seek to find out if there is a need to achieve integration of the fragmented and dispersed pieces of research on the effects of financial inclusion on the performance of MSMEs in Baringo County. Therefore, from the findings of empirical studies, the researcher will identify this area as deserving attention since more needs to be done to address the problem under investigation.

2.7 Conceptual Framework

The conceptual framework in figure 2.1 shows a schematic representation of the perceived correlation on how the independent variables affect the dependent variable in the study.

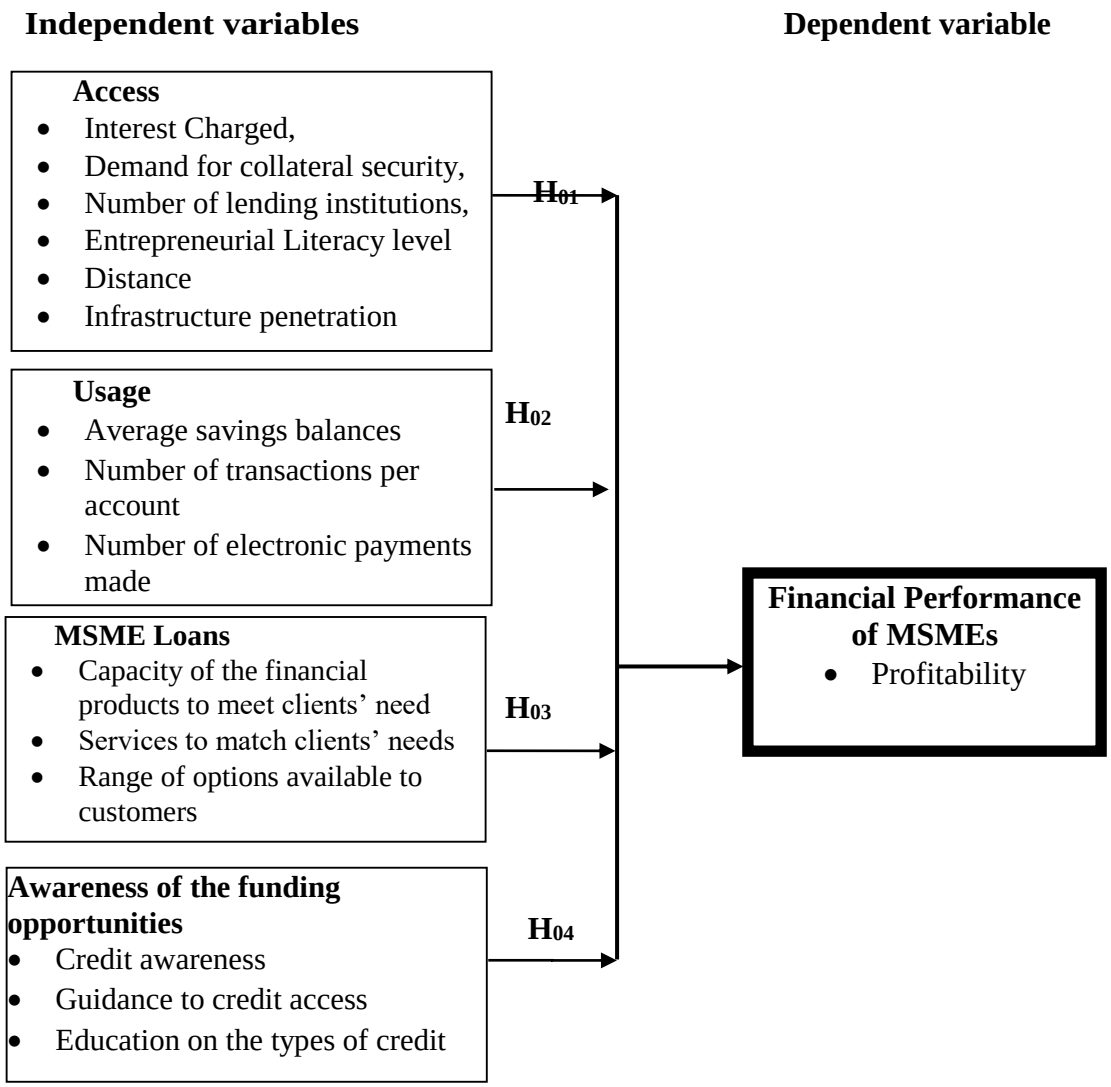

Figure 2.1: Conceptual Framework

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section discusses the research methodology used in this study. It covers the research design, study area, target population, sample size, sampling procedure, data types, instrument of data collection, validity and reliability of the instruments, pre-test pilot study, definition and measurement of variables, data analysis techniques and ethical consideration.

3.2 Research Design

Research design refers to the method used to carry out research. It is a framework that assists the researcher in structuring the collection of data, analysis and interpretation of data. This study employed descriptive and cross-sectional survey designs. According to Osondu and Obike (2015), descriptive design involves enquiring about different kinds of fact findings and then drawing conclusions about the targeted population by describing the data.

A cross-sectional survey design is a design in which the researcher interacts with respondents in a single count. The design is useful in describing a phenomenon as it stands at the time of investigation (Saunders, 2014). The design is appropriate for the study of the relationship between financial inclusion and the growth of MSMEs in Baringo County.

3.3 Study Area

The research was conducted in Baringo County, Kenya, as illustrated in Appendix 5. According to the Kenya National Bureau of Statistics (KNBS, 2019), the county had a population of 666,763 as per the 2019 census. Located in the Rift Valley Region, it is one of Kenya's 47 counties. Baringo County borders eight other counties: West Pokot to the northwest, Turkana to the north, Samburu to the northeast, Laikipia to the east, Nakuru to the south, Kericho and Uasin Gishu to the southwest, and Elgeyo-Marakwet to the west (Devolution Hub, 2018). The county is divided into six sub-counties: Tiaty, Baringo Central, Baringo North, Mogotio, Eldama Ravine, and Baringo South. It covers an area of 11,075 km² and comprises 116 locations and 30 wards. Tiaty is the largest sub-county (4,540 km²), while Baringo Central is the smallest (588.52 km²) (Devolution Hub, 2018).

The county has both indigenous and exotic forests. Indigenous forests include Kabarnet, Kabartonjo, Tenges, Lembus, Saimo, Sacho, Ol Arabel, and Eldama Ravine. Common exotic tree species include Cupressus lusitanica, Eucalyptus saligna, and Grevillea robusta. Prosopis juliflora is found in the Marigat area (Devolution Hub, 2018). Except for Koibatek Sub-County, which is located in the highlands, most areas in East Pokot, Baringo South, Baringo North, Baringo Central, and Mogotio are arid or semi-arid. Rainfall ranges between 300 mm and 500 mm and decreases from south to north. The main economic activities include pastoralism, agriculture, and sand harvesting (KNBS, 2019). Agricultural activities involve MSMEs engaged in crop farming (maize, groundnuts, cotton, and coffee) in highland areas. In the lowlands, residents mainly practice livestock keeping (goats, sheep, cattle, and camels) and beekeeping as key MSME activities.

Major financial institutions include Cooperative Bank, Kenya Commercial Bank, Absa Bank, Equity Bank, Access Bank, and National Bank. Other institutions include Faulu, Kenya Women Microfinance Bank (KWFT), Post Bank, Baringo Farmers' SACCO, Boresha SACCO, Sabatia MSME Owners' Co-operative Society, and Torongo MSME Owners' Co-operative Society. Mobile money transfer services are also widespread across the county.

3.3.1 Challenges and Opportunities

Nearly every economic sector is being digitalized by the majority of the world, a tendency that has increased during the coronavirus epidemic (COVID-19). MSMEs in Baringo County run the risk of falling behind due to the impending COVID-19 pandemic. As customers in the majority of the county interact with shops outside of their homes less frequently, digital migration continues both within the county and nationwide (Schmid, Raju & Jensen, 2021). For example, since the epidemic, internet sales of food and home goods have increased by an average of more than 30% nationwide. Although there are undoubtedly advantages to such expansion, larger companies have reaped a disproportionate share of these advantages (ibid). 60 to 95 percent of digital revenues are earned by the top decile of businesses by size in digital channels (ibid). Compared to major companies, MSMEs in Baringo require greater digitization. This reality stems from the fact that digital solutions are frequently created for large businesses and are challenging for MSMEs to scale down (ibid).

On the contrary, Baringo County's rapid population growth is an opportunity for the MSMEs concerning production and demand (*ibid*). An increase in the population size

can enlarge the economy's production base. The increase in the size of the population enlarges the scope of the division of labour, resulting in large-scale production, reducing production costs and prices and expanding the market. Additionally, when the population increases, opportunities to buy and sell increase, escalating the need to expand businesses or opening up opportunities for start-up companies. Naturally, the demand for most products then increases (*ibid*).

3.4 Target Population

According to Infante-Rivard and Cusson (2018), the target population for a survey is the entire set of units for which the survey data are to be used to make inferences. Thus, the target population defines those units for which the findings of the survey are meant to generalize. The target population is the specific population about which information is desired and according to Kothari (2007) a population is a well-defined or set of people, services, elements, events, groups of things or households that are being investigated.

For this study, the target population is 1,900 MSMEs operating businesses, registered and licensed by the Baringo County government (Department of Finance and Economic Planning, Baringo County, 2019). According to data from the 2019 annual report by the Department of Finance and Economic Planning, Baringo County, (2019), there were 450 MSMEs in manufacturing, 618 MSMEs in trading, and 832 MSMEs in the service industry as shown in Table 3.1.

Table 3.1: Target Population of MSMEs in Baringo County

Sector	Population of MSMEs
Manufacturing	450
Trading	618
Service industry	832
Total	1,900

3.5 Sample Size and Sampling Procedures

3.5.1 Sample Size

A sample size is a sub-population which possesses relatively the same characteristics as the population. The significance of sample size is that it saves time and money for the researcher while collecting data. It can be uneconomical for a researcher to limit his or her population studies because the results will be an inadequate representation of the full population size, yet an oversized population size might be quite expensive (Cooper and Schindler, 2008). Therefore, the sample size for this study was determined using Yamane's (1967) formula as shown in Equation 3.1.

$$n = \frac{N}{1 + N(e)^2} \quad \text{..... (3.1)}$$

Where, n = sample size, N = population size and e is the error term. A 95% confidence level is considered appropriate in this study. To find the sample size, the variable values are then fitted into Equation 3.1 as shown below. Therefore, fitting the values to the equation generates a sample size of 106 registered MSMEs.

$$\boldsymbol{n} = \frac{1900}{1 + 1900(0.05)^2} = 106 \quad \text{..... (3.2)}$$

Therefore, from the above calculations, a total of 106 MSME owners or managers formed the required sample size necessary for data analysis in this study. The researcher added 5% (5) of the sample size to cater for non-response and incomplete questionnaire responses among the respondents.

3.5.2 Sampling Procedures

According to Taherdoost (2016), sampling is the process of selecting the required individuals for the study whereby several individuals are selected from a population such that the selected group has elements representative of the characteristics found in the entire population. Therefore, this study employed multistage sampling comprising of purposive sampling, stratified random sampling, and simple random sampling.

In the first stage, purposive sampling was used to select the study area since the study area is leading in marginalization or has many MSMEs. Purposive sampling is a technique that relies on the researcher's judgement to select members of a population to participate in an experiment (Saunders, 2014). Besides being a researcher's judgement, purposive sampling is a non-probability sampling approach. In other words, purposive sampling allows the researchers to select a representative sample by using sound judgment, resulting in saving money and time.

In the second stage, a stratified random sampling procedure was used to obtain the sample of MSMEs in the whole county. The area under study has six Sub-Counties that will form the six strata for this study. Stratified random sampling is a sampling approach that divides a population into strata (sub-groups), namely manufacturing, trading, and service. In this stratified random sampling procedure, the strata are

established based on shared members' characteristics or attributes (Taherdoost, 2016). This study arranged the population in these sub-sets to allow for easier analysis and questionnaire administration. Each stratum was picked randomly from each sub-county to provide information on how financial inclusion has impacted the performance of their companies (Cooper & Schindler, 2003).

In the last stage, a simple random sampling technique was used. A list of all the MSME owners or managers from each sub-county of the six Sub-Counties that formed the six strata was obtained from the Sub-County or County Department of Trade. The names of the MSME owners/managers in the lists were first serially numbered and then randomly ordered and picked using a simple random sampling technique. Proportionate sampling was then used depending on the population of MSMEs in each of the sub-counties as shown in Table 3.2. The study selected 111 MSMEs owners/managers as respondents from among the registered 111 MSMEs.

Table 3.2: Proportionate Size Sample Distribution of MSMEs in Baringo County

Sub-County	Sector	Population of MSMEs	Proportion (%)	Sample Size	Total
Baringo Central	Manufacturing	240	53%	14	1002
	Trading	321		26	
	Service industry	441		19	
Baringo North	Manufacturing	85	19%	6	356
	Trading	114		9	
	Service industry	157		6	
Baringo South	Manufacturing	43	9%	3	180
	Trading	58		4	
	Service industry	79		3	
Eldama Ravine	Manufacturing	33	7%	3	137
	Trading	44		3	
	Service Industry	60		2	
Mogotio	Manufacturing	28	6%	2	118
	Trading	38		3	
	Service industry	52		2	
Tiaty	Manufacturing	26	6%	1	107
	Trading	34		3	
	Service industry	47		2	
TOTAL		**1900**	**100%**	**111**	**1900**

3.6 Data Types and Sources

This study used both primary and secondary data sources. Primary data was collected from the 111 MSME owners/managers through face-to-face interviews in Baringo County. Primary data that was collected includes the age, gender, education level,

employment type, business type, number of employees, and period of operation of the MSME.

Secondary data was collected through a literature review. A review of various reports, such as data on MSMEs' performance and financial inclusion. The data was obtained from available information maintained by the County Government of Baringo on MSMEs. This included licenses and letters of authority to conduct businesses within the county. Secondary data was also obtained from available SME financial records maintained by the MSMEs in the study area. These financial records included bank statements, income and expenditure statements, cash flow statements, and balance sheets for at least the last four financial years (2019-2023). Other secondary data sources included economic journals, economic surveys, statistical abstracts, conference reviews, books, magazines, national and county development and strategic plans, National Bureau of Statistics publications, Ministry of Trade, Investments and Industry publications, desktop literature, and Internet sources.

3.7 Data Collection Instruments

Conducting scientific research requires accurate and methodical data collection. Data collection allows us to acquire information on the objects of our research. Data collection instruments refer to the devices used to collect data (Njagi & Kombo, 2014). Data gathering instruments vary by research kind but may involve document review, observation, questioning, measurement, or a mix of methods (*Ibid*). A questionnaire is a tool that is used in research for data collection, and data can be collected from a large sample (*Ibid*). Mugenda (2008), on the other hand, described several features which make a questionnaire be more appropriate instrument for data

collection. It helps the researcher to collect information from various places, emotions, and undue influence does not affect data collection; it ensures confidentiality, and it is also economical and saves time.

For this study, primary data were collected directly from the respondents, the managers or owners of the MSMEs, through face-to-face interviews using a structured questionnaire as shown in Appendix I. The items in the questionnaire were derived from the specific objectives of the study. The respondents were given the questionnaires through a hand-delivery system by the researcher, taking into consideration their willingness to participate in the study.

3.7.1 Validity of Research Instruments

Validity expresses the degree to which a measurement measures what it purports to measure (Mugenda, 2003). It also represents the amount of systematic or built-in error in the questionnaire. An instrument cannot be valid if it does not consistently produce accurate results, since the timing of administration can affect the outcome. An instrument can be either valid or reliable, both valid and reliable, or neither valid nor reliable. To be valid, an instrument must be trustworthy, though.

According to Orodho (2009), before using a research instrument, content validity should be determined by the researcher, and discuss the items in the instrument with the supervisor and colleagues. Therefore, the validity of the research instruments for this study was determined by presenting the instruments to two experts at the University of Eldoret to determine both content and face validity. The experts have

wide experience in teaching and supervising postgraduate students. Their comments will be incorporated into the instruments.

3.7.2 Reliability of Research Instruments

Reliability refers to the measure of consistency of concept (Ekelund & Hebert, 2013). A measuring instrument is reliable if it provides consistent results. Reliability establishes whether the instrument is stable, dependable, repeatable, consistent and regular (Ekelund & Hebert, 2013). This study will use Cronbach's alpha to test the reliability of the measures in the questionnaire. To test the reliability of the questionnaire, the study will use Cronbach's alpha for separate domains of the questionnaire rather than the entire questionnaire. Mugenda and Mugenda (2003) argue that the size of a sample used for reliability testing would vary depending on time, costs and practicality. They further assert that the sample size would tend to be 5- 10 per cent of the main survey. The respondents in a reliability pilot test do not have to be statistically selected when testing the validity and reliability of the instruments (Ekelund & Hebert, 2013). Therefore, for this study, the reliability of the instrument was determined by pre-testing the instrument with a sample of 11 respondents in Laikipia county, a neighbouring county with similar characteristics to those of the study area, but they were not be part of the study. The reliability of the instrument was calculated using Cronbach's coefficient for either even or uneven items based on the order of the number of arrangements of the items in the questionnaire. Mugenda (2003) states that reliability should be at least 0.70 or higher. Thus, if the coefficient Alpha of 0.70 is obtained, then the instrument would be accepted; otherwise, reviewed to attain an accepted standard that is, ≥ 0.70. Data from the pilot study were analysed using Cronbach's Alpha coefficient, mathematically

expressed as shown in Equation 3.3. A coefficient of 0.7 and above was deemed reliable.

$$\alpha = \frac{N\bar{c}}{\bar{v} + (n-1)\bar{c}} \quad \text{.....} \quad (3.3)$$

Where α is the Cronbach's Alpha coefficient, $\bar{c}$ is the average inter-item covariance among the items, $\bar{v}$ is the average variance and N is equal to the number of items/observations. The feedback data from the pilot study enabled the researcher to modify the questionnaire accordingly to give valid and reliable information.

3.8 Data Collection Procedures

A research permit (authorization letter) as shown in Appendix 2 was sought from the National Commission for Science Technology and Innovation (NACOSTI) through an introduction letter from the Board of Graduate Studies, University of Eldoret. The permit was presented to the County Commissioner and County Director of Education for permission to collect data from the MSMEs within Baringo County. Thereafter, an appointment with MSMEs' managers or owners was sought by the researcher before the commencement of data collection. MSMEs' owners or managers were interviewed; however, if the manager and owner were not available, a high-ranking administrative employee or a knowledgeable person in the business was interviewed.

3.9 Data Analysis and Presentation

Upon receipt of the filled questionnaires, the initial screening of data began by sorting, coding, and cleaning. This involved interpreting data collected from respondents once the questionnaires and recordings of the secondary data had been completed and collected from each respondent. Incomplete data sources were

discarded. Data was analysed by use of inferential tools with the help of IBM Statistical Packages for Social Sciences (SPSS) version 28.0.1.1 software. The data obtained was analysed using both descriptive and inferential statistics. The descriptive statistics used included simple percentages, arithmetic mean and standard deviation. Data presentation was done by use of frequency distribution tables, bar graphs and pie charts.

Analysis of the data was based on the research questions and objectives of the study. The study used correlation analysis to determine the strength of the relationship between the study variables. Further, regression analysis was conducted to provide a linear prediction and estimate coefficient of linear regression equations to describe the relationship between one or more independent quantitative variables in the growth of MSMEs as a result of the changes in financial inclusion.

This study employed a multivariate regression model as shown in Equation 3.4 to determine the relative significance of each of the four specific objectives.

$$FP = \beta_0 + \beta_1 FU + \beta_2 FA + \beta_3 QS + \beta_4 CA + \varepsilon \quad \text{..... (3.4)}$$

Where;

FP = financial performance of MSMEs,

FU = MSMEs usage of financial services,

FA = MSMEs' access to financial services,

QS = the quality of products and service delivery, and

CA= clients' awareness and understanding of financial products.

β_0 is the constant term while the coefficient βi = 1….4 measured the sensitivity of the dependent variable (*FP*) to a unit change in the predictor variables. ε represents the error term which captured the unexplained variations in the model.

3.9.1 Estimates of Access to Financial Services on MSMEs' Performance

To assess the effects of access (penetration of the bank branches or point of sale devices in rural areas and barriers to access such as costs or information) factors on the performance of MSMEs, a multivariate regression model was used to link the independent variables to the dependent variable as shown in equation 3.5.

$$FP = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \mu \quad \text{..... (3.5)}$$

Where;

FP = MSMEs performance,

X_1 = Interest Charged,

X_2 = Demand for collateral security,

X_3 = Number of lending institutions,

X_4 = Entrepreneurial Literacy,

X_5 =Distance, and

X_6 =Infrastructure.

β_0 is the constant term while the coefficient βi = 1….4 measured the sensitivity of the dependent variable (*FP*) to unit change in the predictor variables. ε represents the error term which captured the unexplained variations in the model.

3.9.2 Estimates of Usage of Financial Services on MSMEs' Performance

Additionally, to assess the effects of usage (average savings balances, number of transactions per account, number of electronic payments made) on performance of MSMEs, the study used the multivariate regression model as shown in equation 3.6.

$$FP = \beta_0 + \beta_1 M_1 + \beta_2 M_2 + \beta_3 M_3 + \mu \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (3.6)$$

Where;

FP = MSMEs performance,

M_1 = average savings balances,

M_2 = number of transactions per account,

M_3 = number of electronic payments made.

β_0 is the constant term while the coefficient βi = 1….3 measured the sensitivity of the dependent variable (FP) to unit change in the predictor variables.

3.9.3 Estimates of Bank Loans on MSMEs' Performance

Further, to assess the effects of clients' Bank loans (describing the capacity of the financial products and services to match clients' needs, and the range of options available to customers) on the performance of MSMEs, the study used the multivariate regression model as shown in Equation 3.7.

$$FP = \beta_0 + \beta_1 Z_1 + \beta_2 Z_2 + \beta_3 Z_3 + \mu \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (3.7)$$

Where;

FP = performance of MSMEs,

Z_1 = capacity of the financial products,

Z_2 = services to match client's needs,

Z_3 = range of options available to customers.

β_0 is the constant term, while the coefficient βi = 1….3 measured the sensitivity of the dependent variable (*FP*) to a unit change in the predictor variables.

3.9.4 Estimates of Clients' Financial Product Awareness on MSMEs Performance

Clients' awareness and understanding evaluate the provision and existence of formal financial literacy and education policy, program or process, both internally (for service providers) and externally (for regulatory agencies) to ensure customer awareness, knowledge and capability to use basic financial services. To assess the effects of clients' awareness and understanding of financial products on the performance of small and medium-scale enterprises, the study used the multivariate regression model as shown in Equation 3.8.

$FP = \beta_0 + \beta_1 T_1 + \beta_2 T_2 + \beta_3 T_3 + \mu$ …….……...……..... (3.8)

Where;

FP = performance of MSMEs,

T_1 = Credit Awareness

T_2 = Guidance to credit access,

T_3 = Education on the types of credit.

β_0 is the constant term while the coefficient βi = 1….3 measured the sensitivity of the dependent variable (*FP*) to unit change in the predictor variables.

3.10 Diagnostics Tests

Diagnostic tests were conducted from the regression results of the analytical approach that is, SPSS output. The analytical approach taken to analyse data was based on specific assumptions about the kind of data being analysed. Specifically, the multiple

linear regression models using ordinary least squares were adopted in the study. However, before using it, the assumption that underpinned this analytical model to be tested was multicollinearity. For this study, a multicollinearity test was performed to check for the correctness of the estimates of the variables using the tolerance and Variance Inflating Factor (VIF). The formula is as shown in Equation 3.9 and as adopted from Snee and Marquardt (1984).

$$VIF = \frac{1}{1 - R^2} \quad \text{.........} \quad (3.9)$$

Where R^2 is the R^2-value obtained by regressing the j^{th} predictor on the remaining predictors. The Variance Inflating Factor of 1 indicates no correlation between the independent variable and any others. VIFs between 1 and 5 suggest a moderate correlation, but it is not severe enough to warrant corrective measures. VIFs greater than 5 represent critical levels of multicollinearity where the coefficients are poorly estimated and the *p*-values are questionable.

3.11 Definition, Measurement of Variables and Expected Signs

Table 3.3 shows the variables that were used in this study and their measurements. The positive (sign +) means a positive association with the dependent variable, while (negative sign) denotes a negative relationship with the dependent and independent variables.

Table 3.3: 1Descriptions, Measurement and Expected Signs of Variables

Variables	Description	Units	Expected sign
Dependent variable			
Financial Performance of MSMEs			
Gross profit	Continuous	Kes	+/-
Independent variables			
	Access		
Interest charged	Continuous	Kes	+
Demand for collateral security	Categorical	1=yes, 0=no	+
Number of lending institutions	Categorical	1=Employer 2=Relatives and Friends 3=Microfinance institutions 4=Group Contribution 5=Banks	+
Entrepreneurial Literacy level	Categorical	1=Primary 2=Secondary, 3=College 4=University 5=post-graduate	+
Distance to nearest financial institution	Continuous	Km	+
Financial infrastructure	Categorical	1=Good, Neutral, 2=poor	+
	Usage		

Average savings balances	Continuous	Kes	+/-
Number of transactions per account			+/-
Number of electronic payments made			+/-
MSMEs Loans			
Capacity of the financial products to meet clients' need	Categorical	1=Strongly Positive 2=Positive 3=Neutral 4=Negative 5=Strongly Negative	+
Services to match clients' needs	Categorical	1=yes, 2=no	+
Range of options available to customers	Categorical	1=Employer 2=Relatives and Friends 3=Microfinance institutions 4=Group Contribution 5=Banks	+
Financial Product Awareness			
Credit Awareness	Categorical	1=Yes, 2=No	+
Guidance to credit access	Categorical	1=Yes, 2=No	+
Education on the types of credit	Categorical	1=Yes, 2=No	+

3.12 Ethical Considerations

A research permit for this study was obtained online from the National Commission for Science Technology and Innovation (NACOSTI). The permit ensured that this study followed the principles guiding the study design and practices. The principles considered included voluntary participation, informed consent, anonymity, confidentiality and potential hazards. The permit was presented to the relevant authorities, including the county commissioner and county inspectorate, responsible for data collection in the county as well as the Ministry of Co-operatives and Micro, Small and Medium Enterprises (MSMEs) Development for permission to collect data from the MSMEs in Baringo County. The respondents were assured of the confidentiality of the information they provided, including their personal information.

CHAPTER FOUR

RESULTS

4.1 Introduction

This chapter presents the study's results and discusses its findings. It includes the response rate, descriptive results, diagnostic test results, and econometric results.

4.2 Response Rate

A sample size of one hundred and eleven (111) MSME owners/managers were selected to take part in the study. A total of 111 questionnaires were duly filled out by the MSME owners, which represented a response rate of 100%, and therefore a representative of the whole population. This response rate indicates strong participation and interest from the respondents, enhancing the reliability and generalizability of the study findings (Lund, 2023). A high response rate minimizes the risk of non-response bias and ensures that the sample accurately represents the population (Holtom *et al.*, 2022).

4.3 Descriptive Analysis Results

The study evaluated the descriptive statistics, including the socio-economic profiles of the respondents. Likewise, the descriptive results of the objectives are presented, including access (penetration of the bank branches or point-of-sale devices in rural areas and barriers to access such as costs or information) of the MSMEs; bank loan usage (average savings balances, number of transactions per account, number of electronic payments made) by the MSMEs; financial usage (average savings balances, number of transactions per account, number of electronic payments made) on the MSMEs' financial performance; effects of clients’ bank loans (describing the capacity

of the financial products and services to match clients' needs, and the range of options available to customers) on the MSMEs' financial performance; as well as effects of clients' financial product awareness on MSMEs' financial performance. The descriptive analysis of financial performance, including gross profit and ROI of the MSMEs, is also presented in this section.

4.3.1 Socio-Economic Profile of MSME Owners/Managers

This sub-section provides the results of the socio-economic profiles of the MSME owners, including age, gender, level of education, marital status, and employment type. It also describes the type of business enterprise.

A summary statistic results in Table 4.1 shows the mean age of the MSME owners/managers. Results indicate that the mean age of MSME owners/managers in Baringo County was 38.0 years, with a minimum of 19 years and a maximum of 61 years, respectively.

Table 4.1: Results on Mean Age of MSME Owners/Managers

Mean	Std. Dev.	N	Minimum	Maximum
38.0	9.6	111	19	61

The current findings suggest that the majority of the interviewed MSME owners were middle-aged, aligning with the productive age for entrepreneurial activities. According to numerous sources and daily observations, an entrepreneur's age may influence firm survival, growth, and/or organizational decline or failure. In some cases, an entrepreneur's age correlates with trust. New SMEs face a greater risk of survival compared to older firms because they often lack experience, access to

resources, and networking skills (Cowling et al., 2018). The high proportion of middle-aged individuals in the MSME industry may also relate to the fact that young people find it challenging to establish business ownership without capital. This challenge reinforces the current finding, which aligns with several other studies conducted in Kenya. A survey of MSMEs across the 47 counties of Kenya indicates that the mean age of MSME owners was 45 years (Karimi, 2023), 37.8 years among MSME owners in the leather industry (Benedict et al., 2021), 34.5 years among MSME owners in Kiambu Municipal Council (Rotich et al., 2015), 37.6 years among MSME owners in Nairobi (Kandie, 2009), and 36.5 years among MSME managers in Tharaka Nithi (Kawira et al., 2019). The current mean age in this study also aligns with MSME owners' mean ages in other African countries, such as 35.9 years in Ethiopia (Hassen and Singh, 2020), 45.6 years in Nigeria (Abdullahi et al., 2016), 36.7 years in Ghana (Nketsiah, 2018), and 36.8 years in Tanzania (John et al., 2023). However, Foya (2023) reported the mean age of MSME owners in Tanga, Tanzania, to be 28 years. Table 4.2 shows the summary statistics on the gender of the respondents in the study area. Results revealed that that 71.2% of the MSME owners/managers in the study area were males, while 28.8% were females.

Table 4.2 Gender of the MSME Owners/Managers

Variable	**Frequency**	**Percent**
Male	79	71.2
Female	32	28.8
Total	111	100.0

The higher number of male owners/managers of the MSMEs in the current study is consistent with other studies done in Kenya. For example, during a study of the performance of SMEs in the Juakali sector in Nakuru County, results showed that 92% were males while 8% were females who owned small and micro enterprises (Kinyua, 2013). In Nairobi County, a study on SMEs' financial performance indicated that males were 59% and females were 41% (Amsi *et al.,* 2017). Further, another study on the influence of organizational strategy and institutional factors on the performance of Small and Medium Enterprises (SMEs) in Kenya, (Kandie, 2009) found that there were 67.9% male and 32.1% female SME owners. However, these findings differ from a study of MSMEs in Kilifi, where males were 42% and females were 59% (Mwakera *et al.*, 2023). In Kiambu Municipal Council, in a study on the effects of microfinance services on the performance of small and medium enterprises, male SME owners were 34% while female owners were 66% (Rotich *et al.*, 2015). In another study among the MSME owners in the leather industry of Kenya, the males were 48% males while females were 52% (Benedict *et al.*, 2021). In a study on the factors affecting the performance of small and micro enterprises in Limuru Town Market of Kiambu County, males were 25.6% and female SME owners were 74.4% (Kamunge *et al.*, 2014). Meanwhile in Tharaka-Nithi County, a study on the effect of digital marketing on the performance of MSMES in Kenya found that males were 46.7% and females were 53.3% (Kawira *et al.*, 2019). The dominance of males as owners of the MSMEs is also consistent with studies in Sub-Saharan Africa such as 87.2% males against 12.8% female owners in Amhara Region, Ethiopia during a study on the effect of market orientation on the performance of small and medium enterprises (Hassen and Singh, 2020). While in Ekiti State, Nigeria, a study on the determinants of Small and Medium Enterprises (SMEs) performance by (Akinruwa *et*

al., 2013), results revealed that 68.75% SME owners were males while 31.25% were females. In Zambia, a study on the impact of supply chain management practices on the performance of small and medium enterprises in developing countries found that 67% were male while 33% were female among SME owners (Chileshe and Phiri, 2022). A study conducted in Malawi on the gender and performance of micro and small enterprises, (Chirwa, 2004) found that 47.5% of the SME owners were males against 35.9% females with the remaining 16.6% being joint owners/managers of the SMEs. Further, in a study on the influence of social competence on the performance of Small and Medium Enterprises (SMEs) in Tanzania manufacturing SMEs, results show that 76.8% of SME owners were male while 23.2% were female (John *et al.*, 2023). The dominance of males in most of the MSMEs stems from access to financial resources which largely favour males in many countries in Africa (Aterido *et al.*, 2011), due to collateral requirements (Senou and Manda, 2022).

Table 4.3 shows the results on the marital status of the MSME Owners in Baringo County. Results reveal that 76.6% of MSME owners were married, 1.8% were widowed and 21.6% were single. In Baringo County, the majority of the MSME owners were married, which is not surprising since household heads are mature. Many African men at the age above 28 years are often married. This may be attributed to the fact that through marriage, MSME owners gain access to family assets which enable them to set up MSMEs. Those who are single are probably young and either still in school or are not able to manage the MSMEs.

Table 4.3 Marital Status of the MSME Owners/Managers

Variable	Frequency	Percent
Married	85	76.6
Single	24	21.6
Widow	1	0.9
Widower	1	0.9
Total	111	100.0

The above results are consistent with other study findings on the marital status of MSME owners in Kenya, such as the study by Benedict et al. (2021) on the financial determinants of SMEs' performance. Evidence from Kenya's leather industry found that 55% of MSME owners among leather workers in Kenya were married, while 45% were single. Similarly, the current results align with another study on the effect of microfinance credit on SMEs' financial performance in Kenya, which found that 31% of MSME owners were married compared to 28% who were single in Nairobi (Amsi et al., 2017). In Tharaka-Nithi County, a study by Kawira et al. (2019) on the effect of digital marketing on the performance of MSMEs in Kenya found that 53% of MSME owners were married against 30.8% who were single. Converging with the current results, Kanini et al. (2022a) reported that 67.5% of MSME owners were married against 16.9% who were single in Nairobi County (Kanini et al., 2022b). The current results regarding the marital status of MSME owners/managers converge with findings from other studies in Sub-Saharan Africa, such as a study in Malawi that examined gender and performance in micro and small enterprises, which found that 76.4% of MSME owners/managers were married against 23.6% who were single (Chirwa, 2004). However, the current findings diverge from another study in Ethiopia on the socio-economic contributions of micro and small enterprises in Jimma City

(Geleta, 2013), which found that 28% were married, 51% were single, and 21% were either divorced or separated.

The summary statistics results in Table 4.4 are those on the level of education of the MSME Owners/managers. Results show that a majority had secondary levels of education (42.3%) followed by a college level of education (29.7%) and then a primary level of education (18.0%). This means that 42.3% of the MSME owners/managers have acquired secondary education, which is key to business management, and performance, hence imparting skills in entrepreneurship to this group of respondents can be highly successful.

Table 4.4 Results on Level of Education of the MSME Owners/Managers

Variable	**Frequency**	**Percent**
No formal education	1	0.9
Primary	20	18.0
Secondary	47	42.3
College	33	29.7
University	10	9.0
Total	111	100.0

The likelihood of failure was related to the owner's work experience before business launch and education. This is the reason why most employees will tend to recruit highly educated people for white-collar jobs because they are assumed to be in a better position to make effective business decisions. Education and skills are thus needed to run micro and small enterprises successfully. A research study in Kenya by

(Wawire and Nafukho, (2010) on factors affecting the management of women groups' micro and small enterprises in Kakamega District, reported that the majority of the women involved in micro and small enterprises in Kenya are not quite well equipped in terms of education and skills. A study by (Wong (2005) on critical success factors for implementing knowledge management in small and medium enterprises indicates that those who are more educated and who have undergone proper training are more likely to be successful in the SME sector. This shows that, for small businesses to perform well in Kenya, people need to be well-informed in terms of skills and management. The dominance of secondary education among MSME owners/managers is consistent with other studies in Kenya. A study on the effect of innovation adoption on the financial performance of Small and Medium Enterprises in Kilifi County by Mwakera *et al.*, (2023) found that 41% of the owners of the SMEs had a secondary level of education, which is in convergence with the current study's finding. In another study on the effects of microfinance services on the performance of small and medium enterprises in Kiambu Municipal Council, Kenya, Rotich *et al.* (2015) found that 45.6% of the MSME owners had a secondary level of education, which is in converges with the current study's findings.

Meanwhile, in a study on the financial determinants of SME performance based on evidence from Kenya leather industry in Tharaka-Nithi County, Kenya, Kawira *et al.* (2019) found that 35.5% of the MSME owners had a secondary level of education against 21.5% and 19.5% of MSME owners who had primary and college education levels respectively. However, the current study findings diverge from the findings reported among the leather workers in Kenya where the results showed that 35% had

no education, 53% had a certificate level of education and 11% had degrees (Benedict *et al.*, 2021).

The current study's findings also diverge from those of a study on factors affecting the performance of small and micro enterprises in Limuru Town, where Kamunge *et al.* (2014) reported that 55.6% of the SME owners had primary education and 35.9% had secondary education. The current findings also deviate from the statistics of Kenya's literacy level where 54% of owners/managers of MSMEs were found to have secondary education (Kenya National Bureau of Statistics, 2019) compared to 42.3% in the current study. A study by Loison (2019) on household livelihood diversification and gender: Panel evidence from rural Kenya revealed that most of the rural population often attend education up to secondary schools and then drop out to look for a job and earn a living owing to the lack of school fees to proceed to tertiary levels of education.

In the African continent, the current study finding of more MSME owners having secondary education is consistent with other studies. These include the study in Tanga, Tanzania on the assessment of the Impact of skills training on establishing micro, small and medium enterprises (MSMEs). In Tanzania, where results show that 41% of the respondents had secondary education as compared to the 30% who had primary level of education (Foya, 2023). Similar findings results were found in a study by (Hassen and Singh, 2020) on the effect of market orientation on the performance of small and medium enterprises in the case of Amhara Region, Ethiopia, where results revealed that 33.6% of SME owners had a secondary education level, 23.2% had primary, while 17.6% had a certificate level of education.

However, dissimilar results from the current study findings are noted in a study carried out in Malawi on gender and the performance of micro and small enterprises, where it was found that 69.6% of the MSME owners had primary education, 18.1% secondary, and 2.2% certificate (Chirwa, 2004). Similarly, in Tanzania, a study on the influence of social competence on the performance of small and medium enterprises (SMEs) in Tanzania's manufacturing SMES found that 47.6% of MSME owners had a primary level of education, and 38.6% had attained secondary education (John et al., 2023). In a review study on education and training as a means of developing MSME expertise, Sutrisno et al. (2023) stated that education improves the knowledge and management skills required for operating SMEs. While working on the financial education for MSME entrepreneurs' perceptions and behaviours in Bogotá, del Pilar López-Peña (2020) noted that the literacy level of MSME owners may also determine the rate of adoption of best management practices that are important for running MSMEs and directly affect their capacity to absorb new ideas. The results on the employment types among the MSME owners and managers in the study area are shown in Table 4.5. Results indicate that 91.9%, 3.6%, 3.6%, and 0.9% of the MSME owners were sole proprietors, formally employed, casually employed, and contract employees, respectively. The findings demonstrate that most MSME owners and managers were in sole proprietorships (91.9%).

Table 4.5: Employment Types among the MSMEs Owners/ Managers

Employment type	Frequency	Percent
Casual employment	4	3.6
Contract Employment	1	0.9
Formal employment	4	3.6
Sole proprietorship	102	91.9
Total	111	100.0

A study by Mutinda (2020) on financial factors affecting access to credit among small and medium enterprises in Machakos Town Sub-County found that 85% of the owners/managers of MSMEs were sole proprietors, compared to 8.3% in partnerships, with the rest engaged in contract employment. This finding aligns with the current study. In another study on the effect of entrepreneurial marketing on the performance of micro, small, and medium enterprises in Tharaka-Nithi, Kenya, Kimathi (2020) established that 57% of MSMEs were operated as sole proprietorships and 44% as partnerships. Additionally, a study on financing preferences of micro, small, and medium enterprises in Nairobi County, Kenya, revealed that 60% of MSME owners/managers were sole proprietors, while 40% were in partnerships (Kimani, 2020). In a study examining the influence of accelerator programs on the growth of Micro, Small, and Medium Enterprises across Western Kenya, Kiambu, and Nairobi Counties, Gikabu (2020) found that sole proprietorships made up 43.7%, compared to 14.8% in partnerships. Furthermore, in other African countries, the prevalence of sole proprietorship among MSME owners/managers was highlighted in a study examining the influence of social competence on the performance of small and medium enterprises (SMEs) in the manufacturing sector, where 58.8% of SME owners

operated as sole proprietors (John et al., 2023). A study on the sustainability of single-owner entities, which examined financial factors influencing the growth of sole proprietorships, indicated that the prevalence of sole proprietorship in managing MSMEs may be attributed to the small scale of the business, limited capital outlay, and frequent disagreements in many partnership or group ventures. These factors may also explain the high number of sole proprietorships in the current study (Makudza et al., 2022).

Results on the classification of the sector of enterprises owned by MSME owners/managers are shown in Table 4.6. Results reveal that trade was the most dominant sector of the MSMEs (50.5%), followed by service (37.8%) and the least was manufacturing (11.7%).

Table 4.6: Classification of the Sectors of Businesses Owned by MSME Owners/ Managers

Sector of the business	Frequency	Percent
Manufacturing	13	11.7
Trade	56	50.5
Service	42	37.8
Total	111	100.0

The dominance of trade among the MSMEs in the current study compares well with a study on the effect of innovation adoption on the financial performance of Small and Medium Enterprises in Kilifi County by Mwakera *et al.*, (2023), where there was 76% dominance by the trade sector among the MSMEs. However, a study on the effect of

business financing on the performance of small and medium enterprises in Lurambi Sub-County, Kakamega County, found that the most dominant MSMEs were service (42%), followed by trade (37.5%) and the least was industrial (20.5%) (Manini *et al.*, 2016b). These results differ from those results found in other Sub-Saharan African countries such as those in a study on the factors affecting the performance of micro and small enterprises in South West Ethiopia regions of Bench Maji, Sheka, and Kefa zones, the Amharic region of Ethiopia where 44.6% of MSMEs were in the service industry, 36.5% in manufacturing and 18.9% in trade (Abdissa and Fitwi, 2016). In a study on market orientation and business performance among SMEs in Accra, Ghana, study findings revealed that 42.3% of MSMEs were in light manufacturing and 57.7% in service (Mahmoud, 2011).

Results on the number of MSME employees in the study area are shown in Table 4.7. Results reveal that the mean number of employees was 3, with a minimum of 1 employee and a maximum of 20 employees.

Table 4.7: Summary Statistics of the number of MSME employees

Mean	Median	Std. Dev.	N	Minimum	Maximum
3.00	2.00	1.6	111	1	20

The mean of 3 employees in the study area converges with several studies in Kenya. In one of the studies on factors affecting the performance of small and micro enterprises in Limuru Town Market of Kiambu County, Kamunge *et al.* (2014) found that MSMEs in Limuru Town employed a mean of three employees. A mean of 3 employees was also found in the study on the effect of innovation adoption on the

financial performance of Small and Medium Enterprises in Kilifi County by Mwakera *et al.*, (2023) as well as in the study on the effect of Entrepreneurial Marketing on the Performance of Micro, Small and Medium Enterprises in Tharaka-Nithi County, Kenya (Kimathi, 2020).

4.3.2 Access to Bank Branches by MSME Owners/Managers

Table 4.8 shows results on access by MSME owners/managers to bank branches in Baringo County. According to the results in the table, the mean interest rate charged by banks for MSME loans was 18.5% but could range from 12.5% to 32%.

Table 4.8: Access to Bank Branches by MSMEs Owners/Managers

Variables	Mean	Std.	N	Minimum	Maximum
Interest rates (%)	18.5	3.78	111	12.5	32
Number of lending institutions	4.0	1.0	111	1	8
Distance to lending institutions	2.46	1.54	111	0.22	8.52

The current results imply that banks were charging interest rates, which increased the borrowing costs and negatively affected access to credit among MSME owners/managers in the study area. The current interest rates compare well with the results of a study on the effect of interest rates on credit access by SMEs in the fisheries sector in Kisumu County, Kenya, where results show that banks and microfinance institutions charged a minimum of 12% and a maximum of 22% interest rates (18.5 %) between the year 2000 and 2022 (Juma, 2022). The current study also compares well with another study (Odhiambo, 2013), on the effect of changes in interest rates on the demand for credit and loan repayments by small and medium enterprises in Kenya which reported that several commercial banks in Kenya charged an interest rate of 16.5%, which is similar to the current study finding. However, the

18.5% interest rate found in the current study is higher than the 15.5% interest rate charged on MSMEs as reported by the finAccess Business Survey by the Central Bank in 2022 (Central Bank of Kenya, 2023). The current interest rate of 18.5% is also higher than the 13% interest rate reported by the Cooperative Bank of Kenya (Cooperative Bank, 2024) and the National Bank of Kenya (National Bank of Kenya, 2024). The current interest rate is also higher than that reported in a study on financing preferences of micro, small and medium enterprises in Kenya: A discrete choice experiment (Kimani, 2020) which found that 11% as the mean interest rate that micro, small and medium enterprises in Nairobi County were charged. The interest is also higher than that revealed in the study on the determinants of average lending rates among selected commercial banks in Kenya, where the average bank lending rate was 16.45% in 2024 (Itimu and Abdul, 2018).

Results further show that the average number of lending institutions in the study area was four. The low number of lending institutions to MSMEs in the current study is attributed to the rural nature of the study area and therefore, there is increased credit risk to borrowers. The low number of lending institutions to MSMEs also implies a low number of lenders, since a well-developed financial system for micro-credit should encompass a large number of lenders (Ribeiro *et al.*, 2022). The current low number of lending institutions compares well with a study by Lokopu *et al.*, (2023) on the effect of bank loan financing policies on the performance of small and medium enterprises in Turkana County, whose results show that the number of lending institutions was 4. The current number of lending institutions is lower than the 16 available for borrowers as reported in a study on the financial factors affecting access to credit among small and medium enterprises in Machakos Town Sub-County

(Mutinda, 2020). Further, the current number of lending institutions accessible to MSMEs in the current study is also much less than the 52 lending institutions that as reported in FinAccess Business Survey in Nairobi by the Central Bank in 2022 (Central Bank of Kenya, 2023). Likewise, the number is also less than the 50 lending institutions reported in Uasin Gishu County in a study on determinants of small and medium enterprise financing by registered financial institutions in the County (Mulee, 2021).

Further results on access by MSMEs to bank branches show that the average distance to the lending institutions was 2.46 km, with a minimum and maximum distance of 0.22 and 8.52 km, respectively. It is clear that the higher the distance, the lower the loan availability by banks. This implies that the distance to financial institutions was short and therefore unlikely to affect access to the financial institutions by the owners/managers of the MSMEs. This observation was further confirmed in a qualitative study on financial access and exclusion in Kenya and Uganda (Johnson and Nino-Zarazua, 2011), which found that 58% of the respondents in Kenya indicated that distance to banks was “near or not very far” as opposed to 24% who indicated that distance to banks was “very far”. The short distance of 2.46 km in the current study converges with a study on determinants of access to credit by individuals in Kenya by Kenya National FinAccess Surveys of 2006 and 2009 which established that the mean distance to financial institution was 2.68 km (Mwangi and Sichei, 2011). However, divergent result to the current study findings was also noticed. One such divergence was the results of a study on microcredit finance and the financial performance of small and medium enterprises in Nyamira Town, Kenya (Kigwa, 2020), which showed that the average distance to the lending institutions was

0.8 km for the majority of the MSMEs. In another study on the importance of geographic access for the impact of microfinance, in Uzbekistan, (Alimukhamedova *et al.*, 2017) found that the distance to financial institutions among respondents who lived near the banks was 3.9 km while those who lived furthest from the bank was 87.5 km.

The descriptive results on demand for collateral security, entrepreneurial literacy and infrastructure of the MSMEs are shown in Table 4.9. The results indicate that 86.5% of the MSME owners/managers were requested to provide collateral before securing loans, compared to 13.5% who did not. This implies that most of the banks were requesting collateral before lending.

Table 4.9: Demand for Collateral Security, Entrepreneurial Literacy and Infrastructure by MSME Owners/Managers

Variable	Frequency	Percent
Demand for collateral security		
Yes	96	86.5
No	15	13.5
Total	111	100.0
Entrepreneurial literacy		
Yes	42	38.7
No	69	61.3
Total	111	100
Finance infrastructure penetration		
Poor	69	62.2
Neutral	27	24.3
Good	15	13.5
Total	111	100.0

According to a study by Leitner, (2006) on using collateral to secure loans, it was revealed that collateral as a security for loans can protect the lender if the borrower defaults. Therefore, in this study, collateral was a requirement before securing credit. The results of the current study converge with several other studies. These include the study by (Mumin, 2018), which determined the factors affecting SME's access to finance from commercial banks in Nairobi County, and found that 82.5% of MSME owners were requested to provide collateral before securing credits. Similarly, in the study conducted by Kimani, (2020) on financing preferences of micro, small and medium enterprises in Nairobi City County, Kenya, it was established that 90% of the MSME managers had to provide collateral before getting loans. Further, in another study on the effect of collateral requirement on the financial performance of agribusiness small and micro enterprises in Nyeri Central Sub-County Kenya, it was established that 99% of the MSME owners were requested to provide collateral before accessing credits (Kiai *et al.*, 2019). In Meru County, a study by (Rithaa *et al.*, 2016) on the effects of banks' loan collateral requirements on the performance of small and medium enterprises in Maua Town, Meru County showed that 70.3% of the respondents indicated that financial institutions' demand collateral before accessing loan/access to financial services. Similar results were also found in the study on the impact assessment of microfinance on financial inclusion and business growth among micro, small and medium enterprises in Igembe South, where 57% of respondents reported the demand for collateral before accessing loan/access to financial services (Kanake and Mahesh, 2018). However, the current study on collateral diverges from a survey-based study reported for Kenya in 2021 on micro small and medium enterprises (Kenya Bankers Association MSE Survey Report, 2021), which

established that 48.6% of SMEs were requested for collateral compared to 51.4% who were not requested to provide collateral.

The results in Table 4.9 further indicate that 38.7% of the MSME owners had entrepreneurial literacy. The present result indicates a low number of MSME owners/managers had entrepreneurial literacy. Low entrepreneurial literacy implies that most of the managers of the study lack any training in entrepreneurial management. The low number of SME owners/managers with low levels of entrepreneurial literacy in the current study finding compares well with the low number of MSME owners with entrepreneurial literacy (45.87%) that was reported in the study on relationships between entrepreneurial literacy and growth of micro and small enterprises in Kakamega Central Sub-County (Lusimbo, 2016). Similarly, the current results of low numbers of SME owners/managers with entrepreneurial literacy concurs with the results of a study on entrepreneurial skills and growth of Small and Medium Enterprise (SMEs): A comparative analysis of Nigerian entrepreneurs and Minority entrepreneurs in the UK, in which the number of SME entrepreneurs in Nigeria was 37%. The current low levels of entrepreneurial literacy also compare well with a study finding Muwanguzi, (2019), on the effect of entrepreneurial skills on the performance of small and medium-sized enterprises in Kamuli Municipal Council (Eastern Uganda). The study found that only 34% of SME entrepreneurs had full entrepreneurial literacy.

However, the current result diverges from the results of some previous studies. Firstly, the study result differs from the study findings on entrepreneurial capabilities and performance of small and medium enterprises in Kenya, where it was established

that 84% of the MSME owners had entrepreneurial literacy (Wachira, 2024). Secondly, the current study diverges from another study on entrepreneurial literacy correlated to the small-medium enterprise's performance in Batu East Java which indicates that 59% of the SME owners had entrepreneurial literacy (Winarno and Wijijayanti, 2018). Thirdly, the current study on owners/managers with entrepreneurial literacy was lower than in a study on digital literacy on SME business performance and the mediating role of entrepreneurial skills conducted in Solo, in Central Java, Indonesia by Novela *et al.*, (2024), in which the proportion of SME owners with entrepreneurial literacy was 79%, which is higher than the current study finding. Fourthly, a study on the role of entrepreneurial literacy in mediating the influence between digital literacy and internal locus of control on SME development by (Wardoyo *et al.*, 2024), was conducted among SME entrepreneurs in Kendal Regency (Indonesia). The study found that 100% of the SME owners had entrepreneurial literacy owing to the government initiatives of providing such training to entrepreneurs.

The results in Table 4.9 on finance infrastructure penetration indicate that 62.2% of the MSME owners/managers reported poor finance infrastructure penetration by financial institutions. This implies that the financial penetration was poor in the study area. Poor penetration of financial infrastructure has been reported in several other studies. A study by Muema, (2009) on the extent to which commercial banks have penetrated the Kenyan market showed a poor financial infrastructure penetration in the markets. In convergence with the current study, was the study by Mutuma, (2013) on the investigation of the effects of expansion strategies on the performance of commercial banks in Kenya, where there were reports of low financial infrastructure

penetration causing poor performance of the commercial banks. The currently low infrastructure penetration converges with another study on the challenges faced by Small & Medium Enterprises (SMEs) in obtaining credit in Ghana where 60% of the SMEs indicated that the financial institutions had low financial infrastructure penetration (Ackah and Vuvor, 2011).

The current low financial infrastructure penetration is also in concurrence with a study on the influence of fixed asset investments and bank penetration on access to capital for SMEs in Latin America, where most banks in developing countries like the majority of Latin America have low financial infrastructure penetration (Wernick and Correia, 2020). Similar results were found in another study by (Muzenda, 2019), on the growth and survival of small and medium-scale enterprises in Nairobi County, where it was established that 75% of the MSMEs had poor financial infrastructure penetration.

4.3.3 Bank Loan Usage by MSME Owners/Managers

Table 4.10 presents descriptive results on bank loan usage (saving balance, number of daily transactions per account, and number of electronic payments made) by MSMEs by owners/managers.

Table 4.10: Summary Results on Bank Loan Usage by MSME Owners/Managers

Variables	Mean	Std.	N	Minimum	Maximum
Savings balance	67,030	10,370	111	20,000	500,000
Number of daily transactions to banks	4	1.71	111	2	8
Electronic daily payments to	6	3.75	111	2	18

Results indicate that the mean saving balance by MSME Owners/Managers was Kshs 67,030 with a minimum and a maximum of Kshs 20,000 and 500,000, respectively. This indicates that the firms do not have a good savings culture or are not well aware of the objectives and advantages of saving. The current study converges with another study on financial literacy and financial performance of micro, Small and Medium Enterprises in Lagos City, Nigeria, which established that the savings balance of the MSME owners was about 12 million Naira (Kshs 70,000) (John, 2022). The current mean saving balance of Kshs 67,030 is lower than those reported in the Micro, Small & Medium Enterprises (MSMEs) Survey Report of 2021 (Kenya Bankers Association MSE Survey Report, 2021), which stated that the average annual saving balance of average SMEs in Kenya was Kshs 500,000. The current mean savings balance by MSME owners/managers of Ksh. 67,030 is also lower than the Kshs 200,000 reported among MSMEs in Kisumu County in a study of microfinance services and financial performance of youth SMEs in Kisumu County (Omondi and Jagongo, 2018). The saving balance in the current study was also lower than the Kshs 321,180 reported in a study on the effect of socioeconomic factors on savings among small-scale entrepreneurs in Kisii Town in Kenya (Ongeri, 2019). In a study by Kiplagat, (2015) on the utilization of M-Pesa and the performance of small and medium-scale

businesses in Nakuru Town, a higher saving balance of Kshs 3,679,666 than in the current study was reported.

Table 4.10 of the results also shows the mean number of daily bank transactions by MSME owners/managers. From the results, the mean number of daily bank transactions by MSME owners/managers was 4, with a minimum and maximum of 2 and 8 transactions, respectively. The current study's finding also agrees with the results in the study on the role of banks in empowering women entrepreneurs in small and micro enterprises (SMEs) in Kenya, where the number of daily transactions was reported to be between 4 and 5 (Mwobobia, 2013). According to a report by Botta *et al.*, (2024) on the future of payments in Africa, there is an average of 9 daily bank transactions among MSMEs in Africa, which diverges from the current study findings. Likewise, the current number of 4 bank transactions per day was also lower than the 8 bank transactions per day reported in a study in Nairobi on a decision model of Kenyan SMEs' consumer choice behaviour in relation to registration for a mobile banking service (Mwangi and Brown, 2015).

Further, results in Table 4.10 show that the mean number of daily electronic payments by MSME owners/managers to banks was 6, with a minimum of 2 and a maximum of 18. There isn’t much information about the average number of electronic transactions for businesses and small and medium-sized enterprises (SMEs). However, based on the report on the future of payments in Africa, there are an average of 21 electronic transactions among MSMEs in Africa, but the report failed to explore the differences across each country in the continent (Botta *et al.*, 2024). The current number of electronic payments per day was lower than the 18 reported in another study in

Nairobi on a decision model of Kenyan SME's consumer choice behaviour in relation to registration for a mobile banking service (Mwangi and Brown, 2015). In another study on the mobile money usage patterns of Kenyan small and medium enterprises, the number of daily electronic transactions was reported to be between 13-15 (Higgins *et al.*, 2012). However, according to the study on the effect of mobile banking adoption on the performance of small and medium enterprises in Nairobi County, the number of electronic transactions increased to approximately 10 among the SME owners who adopted mobile banking their premises (Muchiri, 2018). The current 6 daily electronic transactions with banks by MSME owners/managers is also lower than the 15 reported in a study on the effects of mobile money transactions on the financial performance of small and medium enterprises in Nakuru Central Business District (Ngaruiya, 2014).

4.3.4 Descriptive Results on Bank Loan Capacity on Clients

Table 4.11 presents summary results on bank loan attributes on clients of the MSMEs in the study area.

Table 4.11: Results on Attributes of Bank Loan On Clients of MSME Owners/Managers

Variable	Frequency	Percent
Financial institutions meet clients' financial needs		
Yes	15	86.5.
No	96	13.5
Total	111	100.0
Financial institutions provide good financial services to clients	42	38.7
Yes	69	61.3
No	40	36.0
Total	111	100
Range of options available for SMEs		
Employer	7	6.3
Friends and relatives	13	11.7
Microfinance institutions	38	34.2
Group contributions	44	39.6
Banks	30	27.0
Personal saving	45	40.5
Shylock	10	9.0
Angel investors	6	5.4
Online lenders	12	10.8

Results show that only 13.5% of the MSME owners/managers in Baringo County attested that the financial institutions meet their financial needs. This indicates that money received from financial institutions in terms of start-up capital and operational costs alone cannot be relied upon to meet their financial needs, which implies that they have to obtain financing outside the financial institutions. For many clients,

financial institutions cannot meet their financial needs. The current finding is in line with a study by Kung'u, (2011) on factors influencing SMEs' access to finance in Westland Division, Kenya, which established that only 15.4% of MSME owners did not believe that all their financial needs can be met through bank loans that are sometimes costly than other sources of finance. Another study by Akinyi (2014) on the effect of bank financing on the financial performance of small and medium-sized enterprises in Nairobi County established that only 32.2% of the MSME owners indicated that their financial needs were met by loans provided by banks and microfinance institutions. The current study findings are also in agreement with a study of microfinance services and the financial performance of youth SMEs in Kisumu County, where 70% of the MSME owners stated that microfinance loans cannot meet all their financial needs of running the business (Omondi and Jagongo, 2018). The current findings also converge with the study's findings (Makena, 2011) on challenges faced by small & medium enterprises in accessing finance in Kiambu town, Kenya, which found that loans did not meet their financial needs. The study findings revealed that procuring loans from the financial institution was difficult for the majority of the SME owners, with 56.3% of MSE owners attesting that they obtained the loans applied for from the financial institutions and another 43.7% indicating that they did not receive the loan applied for. The current results are also in convergence with study findings by Chrisostom *et al.*, (2024) on the role of commercial bank loans in enhancing the financial performance of small and medium-sized enterprises in Morogoro Municipality, Tanzania which indicated that up to 45% of the respondents were not able to get loans and therefore, bank loans could not meet their loan requirements.

Results in Table 4.11 further show that 61.3% of the clients attested that the financial institutions provided good financial services to clients. This response is peculiar and contradicts the above findings on financial institutions to meet clients' needs. The finding suggests that the MSME owners/managers who get finances from the financial institutions feel that the service provided is good for their business growth, with an implication that bank loans from financial institutions are good for MSME growth. The current study converges with several studies on the perception of bank loans among MSMEs. The current study converges with a study by (Kiring'a *et al.*, 2021) on the relationship between lending and access to financial services by SMEs in Kenya in which 91% of the respondents attested that they had a good relationship with their banks due to good services provided by the banks, but the services are dictated by information asymmetry. In another study on perceived service quality of Small and Medium Enterprises (SMEs) on banks' lending and loan service quality in Malacca, it was established that 67% of SME owners stated that the banks provided quality financial services to the SMEs that facilitated growth (Hasan *et al.*, 2016). However, in the study by (Bbenkele, 2007) on small and medium enterprises' perceptions towards services offered by commercial banks in South Africa, findings revealed that 75% of SMEs from rural areas tend to have more negative perceptions of the services offered by commercial banks than their counterparts in the urban areas (35%). The absence of information and poor attention placed on this group has led the SMEs to mistrust and wrongly perceive banks not to be very useful in assisting them. In a study on the financial inclusion of youth enterprises in Kilifi Sub-County, Mwadime *et al* (2022) reported that 67% of the MSME owners were happy with the financial services offered by the financial institutions. In another study in Mandera on the performance of the SMEs receiving regular financial support from microfinance

institutions, Abdi *et al* (2020) indicated that the MSME owners rated financial services highly. The current study also diverges from another study conducted in Sweden by Lundahl *et al.*, (2009) on technical and functional determinants of customer satisfaction in the bank SME relationship where a large number of customers were not satisfied with bank services offered to the small business enterprises.

The result further shows that 40.5% of MSME owners/managers obtained their initial capital from personal savings. The other 39.6%, 34.2% and 27% of MSME owners/managers obtained their initial capital from group contributions, microfinance institutions and banks, respectively. The current study concurs with other studies in Kenya including the study on access to finances among the MSMEs in Limuru Town Market, where it was found that 75.2% of the businesses obtained their initial capital from personal savings followed by 11.8% from family members and 1.9% from bank loans (Kamunge *et al.*, 2014). The current results also converge with the findings of the third Survey 2016 on financing small and medium enterprises (Bankers Association, 2016). In the survey, 62% of MSME owners' sources of funds for business were from personal savings, 28% from bank loans, 14% from joint savings by partners, 13% from borrowing from family, 6% from SACCOs and others accounting for 15% of the funds. The current study finding also agrees with a 2021survey-based study on micro small and medium enterprises by the (Kenya Bankers Association MSE Survey Report, (2021), where 64% of the MSME owners' initial capital were from personal savings, 11.7% followed by non-loans from family/friends (11.7%), 8.9% then loans from the bank (8.9%) and loans from SACCO (6.5%) with the rest coming from microfinance institutions, 6.5% loans from

family, and friends, and borrowing from groups. However, the current study finding diverges from the study by Kimani, (2020) on the financial preference of micro, small and medium enterprises in Kenya based on a discrete choice experiment in Nairobi where results revealed that the most common alternative lending for MSMEs was mobile banking (15.4%), banks (16.8%), loan apps (13.5%), SACCOs (10.6%) and microfinance (6,6%) respectively. The current result is also in divergence with the study findings of the assessment of the impact of COVID-19 among micro, small and medium-sized enterprises in Kenya and their resilience mechanism (United Nations, 2024). The study found that 56% of the entrepreneurs obtained funds from family and relatives, 23% from personal savings, 8% from informal savings groups, 4% from microfinance, 4% from SACCOs, and 3% from banks. A similar finding to the current study result was reported in the study by Kung'u, (2011) on factors influencing SMEs' access to finance in the Westland Division, Nairobi County, in which the results revealed that only 41% of the respondents borrowed money from the bank, 47% preferred to borrow from relatives or friends, while 13% preferred other sources.

4.3.5 Descriptive Results on Clients' Financial Product Awareness

Table 4.12 presents descriptive results on clients' financial product awareness in the study area. The table of results shows credit awareness, guidance to credit access and financial skill training on types of credit. Results indicate that 91% of the MSME owners/managers were aware of the existence of MSEM credits. The result, as shown in Table 4.12, indicates that there is a high credit awareness among the MSME owners/managers in the study area.

Table 4.12: Results on Clients' Financial Product Awareness

Variable	Frequency	Percent
MSME loan (product) awareness		
Yes	101	91.0
No	10	9.0
Total	111	100.0
Guidance on credit access		
Yes	24	21.6
No	87	78.4
Total	111	100
Financial skill training on credit risk management		
Yes	54	48.6
No	57	51.4
Total	111	100

The current study result compares well with several past study findings. In a study on factors influencing the uptake of credit by Kenyan youth in Nairobi county, Musha, (2014), found that 75% of the MSME owners were aware of MSME loan products offered, the lending institutions, and the procedures to get credit. Similarly, in the study on the relationship between credit accessibility and growth of small and medium-sized enterprises in Nairobi County, Ochido, (2016) established that 65.1% of the MSME owners who received loans were aware of the loan products such as credit facilities, loan eligibility, credit history, loan guarantee. The current results are also in agreement with the findings of the study on challenges facing micro and small enterprises in accessing credit facilities in Kangemi Harambee Market in Nairobi City County, where 65.5% of the respondents were aware of the loan products such as guarantors, repayment conditions, and requirements needed to secure the loans (Gichuki *et al.*, 2014).

Further, Table 4.12 of the results shows that 21.6% of the MSME owners received guidance to credit access while 78.4% did not as part of clients' financial product awareness. This result shows that there were low levels of guidance to credit access among the MSME owners/managers in the study area. The current study findings on guidance to credit access from the banks are inconsistent with the findings in the study by Anampiu, (2009) on the financial needs of SMEs by commercial banks in Kenya. The study found that 82% of the SME owners took loans from the banks after receiving various credit guidance services including business consulting services and account manager support. The findings of the current study of 21.6% of MSME owners who had received guidance to credit access is lower than the result in the study by Amadasun and Mutezo, (2022) on the influence of access to finance on the competitive growth of SMEs in Lesotho, where 65% of the SME owners received bank support service including guidance on loan processing, and account manager support to the clients, which enabled them to acquire loans. The current study's finding does not compare well with the finding in the study by Aminu and Manko, (2024) on the impact of non-financial services by listed DMBs on the development of SMEs in Nigeria. Results in this study revealed that 66% of SME managers received guidance on mentorship programs, business consulting services, account manager support, capacity-building initiatives, networking possibilities and access to market information. Further, the current study's finding is also lower than the 58% found in the study on challenges faced by small and medium-sized enterprises in accessing credit facilities from financial institutions: an empirical assessment incorporating the perceptions of both borrowers and financiers (Mensah *et al.*, 2015).

The results in Table 4.12 further show that 48.6% of the MSME owners/managers had financial skill training on credit risk management from the banks in the study area. Financial institutions have established separate units to be more responsive to the needs of their MSME clients. Thus, obstacles to SME lending include a lack of adequate financial skills and literacy to enable these financial institutions to manage their risks. This implies that the perceived extent of the problem obligates financial institutions to allocate internal budgetary resources to train MSMEs in aspects of financial skills and literacy (Eniola and Entebang, 2016). The current study finding is in convergence with the findings by Chepkemoi et al., (2017) on the effects of financial literacy training on business profitability in Kwale County, Kenya, where it was found that 42% of the SME owners received training on access to financial services skills.

4.3.6 Financial Performance of the MSMEs in Baringo County

Table 4.13 of the results shows the financial performance indicator based on the mean annual gross profit and Return On Investment (ROI) of the MSMEs within the study area. The results show that the current mean annual gross profit of the MSMEs in Baringo County was Kshs 330,080.

Table 4.13: Financial Performance of the MSMEs in Baringo County

Variables	Mean	Std. Dev.	N	Min.	Max.
Annual gross profit	330,080	36,857	111	20,000	1,360,000
Return on Investment (%)	58.9	21.9	111	7.6	94.8

The current results on mean gross profits of Kshs 330,080 by the MSMEs are lower than the annual average gross profit of MSMEs in Kenya of Kshs 1,122,180 as reported in the 2021 Survey Report on Micro, Small and Medium Enterprises by the Kenya Bankers Association MSE Survey Report, (2021). Likewise, the current study area's mean annual gross profit of Kshs 330,080 is also lower than the Kshs. 500,000 projected for micro-enterprises in Kenya (Ndemo and Mkalama, 2018). Further, the current study result is also lower than the Kshs 1,729,750 reported in a study on entrepreneurial capabilities and performance of small and medium enterprises in a study done in Kenya (Wachira, 2024). However, the current annual gross profit was higher than the Kshs 200,000 reported in a study on Micro, Small and Medium Enterprise growth and innovation in Women Enterprise Fund in Kenya based on data collected from Kakamega, Nairobi, Nakuru and Nyeri (Kiraka *et al.*, 2015). The current annual gross profit level was also higher than the Kshs 217,500 found in the study on the effect of socio-economic factors on savings among small-scale entrepreneurs in Kisii Town in Kenya (Ongeri, 2019). Further, the current annual gross profits are also higher than the Kshs 152,000 generated by MSME in a study on the relationship between microfinance saving services and SME growth in Manyatta Sub-Location, Kisumu, Kenya (Okoth *et al.*, 2022). However, the current annual gross profit of MSMEs in the study area was lower than the Kshs 9,829,114 annual

gross profit found in the study on the utilization of M-Pesa and the performance of small and medium-scale businesses in Nakuru Town (Kiplagat, 2015).

Further, Table 4.13 of the results reveals that the mean annual Return on Investment (ROI) realized by the MSME owners/managers was 58.9. This result indicates that the MSME owners/managers recorded a return on investment of 58.9%, with a minimum of 7.6% and a maximum of 94.8%. This implies that, on average, the MSMEs have a moderate ROI, but there is considerable variation among them, with some SMEs experiencing very low or very high returns (ranging from 7.6% to 94.8%). The current study result compares well with the finding in the study on maximizing Returns: A Deep Dive into the Financial Strategies of SMEs in Morogoro Municipality, which found that the average Return on Investment value was 53.24%, with a standard deviation of 25.82% (Mhanganya *et al.*, 2024). The current findings of 58.9% ROI however, diverges from the result in the study by Mashimba, (2017) on the Return on Investment of Micro and Small-Scale enterprises (MSEs) in Tanzania in fruit and vegetable processors (Mashimba, 2017), which established that ROI was 24.8% among MSMEs in 8 regions of Tanzania.

4.4 Diagnostic Test Results

A multicollinearity test was performed to check for the correctness of the estimates of the variables using the Variance Inflating Factor (VIF) as suggested by Gujarati (2007), as shown in Table 4.14 of the results. The results in Table 4.14 show that all the variables under study had a VIF between 1.061 and 2.365, with tolerance values ranging from 0.423 to 0.943, which shows that there were no potential multicollinearity symptoms among the predictor variables. Therefore, the small VIF

values in the table indicate a low correlation among the variables under consideration. Considering the recommended VIF≤5, we concluded that there was no multi-collinearity.

Table 4.14: Estimates of Multicollinearity Statistics

Model	**Multicollinearity statistics**	
	Tolerance	VIF
Interest charged	0.772	1.295
Demand for collateral security	0.967	1.034
Number of lending institutions	0.718	1.393
Entrepreneurial Literacy level	0.915	1.093
Distance to nearest financial institution	0.975	1.025
Financial infrastructure	0.990	1.010
Average savings balances	0.735	1.361
Number of transactions per account	0.736	1.359
Number of electronic payments made	0.997	1.003
Capacity of financial products to meet clients' need	0.778	1.285
Services to match clients' needs	0.872	1.146
Range of options available to customers	0.747	2.339
Credit Awareness	0.997	1.003
Guidance on credit access	0.946	1.057
Education on the types of credit	0.943	1.060
Mean	**0.873**	**1.231**

4.5 Econometric Analysis Results

To answer the four specific objectives of this study, econometric models were used to empirically analyze each objective separately. A Multivariate linear regression model was used to determine the factors influencing the performance of the MSMEs. The results are presented in the sub-sections that follow.

4.5.1 Estimates of Financial Access on the Performance of the MSMEs

The study's first specific objective was to determine the influence of financial access on the financial performance of the MSMEs in Baringo County, Kenya. The estimated results on the effects of financial access on the performance of the MSMEs are shown in Table 4.15 of the results.

In this study, *R*-squared was used to test the goodness of fit of the linear regression model. As shown in Table 4.15 of the results, the *R*-square was 0.618, which means that 61.8% of the total variation in the dependent variable (MSME financial performance) is attributed to financial access and the remaining 38.2% lies within the error term in the regression model for this study. Further, the overall significance of the regression model (ANOVA test) was also conducted to test the significance of the relationship between the independent and dependent variables. The findings in Table 4.15 show that the *P* value is less than the level of significance, that is , the *P*-value is <0.01. This indicates from the model that there was a significant relationship between financial access and MSME financial performance.

Table 4.15: Estimated Results on Effects of Financial Access on the Performance of MSMEs

Regression Statistics					
Model summary					
Multiple *R*	0.786				
R Square	0.618				
Adjusted R Square	0.607				
Observations	111				
Standard Error	1.564				
ANOVA	SS	df	MS	F	*P*-value
Regression	408.311	3	68.052	27.808	<0.01
Residual	252.059	107	2.447		
Total	660.369	110			
	Unstandardized Coefficients		Standardized Coefficients	t Stat	*P*-value
	Beta	Std.	Beta		
(Constant)	3.283	0.629		5.565	0.000
Interest rates	-0.330	0.045	-0.509	-7.333	0.000**
Demand for collateral security	-0.031	0.455	-0.004	-0.068	0.945
Number of lending institutions	0.465	0.103	0.325	4.514	0.000**
Entrepreneurial literacy level	0.951	0.320	0.189	2.971	0.004**
Distance to nearest financial institution	-0.009	0.141	-0.004	-0.064	0.952
Financial infrastructure	0.127	0.207	0.037	0.614	0.542

Legend
LR Chi^2 = 415.113
Pseudo R^2 (Cox and Snell) = 0.731; Nagelkerke = 0.743
Prob >Chi^2 = 0.000
Log-likelihood = 2.3249
* = significant at 5% level, ** =significant at 1%

From Table 4.15 of the results of the multiple linear regression analysis, interest rate charged, number of lending institutions and entrepreneurial literacy level were all statistically significant at a 1% level, that is, $P < 0.05$. This indicates that the interest rate charged, the number of lending institutions and the entrepreneurial literacy level had a significant effect on MSMEs' financial performance in Baringo County. In this

regard, the null hypothesis ($H0_1$) was rejected, hence concluding that financial access has a significant effect on the performance of MSMEs in Baringo County.

4.5.2 Estimates of Usage of Bank Loans on Financial Performance of MSMEs

The study's second specific objective sought to determine the effects of usage (average savings balances, number of transactions per account, number of electronic payments made) on the MSMEs' financial performance in Baringo County, Kenya. The estimated results on the usage of bank loans on the financial performance of the MSMEs are shown in Table 4.16.

As shown in Table 4.16, the *R*-square value is 0.632, which means that 63.2% of the total variation in the dependent variable (MSME performance) was attributed to the usage of bank loans and the remaining 37.8% lies within the error of the regression model for this study. The overall significance of the regression model (ANOVA test) was conducted to test the significance of the relationship between the independent and dependent variables. Results show that the *P*-value is <0.01. This indicates from the model that there was a significant relationship between the usage of bank loans and MSME performance.

From Table 4.16 of the results of the multiple linear regression analysis, savings balances and the number of daily electronic payments to banks were statistically significant at a 1% level, that is, $P < 0.05$, and influenced the financial performance of MSMEs positively in the study area. This indicates that savings balances and the number of daily electronic payments to banks had a significant positive effect on the MSMEs' financial performance in Baringo County. In this regard, the null hypothesis

(H_{02}) was rejected, hence concluding that bank loan usage has a significant effect on the performance of MSMEs in Baringo County.

Table 4.16: Estimated Results of Bank Loan Usage on Performance of MSMEs

Regression Statistics					
Model summary					
Multiple *R*	0.795				
R Square	0.632				
Adjusted *R* Square	0.622				
Observations	111				
Standard Error	1.511				
ANOVA	SS	Df	MS	F	*P*-value
Regression	404.955	3	134.985	59.048	<0.01
Residual	235.460	107	2.286		
Total	640.415	110			
	Unstandardized Coefficients		Standardized Coefficients	t Stat	*P*-value
	Beta	Std.	Beta		
(Constant)	1.219	0.415		2.937	0.004
Saving balances	0.987	0.146	0.478	6.760	0.000**
Number of daily bank transactions	0.027	0.016	0.103	1.688	0.088
Daily electronic payments to banks	1.086	0.164	0.421	6.622	0.000**

Legend
LR Chi^2 = 734.342
Pseudo R^2 (Cox and Snell) = 0.774;
Nagelkerke = 0.769
Prob >Chi^2 = 0.000
Log-likelihood = 3.129
* = significant at 5% level, ** =significant at 1%

4.5.3 Estimates of Clients' Loans on Financial Performance of the MSMEs

The third specific objective of the study sought to examine the effect of clients' bank loans (capacity of the financial products and services to match clients' needs and the range of options available to customers) on the MSMEs' financial performance in

Baringo County, Kenya. The estimated results on the effects of client bank loans on the financial performance of the MSMEs are shown in Table 4.17.

As shown in Table 4.17, the *R*-square is 0.709, which means that 70.9% of the total variation in the dependent variable (MSME financial performance) is attributed to Client bank loans and the remaining 30.1% lies within the error term in the regression model. The overall significance of the regression model (ANOVA test) was conducted to test the significance of the relationship between the independent (effects of clients' bank loans) and dependent variables (financial performance). Results show that the *P*-value is <0.01. This indicates from the model that there was a significant relationship between MSME clients' bank loans and MSME financial performance.

Table 4.17: Estimated Results of Clients' Bank Loans on Financial Performance of MSMEs

Regression Statistics					
Model summary					
Multiple R	0.842				
R Square	0.709				
Adjusted R Square	0.700				
Observations	111				
Standard Error	1.645				
ANOVA	SS	Df	MS	F	*P*-value
Regression	376.302	3	125.434	46.628	<0.01
Residual	287.842	107	2.690		
Total	664.143	110			
	Unstandardized Coefficients		Standardized Coefficients	t Stat	*P*-value
	Beta	Std.	Beta		
(Constant)	0.759	0.536		1.416	0.159
Capacity of financial institutions to meet Clients' needs	-0.242	0.545	-0.028	-0.444	0.657
Service quality to clients	1.8208	0.3112	0.4408	5.851	0.000**
Range of options available to clients	1.568	0.2568	0.3208	6.106	0.000**
Legend					
LR Chi^2 = 634.23					
Pseudo R^2 (Cox and Snell) = 0.823; Nagelkerke = 0.804					
Prob >Chi^2 = 0.000					
Log-likelihood = 1.875					
* = significant at 5% level, ** =significant at 1%					

Source: Author's Computation from Survey Data (2024)

Table 4.17 of the results of the multiple linear regression analysis of the capacity of financial institutions to meet clients' needs, service quality to clients and range of options available to clients were statistically significant at a 1% level that is., $P < 0.05$, and positively influenced the financial performance of MSMEs in the study area. This indicates that the client's bank loan had a significant effect on MSMEs' financial performance in Baringo County. In this regard, the null hypothesis (H_{03}) was

rejected, hence concluding that clients' bank loans have a significant effect on the performance of MSMEs in Baringo County.

4.5.4 Estimates of Clients' Financial Products Awareness on Financial Performance of MSMEs

The fourth specific objective of the study sought to determine the effects of clients' financial products awareness on the financial performance of the MSMEs in Baringo County, Kenya. The estimated results on client's financial products awareness on the performance of the MSMEs are shown in Table 4.18.

As shown in Table 4.18 of the results, the *R*-square value is 0.643, which means that 64.3% of the total variation in the dependent variable (MSME financial performance) is attributed to clients' financial products awareness and the remaining 30% lies within the error term in the regression model for this study. An ANOVA test was also conducted to test the significance of the relationship between the independent and dependent variables. Results show that the *P*-value is <0.01. This indicates from the model that there was a significant relationship between clients' financial product awareness and MSME financial performance.

Table 4.18 of the results of the multiple linear regression analysis shows that guidance on credit access and education on types of credit were all statistically significant at a 1% level and positively influenced the financial performance of MSMEs in the study area. From the results of the multiple linear regression analysis, guidance on credit awareness and financial skill training on credit risk management were was statistically significant at a 1% level, that is, $P < 0.05$, and positively influenced the financial

performance of MSMEs in the study area. This indicates that the client's financial product awareness had a significant effect on MSMEs' financial performance in Baringo County. In this regard, the null hypothesis (H04) was rejected, hence concluding that the client's financial product awareness has a significant effect on the performance of MSMEs in Baringo County.

Table 4.18: Estimated Results on Effects of Clients' Financial Products Awareness on Performance of MSMEs

Regression Statistics					
Model summary					
Multiple R	0.802				
R Square	0.643				
Adjusted R Square	0.633				
Observations	111				
Standard Error	1.489				
ANOVA	SS	Df	MS	F	*P*-value
Regression	426.759	3	142.253	64.12	<0.01
Residual	237.384	107	2.219		
Total	664.143	110			
	Unstandardized Coefficients		Standardized Coefficients	t Stat	*P*-value
	Beta	Std.	Beta		
(Constant)	0.026	0.345		0.075	0.939
Credit Awareness	0.439	0.398	0.129	1.103	0.097
Guidance on credit access	2.586	0.367	0.604	7.046	0.000**
Education on types of credit	1.445	0.308	0.295	4.691	0.000**

Legend
LR Chi^2 = 391.344
Pseudo R^2 (Cox and Snell) = 0.795; Nagelkerke = 0.781
Prob >Chi^2 = 0.000
Log-likelihood = 2.119
* = significant at 5% level, ** =significant at 1%

CHAPTER FIVE

DISCUSSIONS

5.1 Introduction

This chapter presents the discussion of the findings based on the research objectives and hypotheses of the study. The chapter contains the synthesis and logical inferences of the meaning of the results and findings of the study.

5.1.1 Findings of Financial Access on the Performance of the MSMEs

The results in Table 4.15 show that interest rates charged by financial institutions in the study area were statistically significant at the 1% level with a β coefficient of –0.33. This finding implies that a one-unit increase in the interest rate charged by financial institutions reduces the financial performance of the MSMEs by 33%. When interest rates are high, credit becomes more expensive for MSMEs, making it harder for them to compete and remain profitable. Higher rates can also reduce demand for their products. Thus, an increase in lending interest rates leads to underperformance among MSMEs because high rates discourage borrowing repayments may consume most of the proceeds earned from business operations.

These findings align with those of Nyumba et al. (2015) on loan interest rates and performance of small and medium enterprises in Kenya, which established a significant correlation between interest rate and MSME performance. Similarly, Mnang'at et al. (2016) found that interest rates negatively affected the financial performance of micro-enterprises in Makutano Township, West Pokot County. Cheptot (2014) also established that a combination of real GDP, exchange rates, inflation rates, and interest rates significantly affected profitability in the small and

micro-enterprise sector of Nairobi County. Otieno et al. (2021) reported a strong positive relationship between lending interest rates and SME performance in Kenya. Likewise, Ashogbon (2022) found that interest rates had a significant negative effect on SME growth in Nigeria, where a 1% increase in rates reduced growth by 1.6%. The present study, however, diverges from findings in Arua Municipal Council, Uganda, where both fixed and variable interest rates significantly explained SME performance ($P < 0.01$) (Onzima et al., 2024).

The results in Table 4.15 further indicate a significant positive influence of the number of lending institutions on MSME performance, with a coefficient ($\beta = 0.465$). This implies that a one-unit increase in the number of financial lending institutions is likely to raise MSME financial performance by 46.5%. A higher number of lenders expands credit availability for start-ups and operational needs. This positive relationship has been demonstrated in other Kenyan studies. Oborah (2014) reported that 89.1% of SME owners in Nairobi County believed the number of financial institutions providing loans affected profitability. Similarly, Mohamed (2017) found that a unit increase in the number of lending institutions increased SME profitability by 33.2% in Langata Constituency. Furthermore, entrepreneurial literacy level was statistically significant at the 1% level and positively influenced MSME performance with a β coefficient of 0.951. This means that a unit increase in entrepreneurial literacy likely raises MSME financial performance by 95.1%. According to Sutrisno et al. (2023), entrepreneurial literacy enhances the knowledge and management skills needed to operate MSMEs effectively. The literacy level of MSME owners also determines the adoption rate of appropriate management practices crucial for absorbing new ideas (del Pilar López-Pena, 2020).

Entrepreneurially literate MSME owners are more inclined to apply sound business practices due to their higher technical knowledge compared with those without formal education (Meijer *et al.,* 2015). The current finding aligns with Mutuku *et al.* (2022), who found that increasing entrepreneurial literacy improved MSME performance by 32.5% in Nakuru City. Similarly, Kisubi *et al*. (2022) reported a 43.3% positive effect of entrepreneurial literacy on SME performance in Uganda. The present study also concurs with Seraj et al. (2022), who found that entrepreneurial competency increased SME performance by 75.8% among Saudi entrepreneurs. However, the findings differ from Mohamed (2017), who found no significant effect of entrepreneurial literacy on SME profitability in Langata Constituency.

5.1.2 Usage of Bank Loans on Financial Performance of MSMEs

Table 4.16 of the results show that the savings balances significantly influenced MSME financial performance positively at a 1% level with a β coefficient of 0.987. This implies that a one Kenyan shilling increase in average savings balances would likely increase the financial performance of the MSMEs by 98.7%. The current study shows that the savings balance is the lifeline of the MSMEs since it covers unexpected expenses or cash flow shortages. The current study's finding concurs with the findings in the study by Oluoch (2016) on the impact of cash management practices on the performance of SMEs in Eldoret Central Business District, where the savings balance of the SMEs influenced financial performance by 25%. The current results are in agreement with the study on the effect of financial habits on the financial performance of women-owned micro, small and medium enterprises in Meru, Kenya, where savings improved performance by 25% (Kathono, 2019). The current study is also in convergence with study findings on the financial inclusion and

performance of the top 100 small and medium enterprises in Kenya, where savings balance improved the performance of the enterprise by 74.1% (Njagi and Mutwiri, 2024). Further, this study's finding agreed with the study results on the analysis of microfinance services on the financial performance of youth-led enterprises in Hamisi Sub-county, Kenya, where a unit increase in microfinance services savings accounted for 23.1% improved performance of the small enterprises (Anyanje, 2016). In another study on the financial inclusion and performance of MSMEs in Eswatini (Fomum and Opperman, 2023), the authors found that formal saving balances accounted for 26.1% of business performance. The current results also compare well with the study results on loans and savings in business growth of small and medium enterprises (SMEs) in North Central Nigeria, which established that savings of the business improved business performance by 88.3% (Kio *et al.*, 2021. Likewise, the current study findings converge with the result of a study on the trends in working capital management and its impact on firms' performance in Mauritian small manufacturing firms, where the saving balance of the small-scale businesses influenced business performance by 18.2% (Padachi, 2006).

Results also show that the number of daily electronic payments to banks was statistically significant at a 1% level and influenced the financial performance of MSME positively with a β coefficient of 1.086. This implies that a unit increase in the number of daily electronic payments to banks increased the financial performance of the MSMEs by 108.6%. According to Riivari (2017), electronic payments to banks are a form of banking in which funds are transferred through an exchange of electronic signals rather than through an exchange of cash, cheques, or other types of paper documents. According to him, transfers of funds occur between financial

institutions such as banks and micro-credit institutions. Electronic bank payments can help businesses streamline payment processes, improve supplier relationships, reduce operational costs, enhance cash flow, as well as improve overall visibility into the accounts payable process.

The current results are in agreement with the study findings by Mue, (2021) on the impact of mobile banking on the financial performance of SMEs in Nairobi County, Kenya, where the number of mobile electronic transactions improved financial performance by 8.3%. The current results are also in agreement with a study on the efficacy of mobile payment solutions on the performance of small and medium enterprises in Kamukunji Trading Center, Nairobi County, where electronic payments to banks improved the performance of the SMES by 25.4% (Elly, 2021). The current results are also in agreement with a study on the influence of mobile money services on the growth of SMEs in Nakuru Town, Kenya where increased electronic payments increased the performance of businesses by 16.5% (Mararo, 2018). Moreover, the current study result converged with the study findings by Mutiso and Reuben, (2021) on the effects of mobile payment and mobile money transfer on the performance of micro, small and medium enterprises in Kenya.

The study found that mobile money transfers influenced financial performance by 73.1%. The current study result is also in agreement with the study finding by Onyango *et al.*, (2021) on the effect of mobile money transfer services and the financial growth of small and medium enterprises in Busia Town, Kenya. The study found that there was improved financial performance by 78.9% when mobile money transfer services were adopted. The current study also converges with another study

by Ogunwale *et al.*, (2023) on the impact of electronic banking on the operational efficiency of small and medium-scale businesses in South-western Nigeria, where the use of electronic payments improved business performance by 31%. The current findings are also in agreement with another study on the influence of mobile money payment on the performance of small and medium enterprises in Somalia, where the study found that mobile money promotes business growth, and a 1 % increase in mobile money usage leads to about 11.14 % of business growth (Mohamed), 2023. The current study result is also in agreement with the study finding on the influence of e-payment and e-commerce services on the supply chain performance of Micro, Small, and Medium Enterprises (MSMEs) in Indonesia, which found that a unit increase in electronic transactions increased the performance of the MSMEs by 18.3% (Kilay *et al.*, 2022).

5.1.3 Clients' Loans on Financial Performance of the MSMEs

Results in Table 4.17 show that service quality to clients was statistically significant at a 1% level with a positive β coefficient of 1.8208. This implies that a unit increase in bank service quality to clients increases the financial performance of the MSMEs by 182.08%. The current findings imply that bank service quality to clients may encourage customers to be loyal to the bank. Research conducted by Shanka, (2012) found that there was a positive relationship between service quality and customer satisfaction in the banking sector. Moreover, the service quality may also affect customer loyalty, which in turn influences customer satisfaction, leading to increased profitability of the firm (Supriyanto *et al.*, 2021).

In this study, the bank service quality improved the performance of the small business enterprises in the study area. The current study diverges from a study on the factors influencing the growth of small and medium enterprises in Bobasi Sub-county, Kisii County, whose results show that bank service quality improved business performance by 30.9% (Ogega and Muturi, 2017). Moreover, the current study's finding also diverges from the study on service quality as a catalyst for customer satisfaction of small and medium-sized enterprises (SMEs) in Kitale Municipality, Kenya, where it was found that service quality improved business performance by 51.9% (Kemboi *et al.* 2014). According to the findings by Ali *et al.*, (2023) in a study on service quality by small and medium practices towards SMEs expectations, perceptions, and firm performance, service quality contributed to SMEs' performance by 57%. The current results also diverge from another study on the microfinance services and financial performance of small and medium enterprises in Nairobi City County, Kenya, where the quality of credit service affected the financial performance of the enterprises by 22.9% (Ali *et al.*, 2023).

Results in Table 4.17 further show that the range of options available to clients is statistically significant at a 1% level with a β coefficient of 1.568. This implies that a unit increase in the number of lending institutions available to clients increased the performance of the MSMEs by 156.8%, suggesting that the range of options available to SME clients enhanced the growth of the small business enterprises, through enhancing banking services of good accessibility to a larger population in the country (Okibo and Wario, 2014).

The current study's finding converges with a study on the effect of financing sources on the financial performance of small and medium enterprises in Taraba State, Nigeria, where access to different sources of finance affected the performance of SMEs by 94% (Yusuf *et al.*, 2020). The current study diverges with the effect of bank credit on the financial performance of small and medium enterprises in Dagoreti North Constituency, which showed that the availability of different capital sources influenced the performance by 86.5% (Mulwa, 2014) The current study diverges with a study on the effect of access to finance on the financial performance of processing SMEs in Kitui County, Kenya (Mbuva and Wachira, 2019) where access to sources of finance influence financial performance by 22.8%.

The current study findings also diverge from findings from a study on the effect of financing sources on the financial performance of the top 100 mid-sized companies in Kenya (Muriithi, 2014), where there was a 17.4% contribution of various financing sources to financial performance. The current findings diverge from the result of the study by Ndemi, (2018) on financing options and financial performance of small and medium enterprises in Nanyuki town, Kenya, where formal financing improved financial performance by 20.2%, informal financing by 76.7% and personal financing by 70.1%.

5.1.4 Clients' Financial Products Awareness on Financial Performance of MSMEs

The results from Table 4.18 show that guidance on credit awareness was statistically significant at the 1% level, with a positive β coefficient of 2.586. This implies that a unit increase in guidance on credit awareness improves MSME financial performance

by 258.6%. The current finding aligns with Atkinson (2017), who found that 80.95% of MSME owners/managers who received guidance on credit awareness experienced improved financial performance. Similarly, Richardson (2016) reported that financial institutions offering non-financial guidance such as account manager support, information provision, consulting, and IT services helped SMEs enhance their performance. However, the current study diverges from Kamyabi and Devi (2012), who found that advisory services by professional accountants affected SME performance by 67.1% in Iran. It also differs from Aminu and Manko (2024), who found that non-financial services (e.g., mentorship, consulting, capacity-building, and networking) affected SME performance by 10.9% in Nigeria.

The findings further differ from Kathuku (2017), who found that capacity-building initiatives by commercial banks improved the growth of micro and small enterprises in Kenya by 65.6%. These initiatives enhanced the skills, knowledge, and financial management capacities of MSMEs, fostering sustainable growth. Additionally, Table 4.18 results show that financial skill training in credit risk management was statistically significant at the 1% level, with a positive β coefficient of 1.445. This implies that a unit increase in financial skill training increases MSME financial performance by 144.5%.

Training in financial literacy equips SME owners with the skills to manage business finances, plan for loan use and repayment, conduct internal audits, and allocate resources efficiently (Abdallah et al., 2024). This finding aligns with Chepkemoi et al. (2017), who found that financial literacy training improved SME profitability by 78% in Kwale County. Similarly, Cherugong (2015) found that financial literacy programs

enhanced SME performance by 78.1% in Trans-Nzoia County. Kathuku (2017) also reported that financial literacy and customer relationship management improved financial performance by 99.8% among micro and small enterprises.

Siekei et al. (2013) found that financial literacy training under the Equity Group Foundation program improved SME performance by 89.8%. After attending such training, average profits rose significantly. Kirui (2014) also found that training in budgeting, bookkeeping, and profit/loss management improved women-owned enterprise performance by 84.6% in Nakuru Municipality. Conversely, Kimunduu et al. (2016) found that financial literacy influenced SME financial performance by only 34.7% in Ruiru Town, while Kisaka and Mwewa (2014) concluded that training was not statistically significant in affecting SME performance in Machakos County.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This chapter presents a summary of the findings based on research objectives and hypotheses, conclusion, recommendations and suggestions for further study.

6.2 Summary of Findings

Descriptive results of this study revealed that 71.2% of the MSME owners/managers in the study area were males, while 28.8% were females, with 76.6% of the MSME owners/managers being married. The mean age of the MSME owners/managers was found to be 38.0 years, with the youngest being 19 and the oldest being 61 years. Results further show that 42.3%, 29.7% and 18.0% of MSME owners/managers had secondary, college and primary levels of education, respectively, with 38.7% of the MSME owners having entrepreneurial literacy. Results show that 91.9%, 3.6%, 3.6% and 0.9% of the MSME owners were sole proprietors, formally employed, casually employed and in contract employment, respectively. Results also show that the mean number of employees in an MSME was 3, with a minimum of 1 employee and a maximum of 20 employees. The findings further revealed that the average interest rate charged on MSME loans by banks was 18.5%, but could range from 12.5% to 32%. Results on finance infrastructure penetration indicate that 62.2% of the MSME owners/managers reported poor finance infrastructure penetration by financial institutions. Further, results show that the mean saving balance by MSME owners/managers was Kshs 67,030, with a minimum and a maximum of Kshs 20,000 and 500,000, respectively. However, the results show that the financial performance indicator of MSMEs in the study area, based on the mean annual gross profit, was

Kshs 330,080 against the national annual average gross profit of Kshs 1,122,180. Further, results show that the mean number of daily electronic payments made by the MSME owners/managers to banks was 6, with a minimum of 2 and a maximum of 18 electronic payments, respectively. Results show that 40.5% of MSME owners/managers obtained their initial investment capital from personal savings. The other 39.6%, 34.2% and 27% of MSME owners/managers obtained their initial capital for investment from group contributions, microfinance institutions and banks, respectively. On clients' financial product awareness, results revealed that 91% of the MSME owners/managers were aware of the existence of MSEM credits.

Multiple linear regression models were fitted for the four specific objectives. Concerning the effects of financial access on the MSMEs' performance (first objective) the number of lending institutions (β = 0.465) and entrepreneurial literacy level (β = 0.951) were statistically significant at a 1% level and had a positive effect on the performances of MSMEs in Baringo County. However, though statistically significant at a 1% level, interest rate (β = -0.330) had a negative effect on the performances of MSMEs in the study area. For the second objective on the financial usage of bank loans on the performance of MSMEs in Baringo County, only the variables saving balances (β = 0.987) and daily electronic payments to banks (β = 1.086) had a significant effect on the MSMEs' performance in Baringo County. For the third objective on the effects of clients' bank loans, service quality to clients (β = 1.8208) and the range of options available to clients (β = 1.568) had a significant effect on MSMEs' performance in the study area. Lastly, for the fourth objective on the estimates for the effect of clients' financial products awareness on the performance of MSMEs, guidance to credit access (β = 2.586) and financial skill

training on credit risk management (β = 1.445) had a positive and significant effect on the performance of MSMEs in the study area.

6.3 Conclusion

Estimated results using multiple linear regression, for the first specific objective of the study, on financial access, and on the MSMEs' performance show that total variation in the financial performance was significantly affected by financial access. A unit increase in the interest rates reduced MSMEs' performance by -33%, while the number of lending institutions and entrepreneurial literacy level increased their financial performance by 46.5% and 95.1%, respectively. The result indicates a strong correlation between access to financial resources and the overall performance of small and micro-enterprises (MSMEs). This suggests that financial access is a key driver of financial success for MSMEs. The availability and accessibility of financial lending resources and entrepreneurial literacy play a crucial role in the financial outcomes of MSMEs in the study area.

Further, estimated results for the second specific objective of the study revealed that the financial performance of MSMEs was affected by bank loan usage. A unit increase in the amount of savings balances and Daily electronic payments to banks increased the financial performance of the MSMEs by 98.7% and 108.6%, respectively. More savings deposits mean a larger pool of funds available for lending and generating interest income. On the other hand, daily electronic payments can also generate transaction fees for the bank. Therefore, more savings deposits and electronic transactions can lead to increased profitability and revenue for the MSMEs institution, as it indicates higher customer engagement and activity, often associated

with less costly transactions. Electronic transactions are typically less expensive for banks to process compared to traditional branch transactions, leading to operational cost savings. Likewise, customers often prefer the convenience and accessibility of electronic banking, which can lead to better customer retention and loyalty.

Financial performance was also affected by clients' loans. It was established that a unit increase in service quality to clients and range affected financial performance by 182% and 156.8%, respectively. Therefore, a unit increase in service quality to clients is positively correlated with a range of increased financial performance outcomes. This improvement in service quality can lead to increased customer satisfaction, loyalty, retention, and ultimately, profitability. A loyal, satisfied customer base translates into higher revenue and improved profitability.

Finally, the study established that financial performance was affected by clients' financial product awareness. A unit increase in the Guidance to credit access and Financial skill training on credit risk management influenced the financial performance of the MSMEs by 248.6% and 144.5%, respectively. This suggests that providing better financial literacy and access to credit resources positively impacts the financial well-being of small and medium-sized enterprises. Guidance on credit access helps MSMEs navigate the process of obtaining loans, which can provide the funding needed for growth and investment. Therefore, training on credit risk management equips MSME owners with the knowledge to make informed decisions about borrowing and managing their finances. By understanding credit risk, MSMEs owners/managers can better assess their ability to repay loans and make responsible borrowing decisions, and hence reduce the risk of default. With better financial

management and access to credit, MSMEs are more likely to experience improved profitability, growth, and overall financial stability.

6.4 Recommendations

Based on the findings of the studies, this part proposes important policy recommendations with the implementation of which, the quality of the MSMEs in Baringo county would be enhanced and may spread to other regions.

1. The interest rates charged by financial institutions should be reduced, and the number of lending institutions should be increased, especially in areas where borrowers may have to travel long distances to carry out bank transactions. There is a need for training of the entrepreneurs to gain financial literacy to help them in the management of the MSMEs.
2. Financial institutions, national and county governments to create or establish policies that facilitate access to finance for MSMEs, including offering loans, incentives, and other support services, to boost their financial performance. The created policies should focus on customer needs, setting clear service standards, and providing consistent, high-quality service.
3. There is a need to sensitize MSME owners on increasing their savings balance and making more payments to financial institutions to enhance performance. There is a need for financial institutions to increase the amount of loans to the MSMEs to enhance their saving capacity.
4. The county government, in liaison with the national government, as well as other stakeholders, should liaise with the financial institutions to ensure they provide quality services that meet the client's financial needs, and provide more range of options to MSMEs.

5. There is a need for undertakings such as the provision of credit facilities and creating public awareness of the same to enhance credit awareness among MSMEs. Credit schemes should be friendly to MSMEs, and if there is a need, the financial institutions should provide guidance and access to the owners of MSMEs. Various training methods should be introduced to the MSME owners/managers whenever they are seeking to borrow funds.

6.4 Suggestions for Further Research

1. The study calls for future research focusing on entrepreneurs, employing longitudinal approaches to capture dynamic relationships affecting MSME performance. Frequent national-level surveys are also necessary to assess the impact of policy reforms on MSME performance in Kenya.
2. The study focused on Baringo County, which is considered largely marginalized (and in which access is especially difficult). Future research could focus on comparison of the effects of financial inclusion on the performance of MSMEs from marginal areas and other rural areas that are not from marginal regions
3. Concerning the survey approach, future determinants of MSME growth in Kenya surveys should employ a longitudinal approach to data collection to aid in the investigation of dynamic relationships of factors affecting MSME performance. Related to this, there is also a need for more frequent national-level surveys to track and analyze the impacts of policy reforms on MSME performance in Kenya.

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APPENDICES

Appendix I: Letter of Transmittal

Alice Cheruto,

P.O Box 5061-30100

Eldoret.

Dear Sir/Madam,

REF: REQUEST FOR PARTICIPATION IN RESEARCH STUDY

I am Alice Cheruto, a student at the University of Eldoret pursuing a Master's Degree in Economics. I am conducting a research study on **"Effect of Financial Inclusion on Micro, Small and Medium Enterprises (MSMEs) Performance in Baringo County, Kenya"**. You have been selected to participate in this study as a respondent. I kindly request that you respond to the questions in this questionnaire. The information collected from you will be kept confidential and used purely for this academic work.

Thank you for your cooperation.

Yours faithfully,

Alice Cheruto,

Reg No. SECO/AEC/M/001/20

Tel. No. +254 706 412710

Appendix II: Letter Authorization

University of Eldoret
flame of knowledge and innovation

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OFFICE OF THE DEPUTY VICE-CHANCELLOR (ASA)
(Board of Postgraduate Studies)

NAME:	Alice Cheruto
POSTAL ADDRESS:	1125- Eldoret.
Email:	alicecheruto13@gmail.com
TEL:	0706 412710 / 0724 245128
DATE:	7th February, 2024
ADM NO.	SECO/AEC/M/001/20

Dear Cheruto,

RE: CLEARANCE TO UNDERTAKE RESEARCH

Congratulations on the successful defense of your thesis research proposal titled "**Effects of Financial Inclusion on Micro, Small and Medium Enterprises (MSMEs) Performance in Baringo County, Kenya**" on the 1st August, 2023.

The supervisors assigned to guide you through your research are:

Lead Supervisor: Dr. Elijah Ng'eno - Department of Applied Economics
University of Eldoret

Co-Supervisor: Dr. Naftaly Mose - Department of Applied Economics
University of Eldoret

Subsequently, the Board of Postgraduate Studies hereby grants you clearance to undertake the proposed research work. Please note that during the entire period of research you shall be expected to work closely with your supervisors. You are required to observe professionalism and ethics during the period of research.

As a requirement for study continuation at the university, you shall file quarterly written progress reports with the Board of Postgraduate Studies using the prescribed progress reporting form for review. Have a fruitful time in your research and publication activities.

DIRECTOR
Postgraduate Studies
Eldoret

PROF. SAMUEL LUTTA
DIRECTOR, BOARD OF POSTGRADUATE STUDIES.

Appendix III: Questionnaire for MSME Owners/Managers

Instructions: Please tick/mark where necessary

Section A: Personal Information

1. Age: ……. years
2. Gender: Male [ ]
   Female[ ]
3. Education Level: illiterate [ ]
   Primary [ ]
   High school [ ]
   College [ ]
   University [ ]
4. Employment type: Self-employed [ ]
   Formal [ ]
   Unemployed [ ]
   Casual employment []
   Contract employment [ ]
5. Marital Status: Single [ ]
   Married [ ]
   Divorced [ ]
   Separate [ ]
   widow [ ]
   widower [ ]
6. Business type:
   Micro [ ]
   Small [ ]

Medium [ ]

Manufacturing [ ]

Trade [ ]

Service [ ]

Others, specify …….

4. How many employees do you have?.....

6. Do you have access to loan services?

Yes [ ]

No [ ]

7. Have you borrowed any loan from any finance institution before?

Yes [ ]

No [ ]

8. What was the purpose of the loan borrowed from any finance institution?

	Purpose	Tick
1	Personal use	
2.	To finance higher education or vocational training.	
3	To start or expand a business	
4	To invest in stocks, bonds and other financial instruments	
5	Others(specify)	

9. What were your sources (or types) of credit? (select more than one)

	Sources of credit	Tick
1	Start-up capital	
2	Personal savings	

3	Business loans	
4	Angel investors	
5	Saccos	
6	Venture capital	
7	Personal savings	
8	Government grants	
9	Commercial finance corporations	
10	Friends and relatives	

8. What were your other source(s) of credit?

	Type of credit	Tick
1.	Employer	
2.	Shylocks	
3.	Microfinance institutions (MFIs)	
4.	Group Contribution e.g., merry-go-round, chamas	
5.	Hustler fund	
6.	Commercial Bank Loans	
7.	Pension	
8.	Online lenders	

9. Evaluate the changes before and after loan access –

	Activity	**Before Loan Access**	**After Loan Access**
(i)	Monthly Profit in Ksh.		
(ii)	Enterprise Stock/asset in Ksh		
(iii)	Monthly sales in Ksh		
(iv)	Number of Employees		

9. To what extent does loan access affect your business's financial performance? (Kindly tick one).

i. Very great extent [ ]
ii. Great extent [ ]
iii. Medium extent [ ]
iv. Small extent [ ]
v. No extent [ ]

Section B: Terms in Credit/Loan Access

1. When do you normally repay the loan?

Weekly [] After 2 weeks [] Monthly [ ]

2. Fill in the following table on the effects of microcredit terms on financial performance by marking the corresponding responses.

S/no	Effects of microcredit terms	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	The loan repayment period affects the sales growth of my					

	enterprise.					
2	The loan repayment period affects the profitability of my enterprise.					
3	The loan repayment period affects the working capital of my enterprise.					
4	The loan repayment period affects the assets of my enterprise.					

3. From your experience, how do bank loans match your business's specific financial needs?

   Strongly Positive [ ]

   Positive [ ]

   Neutral [ ]

   Negative [ ]

   Strongly negative [ ]

4. Which of the bank loan option(s) is suitable for your enterprise?

	Bank loan option	**Tick**
1	Secured loans	
2	Unsecured loans	

5. Have the bank loans positively influenced the financial performance of your enterprise?

   Strongly agree [ ]

   Agree [ ]

   Neutral [ ]

   Disagree [ ]

   Strongly disagree [ ]

6. How do bank loans influence your financial performance? (tick where applicable)

No	Bank loan	Positive	Neutral	Negative
1.	Business loan			
2.	Mortgage loan			
3.	Personal loan			
4.	Education loan			
5.	Secured loan			
6.	SME loan			

7. Does credit availability influence the decision to expand your business? (Choose one)

YES [ ] NO [ ]

8. Have you ever faced challenges related to the accessibility of credit due to the location of your business in rural areas? (Choose one)

   - Yes [ ] No [ ]

If 'Yes', please specify the challenges you have faced:

……

How has the availability of multiple lending institutions affected your access to credit options? (Choose one)

Facilitated Access [ ]

Limited Access [ ]

No Impact [ ]

9. Please rate the influence of entrepreneurial literacy on your ability to access credit and manage your finances:

Strongly Positive [ ]

Positive [ ]

Neutral [ ]

Negative [ ]

Strongly Negative [ ]

10. Do you believe that the penetration of bank branches or point-of-sale devices in rural areas has affected your access to credit and financial services? (Choose one)

Yes [ ] No [ ]

If 'Yes', please describe how this penetration has impacted your access to financial services:

……

11. Have you encountered any barriers to access such as costs or lack of information in obtaining credit? (Choose one)

Yes [ ] No [ ]

If 'Yes', please specify the barriers you have faced:

…….

……

12. Do you keep financial records for your business? (Choose one)?

YES [ ] NO [ ]

Section C: Loan Interest

1. Are you aware of the different types of loans offered by banks or financial institutions?

YES [ ] NO [ ]

If yes, which types of loans are you familiar with? (please select all that apply)

Personal loans [ ]

Mortgage loans [ ]

Auto loans [ ]

Educational loan [ ]

Business loan [ ]

Mobile loans [ ]

Cash loan [ ]

Agricultural loan [ ]

Flexi loans [ ]

Overdraft loan [ ]

2. Are you aware of the interest rate amount charged on your loan?

Yes [ ] No [ ]

3. From your experience, how have high-interest rates impact your business's financial performance? (Choose one)

Strongly Positive [ ]

Positive [ ]

Neutral [ ]

Negative [ ]

Strongly negative [ ]

4. Fill the following table on loan terms affecting your enterprise by marking the corresponding response:

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Interest rates influence sales growth in my enterprise.					
2	Interest rates influence my enterprise's profitability					
3	Interest rates influence the working capital growth of my enterprise					
4	Interest rates influence the asset growth of my enterprise.					

5. Have premium costs or other loan processing costs affected your ability to access credit? (Choose one)

Yes [ ] No [ ]

If 'Yes', please describe how these costs have influenced your access to credit:

……

……

……

……

Section D: Collateral Requirement

1. Do financial institutions ask for loan security before advancing any credit?

   Yes [ ] No [ ]

2. Fill the following table on collateral requirement policies impacting your enterprise by marking the corresponding response:

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	Loan security required by financial institutions influences sales growth in my enterprise.					
2.	Loan security required by financial institutions influences my enterprise's profitability.					
3.	Loan security required by financial institutions influences the working capital growth of my enterprise.					
4.	Loan security required by financial institutions influences the asset growth of my enterprise.					

Section E: Education On The Types Of Credit

1. Are you educated on the types of credit?

Strongly agree [ ] somewhat agree [ ] somewhat disagree[ ] strongly disagree [ ]

3. Fill in the following table on how education on types of credit has affected your enterprise by marking the corresponding response:

	Impact of training	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	Education on types of credit has influenced sales growth in my enterprise.					
2.	Education on types of credit has influenced my enterprise's profitability.					
3.	Education on types of credit has influenced the working capital growth of my enterprise.					
4.	Education on types of credit has influenced the asset growth of my enterprise.					

Section F: Financial Service Usage by The Enterprise

1. How often do you transact with local financial institutions? (Choose one)

Daily [ ]

Weekly [ ]

Monthly [ ]

Bi-annually [ ]

Annual [ ]

2. Do you save or deposit with financial institutions? (Choose one)

Yes [ ] No [ ]

If 'Yes', please proceed to question 3. If 'No', skip to question 6.

3. If yes, how frequently do you save or deposit with financial institutions? (Choose one)

Daily [ ]

Weekly [ ]

Monthly [ ]

Bi-annually [ ]

Annual [ ]

4. What is the average savings balance you maintain with financial institutions? (Please specify the amount in Ksh.)

_____

5. On average, how many transactions do you make per account with financial institutions per month? (Please specify the approximate number)

_____

6. If none, do you plan to start transacting with financial institutions? (Choose one)

Yes [ ] No [ ]

7. How often do you make electronic payments with financial institutions? (Choose one)

Daily [ ]

Weekly [ ]

Monthly [ ]

Rarely [ ]

Never [ ]

8. Do you use additional banking services beyond savings and transactions with financial institutions? (Choose one)

Yes [ ] No [ ]

If 'Yes', please specify the additional banking services you use: _____

……

……

……

……

……

…….

9. How far is the nearest bank from your enterprise's location? (Please specify the distance in km)

_____

10. Fill in the table regarding saving/depositing with financial institutions on your enterprise by marking the corresponding response:

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	Saving/depositing with financial institutions has influenced sales					

	growth in my enterprise.					
2.	Saving/depositing with financial institutions has influenced my enterprise's profitability.					
3.	Saving/depositing with financial institutions has influenced the working capital growth of my enterprise.					
4.	Saving/depositing with financial institutions has influenced the asset growth of my enterprise.					

Section G: Financial Performance of the Enterprise

1. What was the total profits for the last 5 years?

Name of MSME …….	Year				
……	2019	2020	2021	2022	2023
Total Revenue					
Total sales					
Gross profit					

2. What are the major sources of revenue for the enterprise?

_____

_____

_____

_____

3. What is the enterprise's return on investment for the past 3 years?

Less than 5% [ ]

5%- 10% [ ]

More than 10% [ ]

Name of MSME …….	Year				
……	2019	2020	2021	2022	2023
Net income					
Cost of investment					
Return on investment					

Appendix IV: NACOSTI Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 231194

Date of Issue: 14/February/2024

RESEARCH LICENSE

This is to Certify that Miss.. Alice Cherute of University of Eldoret, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Baringo on the topic: Effect of financial inclusion on Micro ,small and medium enterprises (MSMEs) performance in Baringo County,Kenya for the period ending : 14/February/2025.

License No: NACOSTI/P/24/33152

231194

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

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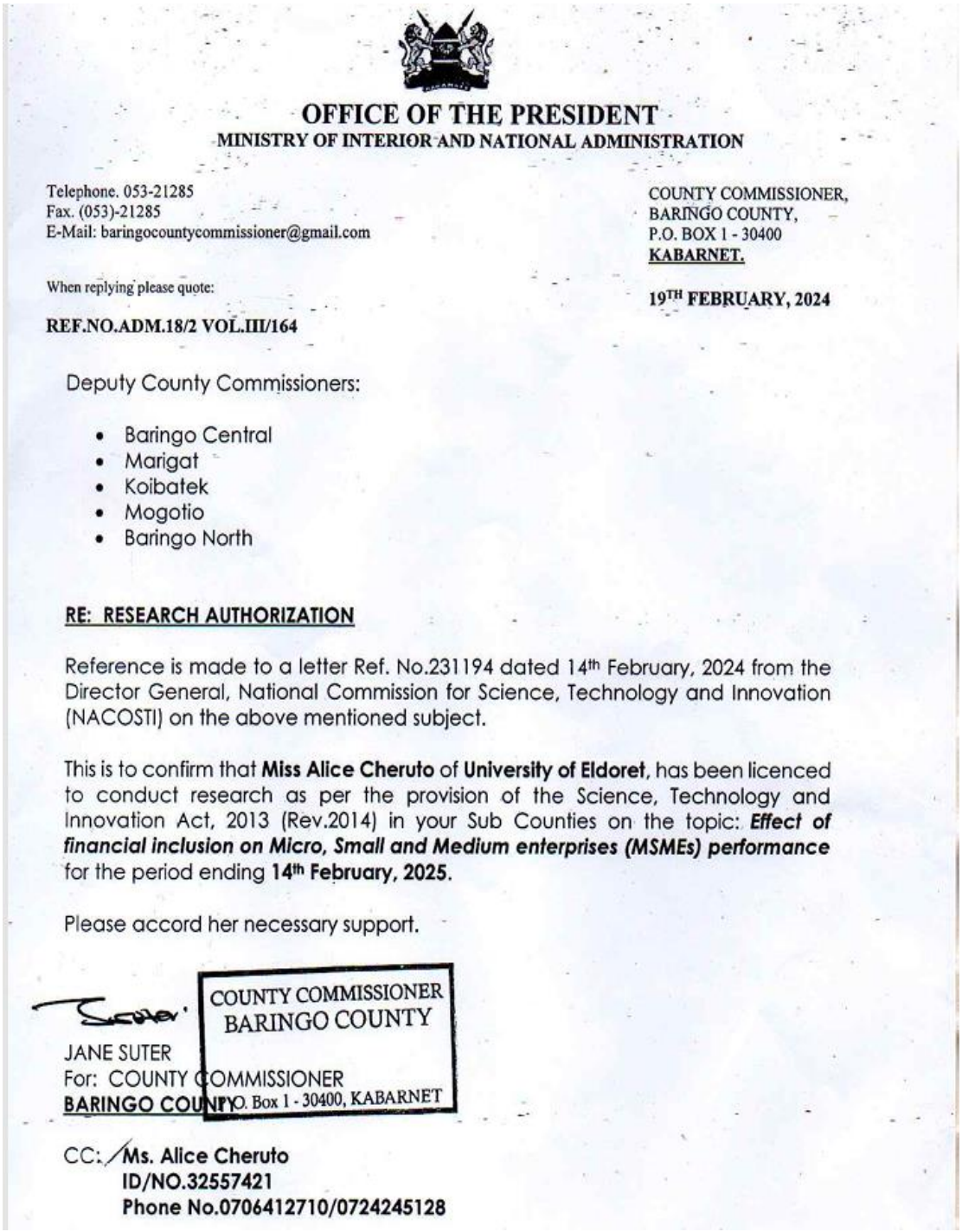
See overleaf for conditions

Appendix V: Ministry of interior and National Administration permit



OFFICE OF THE PRESIDENT
MINISTRY OF INTERIOR AND NATIONAL ADMINISTRATION

Telephone. 053-21285
Fax. (053)-21285
E-Mail: baringocountycommissioner@gmail.com

COUNTY COMMISSIONER,
BARINGO COUNTY,
P.O. BOX 1 - 30400
KABARNET.

When replying please quote:

REF.NO.ADM.18/2 VOL.III/164

19TH FEBRUARY, 2024

Deputy County Commissioners:

- Baringo Central
- Marigat
- Koibatek
- Mogotio
- Baringo North

RE: RESEARCH AUTHORIZATION

Reference is made to a letter Ref. No.231194 dated 14th February, 2024 from the Director General, National Commission for Science, Technology and Innovation (NACOSTI) on the above mentioned subject.

This is to confirm that **Miss Alice Cheruto** of **University of Eldoret**, has been licenced to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in your Sub Counties on the topic: ***Effect of financial inclusion on Micro, Small and Medium enterprises (MSMEs) performance*** for the period ending **14th February, 2025.**

Please accord her necessary support.

COUNTY COMMISSIONER
BARINGO COUNTY
P.O. Box 1 - 30400, KABARNET

JANE SUTER
For: COUNTY COMMISSIONER
BARINGO COUNTY

CC: **Ms. Alice Cheruto**
ID/NO.32557421
Phone No.0706412710/0724245128

Appendix V: Ministry of Education Permit

REPUBLIC OF KENYA

MINISTRY OF EDUCATION
State Department for Basic Education

Our Email:countyedubaringo@gmail.com

COUNTY DIRECTOR OF EDUCATION
BARINGO COUNTY
P.O. BOX 654
KABARNET

REF: CDE/BAR/EDU 9/11 VOL 2/99

19/02/2024

Miss Alice Cheruto

Application Identification Number 231194

University of Eldoret

RE : RESEARCH AUTHORIZATION

Reference is made to research license No. NACOSTI/P/24/33152 dated 14/02/2024.

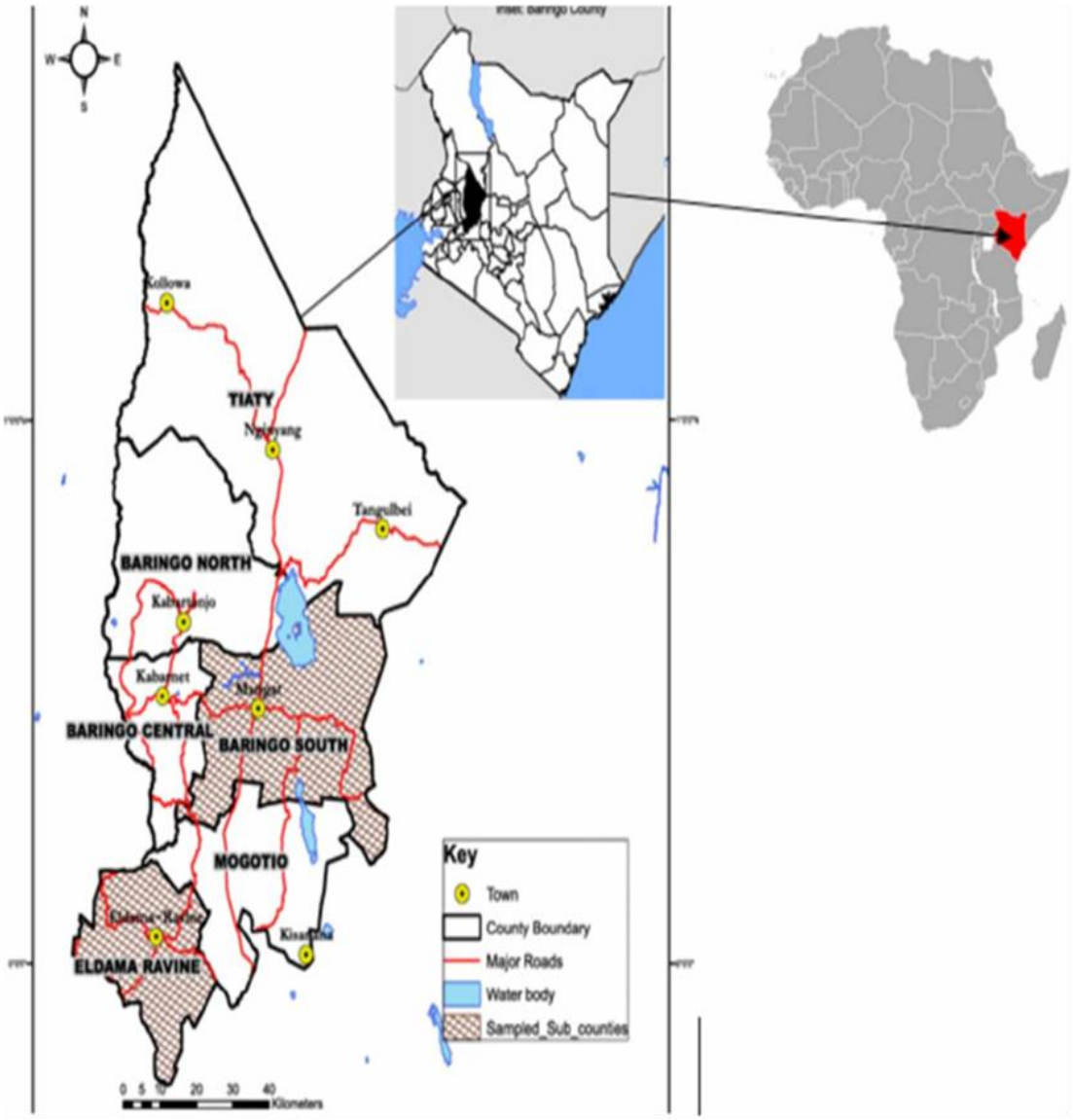
Authority is hereby granted to you to carry out research on: ***Effect of financial inclusion on Micro, small and medium enterprises (MSMEs) performance in Baringo County*** for a period ending 14/02/2025.

Masibo J. Kituyi
County Director of Education
BARINGO COUNTY

CC

All Sub County Directors of Education
Baringo County

Appendix VI: Baringo County Map



Appendix VI: Similarity Report

University of Eldoret

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Certificate of Plagiarism Check for Thesis

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Similarity	12%
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