FINANCIAL INCLUSION STRATEGIES AND PROFITABILITY OF MICROFINANCE BANKS IN NAIROBI CITY COUNTY, KENYA

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A RESEARCH PROJECT REPORT SUBMITTED TO THE SCHOOL OF BUSINESS, ECONOMICS AND TOURISM IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF DEGREE IN MASTER OF BUSINESS ADMINISTRATION (FINANCE OPTION) KENYATTA UNIVERSITY

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DECLARATION

The research project report presented here is original and has not been previously submitted for any degree or similar distinction.

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I hereby authorize the submission of this research project report for examination as the university supervisor.

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DEDICATION

I dedicate this project report to Almighty God for His grace, strength, and divine guidance throughout this academic journey. I also dedicate it to my husband, Mr. Chris Sakwa, for his unwavering support, patience, and encouragement, and to my children, Esther, Ella, and Elly, whose love, inspiration, and understanding have been my greatest motivation. I also acknowledge my siblings for their constant support and encouragement. Additionally, I extend this dedication to my close friends and mentors who walked with me through this academic journey. Their advice, inspiration, and emotional support contributed greatly to the completion of this work.

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OPERATIONAL DEFINITION OF TERMS

Profitability	Refers to the ability of a business to utilize its assets efficiently to generate earnings over time. It was measured by the return on asset.
Financial Inclusion Strategies	Refers to comprehensive approaches implemented by microfinance institutions to increase access to financial services for underserved populations. These strategies included digital financial services, group lending models, and financial literacy programs.
Digital Financial Services	Refers to financial products and services delivered through digital channels, including mobile banking, online platforms, and electronic payment systems. Proxies for digital financial services were the number of active digital accounts, transaction volume and Service uptake rate.
Financial Literacy Programs	Refers to educational initiatives aimed at improving clients' understanding of financial concepts, products, and services, ultimately empowering them to make informed financial decisions. The proxies were program reach, pre and post-program assessment scores, and percentage of clients implementing learned financial literacy programs.

Group Lending Models	Refers to a system in which small groups of individuals co-guarantee each other's loans, thereby sharing the risk of default through collective responsibility. Proxies for measuring group lending models were group size, loan repayment rate and loan size per group.
Microfinance Banks	Refers to financial entities that provide small-scale financial services, such as microloans, savings, and insurance, to individuals and small businesses that lack access to traditional banking services.

ABBREVIATIONS AND ACRONYMS

CBK	**:**	Central Bank of Kenya
DFS	**:**	Digital Financial Services
EFT	**:**	Electronic Funds Transfer
FLP	**:**	Financial Literacy Programs
GLM	**:**	Group Lending Models
ICT	:	Information and Communication Technology
MFBs	**:**	Microfinance Banks
MFIs	**:**	Microfinance Institutions
NACOSTI	**:**	National Commission for Science, Technology and Innovation
NPLs	**:**	Non-Performing Loans
ROA	**:**	Return on Assets
ROE	**:**	Return on Equity
SACCOs	**:**	Savings and Credit Cooperative Organizations
SMEs	**:**	Small and Medium-sized Enterprises
VIF	**:**	Variance Inflation Factor

ABSTRACT

Profitability in Kenya's microfinance banking sector has faced persistent challenges, with many institutions in Nairobi City County recording financial losses despite expanding outreach to underserved populations. Existing studies have largely examined operational and institutional factors, leaving limited empirical evidence on how financial inclusion strategies relate to profitability. This study examined how financial inclusion strategies affect the profitability of microfinance banks in Nairobi City County. Specifically, the study examined how digital financial services, group lending models, and financial literacy programs influence the profitability of microfinance banks. Guided by financial intermediation theory, the group lending model, financial literacy theory, and profit maximization theory, the study explored how the three financial inclusion strategies—digital financial services, group lending mechanisms, and financial literacy initiatives—relate to institutional performance. An explanatory research design was adopted, targeting 14 licensed microfinance banks in Nairobi City County. Primary data were obtained using structured questionnaires, while secondary data were drawn from audited financial statements covering the period 2016–2024. Data analysis involved descriptive statistics, correlation, and multiple regression, supported by relevant diagnostic tests. The findings revealed that digital financial services, group lending models, and financial literacy programs each contributed positively to profitability by improving operational efficiency, strengthening repayment behavior, and enhancing clients' financial capability. The study concludes that financial inclusion strategies play a significant role in supporting the financial sustainability of microfinance banks. It recommends strengthening digital infrastructure, improving the structure and monitoring of group lending practices, and institutionalizing financial literacy programs to ensure that financial inclusion efforts translate into sustained profitability.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Microfinance Banks (MFBs) have become central instruments in the financial inclusion movement by offering services such as credit, deposit schemes, and insurance products to individuals and microenterprises traditionally excluded from formal banking systems (Soofia, 2024). These institutions not only expand access to financial services but also contribute to their own financial sustainability. Profitability remains a key indicator of MFB performance, reflecting how efficiently they utilize assets to generate income (Kumar et al., 2024).

MFBs play a crucial role in socio-economic development by serving low-income and underserved populations (Memon et al., 2021). Their interventions help integrate marginalized groups into formal financial channels, enhancing resilience and promoting economic empowerment (Ghising, 2023; Hudon et al., 2019). Through credit, savings, and insurance services, MFBs open financial access to individuals who previously lacked opportunities within conventional banking environments.

Globally, financial inclusion has gained prominence as a driver of economic development. Over the years, the financial sector has emphasized inclusive systems as a pathway to poverty reduction and enhanced financial security. Financial inclusion refers to ensuring accessible, affordable, and appropriate financial services for individuals excluded from formal financial systems (Sharma & Pandey, 2022).

Worldwide, MFBs have served as key conduits for advancing inclusive finance. The Grameen Bank model in Bangladesh, documented by Yunus (2017), demonstrated how credit, savings, and insurance products can reach previously excluded populations. In India and the Philippines, MFBs

have significantly contributed to providing financial solutions to economically disadvantaged communities, especially in rural areas (Swamy, 2018). A global review by Ledgerwood, Joanna, Wilson, and Kim (2016) affirms that MFBs continue to broaden access to banking and financial services across diverse groups.

In Africa, MFBs' efforts in promoting financial inclusion are particularly critical, as the continent has some of the highest levels of financial exclusion. For instance, Banna, Mia, Nourani, and Yarovaya (2022) examined fintech innovations such as mobile banking and digital payment systems, highlighting their contribution to digital financial inclusion through MFBs. The study found that such innovations bridged service gaps for underserved populations and emphasized balancing technological advancement with risk management to sustain profitability through financial inclusion.

In Ghana, Awuah and Addaney (2016) explored the contribution of MFBs in delivering financial solutions to economically disadvantaged and marginalized groups. Their findings indicated expanded access, especially in rural areas and among women. However, limited funding availability, high processing costs, and inadequate financial knowledge hinder full financial inclusion, underscoring the importance of financial literacy programs—an essential component for improving both client outcomes and institutional profitability.

A study by Wokabi and Fatoki (2019) investigating financial service provision in East Africa, Rwanda, and Burundi showed that the size of the rural population had an inverse relationship with financial inclusion, while income levels had a positive effect. Although unemployment and interest rates showed mixed effects, the findings underscored the need for increased financial literacy and appropriate lending strategies. These observations highlight the continued necessity for strong financial inclusion mechanisms to enhance both financial access and the profitability of MFBs.

In Kenya, microfinance institutions continue to play a central role in expanding access to financial services for low-income and underserved communities across both rural and urban regions. Various studies have shown that while MFBs in Kenya support financial access, they also face challenges related to operational costs, repayment trends, and sustainability pressures, prompting increased focus on effective financial inclusion strategies.

Given these persistent challenges within the Kenyan microfinance sector, financial inclusion strategies have become central not only to expanding outreach but also to strengthening institutional sustainability. Approaches such as digital financial services, group lending models, and financial literacy programs are increasingly recognized for their potential to improve repayment behavior, reduce operational costs, and enhance client capacity, all of which influence the profitability of microfinance banks. It is within this context that the present study examined how these strategies relate to financial performance.

1.1.1 Profitability of MFBs

Profitability is a financial indicator used to assess the ability of an institution to use its assets effectively to generate earnings over time (Akinleye and Akomolafe, 2019). From a theoretical standpoint, profitability involves analyzing asset-based returns in relation to the developmental objective of delivering lasting access to financial products for marginalized communities (Salem and Abdelkader, 2023). It emphasizes the capacity of such an institution to utilize its resources efficiently in serving low-income citizens (Shkodra, 2019). The most disappointing aspect about MFBs is that they are expected to earn while fulfilling their missions within the irritating limitations of few resources and regulatory requirements.

Empirically, profitability in MFBs is an institution's capacity of yielding financial returns with its resources, assessed through core performance metrics like ROA and ROE. For instance, return on

assets will evaluate how effectively any MFB uses its entire asset base to generate profits, while ROE will calculate the returns to amounts invested by shareholders (Srouji, Hamdallah, Al-Hamadeen, Al-Okaily, and Elamer, 2023). These indicators are engaged in multiple studies to determine the financial viability of MFBs in terms of being sustainable relative to their social missions. Practically, performance evaluations on MFBs can be done through financial statements that take a special interest in critical performance indicators such as ROE and ROA. This extensive evaluation ensures sustainability with profitability and supports institutions in achieving critical financial objectives (Osinde, Singoro, and Fwamba, 2021). ROA and ROE are popular measures to assess how institutions make profit generated from resources and return profit to its shareholders measured simply as indicators.

The total assets of an MFB make proceeds in income generating activities purposely thereby widening the scope of financial services offered. It includes cash and loan assets, infrastructure, physical properties, and investments. Large asset bases earn banks more in profits because they achieve economies of scales when they expand and diversify their lending portfolios (Nur Iman, Sukmana, Ghifara, and Wardhana, 2022). MFBs in Nairobi have been reporting increasing total assets over the past five years mostly due to loan allocations, increase in mobile money usage and foreign investments. Through mobile banking and fintech solutions, MFBs have very much attained their goal for efficiency in assets accumulation.

Not all institutions though managed to take advantage of the increase in the value of assets as an avenue to improve profitability, Kimaru and Kinyua (2019) indicated that this is due to minimal effective and efficient use of assets, poor credit management, and other external economic factors. High non-performing loans contribute a major share to the liquidity problems through the erosion of asset value. Much asset growth might then be paramount in terms of profitability but should be

complemented by efficient management of resource and risk controls, guaranteeing sustainable long-term profitability.

Total costs are another determinant that affects profitability and influence net income. Extremely high operating costs make possible gains extremely unattractive, hence the importance of cost management in contributing to financial sustainability. As Nur Iman et al., (2022) state, rising costs, especially rent, salaries, and loan recovery, are a deterrent to the profitability of MFBs. The overall costs of MFBs in the Nairobi area have been aggravated by compliance costs, economic shocks, and increased operational costs. New financial regulations have directed MFBs to channel more resources toward risk management and capital reserves; thus, additional cost pressure is exerted.

According to Kimaru and Kinyua (2019), declining profits are for MFBs unable to cut operational costs despite increasing total assets. Digital lenders and automated processes are generally cheaper and more efficient. Technology enables MFBs to dematerialize overhead systems with very high administrative costs and easy customer access, all of which contribute toward improved financial performance and profitability. Hence this study employed ROA as a major profitability ratio in order to ascertain whether the MFBs efficiently use their assets to generate profit.

Table 1.1: Profitability Indicators for Microfinance Banks (2016–2024)

Variable	2016	2017	2018	2019	2020	2021	2022	2023	2024	Annual Change (%)
Total Assets (Ksh Mn)	72,510	67,597	70,754	76,353	74,879	75,138	70,427	64,202	57,900	-9.8
Net Income (Profits Before Tax) (Ksh Mn)	-377	-622	-1,437	-339	-2,240	-722	-980	-2,391	-3,531	47.7
ROA (%)	-0.5	-0.9	-2.0	-0.4	-2.99	-0.96	-1.39	-3.72	-6.1	-2.38*

Source: CBK, 2024

The profitability trends of MFBs from 2016 to 2024 show a persistent decline. Total assets fell from KSh 72.5 billion in 2016 to KSh 57.9 billion in 2024, a 9.8% drop from the previous year. Net income losses deepened from KSh 2.39 billion in 2023 to KSh 3.53 billion in 2024, while ROA worsened from –3.72% to –6.1%. These results indicate that asset growth has not translated into returns, with rising costs, inefficiencies, and credit risks threatening the long-term sustainability of MFBs.

1.1.2 Financial Inclusion Strategies for MFBs

This refers to actions or policies focused on expanding the availability of financial solutions to marginalized groups and economically disadvantaged populations. These strategies aim at improving financial literacy and expanding access to financial products for the most impoverished groups for the purposes of promoting economic development and reducing inequalities (Ariana, Wiksuana, Candraningrat, and Baskara, 2023). In theory, these strategies are thought to confer access to the financial system for the disadvantaged via microloans, savings accounts, financial literacy programs, with aim of development and poverty alleviation (Gunawan and Muzayanah

2023). In practice, however, studies analyze the availability and utilization of financial offerings through various channels, including digital financial services, group lending models, and financial literacy programs (Sethi and Acharya, 2018). Conceptually, such strategies involve giving life to initiatives geared towards building outreach and financial literacy while loosening barriers to access to financial services (Wasike, 2023).

Practically, MFB strategies include mobile banking, financial literacy programs, and tailor-made monetary solutions that effectively address the requirements of the extremely needy (Bedaiwy and Peter, 2022). From the study, the main interventions are digital financial channels, group lending models, and financial literacy programs. These channels are diagnosing financing gaps, imparting financial literacy to the people, and creating tailored financial instruments, there by giving Kenya an aggressive push in the direction of financial inclusiveness.

Digitization has created a paradigm shift in outreach and operational capacity in Kenya's microfinance banking environment. Conceptually, digital financial services involve the use of technology to provide a financial service, which includes banking services delivered either through a mobile device, internet banking, or electronic payment systems (Tiony and Tiony, 2023). Empirical studies further show that it is the balance of providing digital cash transfer services, such as through the M-Pesa system, that has largely enhanced the ability to reach and serve hitherto unbanked segments in the process of financial inclusion (Kambi & George, 2022). By adopting digital solutions, MFBs can reduce operational costs and create a better customer satisfaction environment since customers can access the services from anywhere at any time (Wanyonyi and Ngaba, 2021). From their findings, the transition from manual banking to digital banking enables an MFB to compete with a conventional bank, thereby improving its service delivery. Moreover,

Kambi and George (2022) state that digital financial inclusion increases available services while making such services affordable and sustainable for consumers and providers.

Digital financial services adoption in Kenya has been mainly characterized by rapid growth and innovation in such technologies. An alarming report released by the CBK is that mobile money transactions skyrocketed above the fourth-trillion-mark in 2021 due to widespread reliance on these platforms to perform financial transactions (Kalui,2019). This growth trend has been majorly driven by continued partnerships within the microfinance institutions and mobile service providers to extend financial access landside. A faster adaptation to digital avenues came into play following COVID-19 because consumers sought close contact-less transactions and banking (Chemtai, Okumu, and Kimutai, 2024). This trend signals sustained commitment to continued use of digital innovations in advancing inclusive finance. By the year 2024, the financial inclusion rate in Kenya climbed to 84.8%, from 83.7% in 2021. Much of this progress was associated with policy reforms and the increased digitization of financial services. The 2024 national household financial survey, conducted collaboratively by the CBK, KNBS, along with FSDK, further reveals indicating that among the 9.9% of adults in Kenya excluded from financial services, most had access to both bank accounts and digital payments (Xinhua, 2024).

Group lending models present a viable strategy for MFBs in Kenya to enhance financial inclusiveness. In group lending, groups are lent rather than the individual, which lowers the risk of default and creates a sense of communal responsibility for the borrowers (Trine and Jagongo, 2019). Hermes and Lensink (2018) refer to group lending as an arrangement whereby small groups of individuals co-guarantee each other's loans, thereby sharing default risk on the principle of collective responsibility that is built on trust, which should enhance repayment and reduce the risk of default. The key measurable indicators for group lending are group size, loan repayment, and

loan size per group. In a conceptual framework, group lending would be based on social capital theory stating that social networks help access resources and support among the members (Adams and Tewarib, 2017). Theoretically, the group dynamics are supposed to enhance repayment rates due to peer pressure and mutual support (Kueredza, 2022). There are, however, empirical studies confirming that group lending improves the performance of MFBs. The study shows that MFBs with group lending models exhibit a lower rate of default than those with the individual lending method (Kamarudin, Senan, Hussain, Michałek, and Anwar, 2023). In Kenya, this becomes a critical factor, where otherwise low-income persons stand to be excluded from accessing credit due to traditional requirements for collateral. Group solidarity, therefore, can allow MFBs to lend without taking any formal collateral so as to increase their clientele (Awuah and Addaney, 2016). The dynamism of group lending in Kenya has changed through the years. In the past, it was favoured for it being effective in risk alleviation of lending to those at the bottom of the pyramid. According to Ahlin and Suandi (2019), MFBs are witnessing quicker regression into dependence on group lending while still trying out other mechanisms. It is claimed that this change has been brought on by the awareness of the real costs of joint liability and the increasing requirement that lending should be a personal act, just as any other form of finance could have been better suited to that particular class of clientele (Shapiro, 2015). Group lending enjoys popularity mostly among NGOs and community-based MFBs because it provides an element of community.

Financial literacy programs form the foundation for client empowerment in MFB, as well as for using the services effectively. Conceptually, financial literacy refers to the knowledge and skills t hat allow one to make informed decisions concerning the act of budgeting, saving, and investing. According to theories such as the financial capability model, financial literacy improves one's re sponse to financial issues and conditions (Ariana et al., 2023). Empirical studies of financial liter

acy have shown a strong correlation between literacy and financial inclusion. According to Sari, Selviana, Brilliani, Asila, and Jannah (2022), higher financial literacy tends to correlate with mor e frequent interactions with formal financial institutions, thus promoting greater inclusion within their communities. The financial literacy programs created for a Kenyan context have much potential and assist MFB clients in understanding the products and services present to them for better utilization. Equally, it can uplift and instill clients with essential skills to hold their financial affairs, which is critical for sustaining their businesses and economic empowerment at large (Musthafa, Handra, Bachtiar, Taifur, and Ariyanto, 2023).

The trend behavior of financial literacy services in Kenya is described with education and training for furthering financial knowledge. Many MFBs presently tend to believe that allowing a few basic finance skills to clients-financial literacy, is essentially a part of financial inclusion (Atieno et al., 2024). These programs are fast gaining ground as many join hands along with NGOs or government agencies to train target populations (Fanta & Mutsonziwa, 2021). Meanwhile, the digital platform has also progressed substantially with financial education in its bid to achieve greater access and reach (Chemtai et al., 2024).

The strategic positioning of MFBs in pushing financial inclusion in Kenya is through digitization of financial services, group lending, and promotion of financial literacy. Each one of these has a theoretical and empirical check-all soundly conceived and well-framed. Using these strategies further extends outreach, enhances financial performance, and empowers the underprivileged in Kenya to secure their livelihoods.

1.1.3 Microfinance Banks (MFBs)

In recent years, there has been respectable progress and transformation of MFBs in Nairobi. This robustness is supported by the CBK report, indicating an average annual growth of 12% over the

last five years corresponding to an increasing demand for microfinance from small and medium enterprises (SMEs) and the urban populace within Nairobi. Underlying such a momentum is efficient management of the loan portfolio, where non-performing loans reported by MFBs are below 5%, an indication of prudent lending (Lwesya, Beni, and Mwakalobo, 2023). While witness trends indicate growth, the Central Bank of Kenya established over 30% of MFBs in Nairobi City County reported declining profitability, with ROA averaging 1.5% against 3% ideal benchmark for their financial sustainability (CBK, 2023). The trend of declining profitability is a reflection of challenges faced by MFBs in being sustainable while trying to broaden access for the underserved. In line with trends in global financial inclusion, strategic programming has been a priority among MFBs in Nairobi to cover areas where populations are underbanked and unbanked. A significant technological advancement is the application of mobile banking technology, where MFBs partnered with mobile network operators in offering mobile banking services to customers in remote areas. MFBs have broadened their product array to include savings accounts, insurance, and financial literacy initiatives, thus promoting financial inclusion and economic resilience (Lwesya et al., 2023).

Government partnership has been highly important in entrenching financial inclusivity in Nairobi. Initiatives such as the Inua Jamii Cash Transfer Program, which has been running since 2017 with the amount sourced through the National Treasury and CBK, has, thus, allowed the MFBs to transfer modal welfare payments to poorer segments and into their mainstream access to financial services. These partnerships greatly emphasize the public-private partnership frameworks towards financial inclusion. Further enabling the technology revolution has come into place in the drive towards making financial inclusive the case in Nairobi. General adoption of mobile phones and fintech solutions means that the MFB reduces its operational costs while providing convenience

to its customers and, at the same time, scaling its clientele base (Racheal, Joseph, and John, 2021). The technological shift thus aided in minimizing the financial inclusion gap existing in Nairobi City County. The pandemic of COVID-19 cast light on the urgent requirement for credible forms of social safety nets, and within that framework, MFBs in Nairobi changed the configuration of their operations, aiming at economically supporting clients impoverished by the pandemic. Institutions instituted moratoriums for loan repayments while also granting funding for emergency loans to help their clients cope with the financial implications of the pandemic (Kizza, 2021). This adaptability has been monumental in ensuring client resilience during a period characterized by dire challenges. MFBs in Nairobi County have shown immense growth, dynamism, and innovativeness in the development of a flexible service floor. Through strategic initiatives, government partnership, technology integration, and crisis interventions, Nairobi MFBs remains crucial for financial inclusion and economic empowerment.

1.2 Statement of the Problem

Microfinance Banks (MFBs) in Kenya have expanded significantly in recent years, playing a central role in delivering financial services to low-income and underserved groups. Despite this growth, their financial performance has remained a cause for concern, particularly in Nairobi City County, where the majority of licensed MFBs operate. According to the Central Bank of Kenya (CBK, 2023), more than 30% of MFBs in the county reported persistent profitability challenges. The sector's average Return on Assets (ROA) stood at approximately 1.5%, which falls below the commonly accepted 3% benchmark for financial sustainability.

Further evidence from CBK shows a worrying performance decline over time. Between 2016 and 2023, total assets held by MFBs decreased by about 8.84%, while net income deteriorated sharply from a deficit of Ksh 377 million to Ksh 2.39 billion. During the same period, ROA dropped from

–0.5% to –3.72%, indicating inefficiencies in asset utilization and increasing pressure on institutional sustainability. These negative trends raise concerns regarding the long-term viability of MFBs and their ability to meet both operational needs and client expectations.

Several studies have attempted to explain the profitability dynamics of MFBs in Kenya. For instance, Aluodo and Musau (2024) examined liquidity management and its effect on financial performance among MFBs in Nairobi. Kosasia and Njeru (2023) analyzed the role of credit risk on profitability, while Nyabiba and Kimani (2023) evaluated portfolio diversification strategies. Ouma (2024) further demonstrated how firm characteristics, such as capital adequacy, liquidity, and management efficiency, shape financial performance. However, these studies predominantly focused on operational or firm-level determinants of profitability. They paid limited attention to broader financial inclusion strategies and how these strategies may influence institutional financial outcomes.

This reveals a critical knowledge gap: although operational factors affecting profitability are well documented, the relationship between financial inclusion strategies, specifically digital financial services, group lending models, and financial literacy programs, and profitability remains underexplored in the Kenyan microfinance context. As a result, there is limited empirical evidence on whether these client-focused strategies, widely used by MFBs, contribute to improved financial performance.

Failure to address this gap constrains the ability of policymakers, regulators, and microfinance managers to adopt strategies that simultaneously advance financial inclusion and strengthen institutional sustainability. Without understanding how these financial inclusion strategies influence profitability, MFBs may continue to experience declining financial performance, thereby undermining their long-term operational effectiveness.

Therefore, this study sought to examine the effect of financial inclusion strategies, digital financial services, group lending models, and financial literacy programs, on the profitability of Microfinance Banks in Nairobi City County. The study was designed to fill the identified gap and contribute empirical evidence to support informed decision-making in the microfinance sector.

1.3 Objectives

1.3.1 General Objective

To examine the effect of financial inclusion strategies and the profitability of Microfinance Banks in Nairobi City County, Kenya.

1.3.2 Specific Objectives

i. To determine the effect of digital financial services on the profitability of Microfinance Banks in Nairobi City County.

ii. To establish the effect of group lending models on the profitability of Microfinance Banks in Nairobi City County.

iii. To examine the effect of financial literacy programs on the profitability of Microfinance Banks in Nairobi City County.

1.4 Research Hypothesis

H_{01}: Digital lending services do not have a significant effect on the profitability of Microfinance Banks in Nairobi City County.

H_{02}: Group lending models do not have a significant effect on the profitability of Microfinance Banks in Nairobi City County.

H_{03}: Financial literacy programs do not have a significant effect on the profitability of Microfinance Banks in Nairobi City County.

1.5 Significance of the Study

The study focused on Nairobi, selected for being the economic and financial center of Kenya. The county is home to a large and diverse population, of which many look up to MFBs in order to access crucial financial services. Nairobi hosts over 13 percent of Kenya's MFBs and a significant chunk of the low-income population, making it a critical ground for exploring the interaction between financial inclusion strategies and MFBs profitability. Even though the focus was on Nairobi, the financial inclusion strategies under this assessment are governed by national policies such as Kenya Vision 2030 and the National Financial Inclusion Strategy (2019-2024). Therefore, the relevance of this study goes beyond Nairobi and MFBs across the nation in providing a context for national applicability.

The research findings potentially improve the profitability of MFBs in Nairobi. It gives MFB management valuable information on how different methods of financial inclusion affect financial profitability. Looking into the effect of these methods enables MFB managers to determine which ones are better for profitability and sustainability. In particular, such insights would help in decision-making efforts such as whether or not to promote digital financial services and the structuring of group lending models, as well as whether to provide financial literacy that will improve financial performance.

These results can be utilized to improve MFBs in Nairobi City County, thereby increasing their financial profitability. Managers of MFBs will learn how various financial inclusion mechanisms affect financial profitability. By analyzing the inclusion mechanisms and their effect, managers of MFBs can discern which option contributes most to enhancing the profitability and sustainability of MFBs. In other words, the study will provide guidance for adopting the appropriate digital

financial services, group lending model, and financial literacy programs that maximize financial results.

The study will enrich policymakers with valuable insights on the challenges and opportunities linked to financial inclusion strategies in MFBs. Hence, the research will proffer evidence-based recommendations for policymaking, thereby ensuring that policies, regulations, and support programs assist strategies that enhance the sustainability of MFBs. Consequently, understanding how the profitability of digital financial services, group lending, and financial literacy programs are affected will enable policymakers to initiate targeted interventions that promote financial inclusion while fortifying the viability of MFBs. This research seeks to provide valuable insight for scholars looking at the effect of inclusive financial policies on the profitability.

1.6 Scope of the Study

The study focused on financial inclusion strategies, specifically digital financial services, group lending models, and financial literacy programs. Profitability was assessed using Return on Assets (ROA) and net income as the key performance indicators. The study was conducted in Nairobi City County, where all 14 licensed Microfinance Banks in Kenya operate at least one branch. Nairobi was selected because it serves as the country's primary financial hub and exhibits the highest financial inclusion rates nationally. The study covered the period from 2016 to 2024. This timeframe was selected because it captures major developments in financial inclusion strategies, regulatory reforms, the COVID-19 pandemic disruptions, and post-pandemic digital transformation within the microfinance sector. The unit of analysis comprised licensed Microfinance Banks operating within Nairobi City County, reflecting institutions directly responsible for implementing financial inclusion strategies and reporting profitability outcomes.

1.7 Limitations of the Study

Challenges that hampered this study included a lack of detailed financial information from the 14 registered MFBs, especially concerning their transactions in digital financial services, group lending, and financial literacy programs. Some institutions may even hesitate to divulge sensitive financial information such as profit levels. To minimize this situation, the researcher secured a letter to guarantee confidentiality and ensure the data would be used solely for scholarly purposes.

1.8 Organization of the Study

The study begins with a comprehensive introduction, outlining the research background, objectives, significance, scope, limitations, and the study's structural overview. It then covered the theoretical framework, a review and summary of relevant literature, and the conceptual framework underpinning the study. It describes the research methodology, including the research design, data gathering procedures, and analytical methods employed. The analysis of the data, key findings, and their interpretation is presented. Finally, it offers a summary, draws conclusions, and outlines recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This part involves relevant literature and theories related to the study's objectives, focusing on how financial inclusion strategies affect MFB profitability. It ends with a summary and conceptual framework.

2.2 Theoretical Review

To establish a solid basis for examining the connection between financial inclusion strategies and MFB profitability, this study draws upon four theories. Together, they guided the study by linking financial inclusion interventions with institutional profitability.

2.2.1 Financial Intermediation Theory

Financial Intermediation Theory was originally developed by Gurley and Shaw (1960) and later refined by Diamond (1984). The theory explains how financial institutions act as intermediaries by mobilizing funds from surplus economic agents (savers) and channeling them to deficit units (borrowers). Through intermediation, financial institutions reduce transaction costs, pool risks, and address information asymmetry between lenders and borrowers. Microfinance Banks therefore enhance efficiency in financial markets by lowering operational frictions and providing financial services to populations typically excluded from formal banking.

The theory rests on the assumption that intermediaries exist to minimize the costs associated with financial transactions and reduce imperfect information between savers and borrowers. It also assumes that financial institutions can screen borrowers more effectively than individual lenders, resulting in lower default risk. By managing liquidity, evaluating creditworthiness, and monitoring borrowers, intermediaries enhance market efficiency and stability.

Stiglitz and Weiss (1981) critique the theory by arguing that financial intermediation does not always eliminate information asymmetry, especially in markets characterized by credit rationing and high default risk. They note that even with intermediation, lenders may still face adverse selection and moral hazard problems, particularly where low-income borrowers lack reliable credit histories or collateral. Their critique further highlights that intermediaries may prioritize profit-maximizing clients, thereby limiting true financial inclusion among vulnerable populations. This suggests that the theory may oversimplify the complexity of lending environments, especially within microfinance settings.

The theory is relevant to the present study because Microfinance Banks in Nairobi City County rely on financial inclusion strategies to strengthen their intermediary role. Digital financial services enhance intermediation efficiency by lowering transaction costs and expanding outreach. Group lending mechanisms address information asymmetry through social monitoring, while financial literacy programs reduce borrower-side information gaps. Together, these strategies strengthen the intermediation process and influence the profitability of MFBs.

2.2.2 Group Lending Model

The Group Lending Model was pioneered by Muhammad Yunus in the 1970s through the Grameen Bank initiative. The model enables borrowers to access credit without physical collateral by forming groups whose members provide joint guarantees for each other's loans. The approach leverages social capital, peer monitoring, and collective responsibility to ensure repayment discipline. The model reduces credit risk by relying on the close social ties among borrowers who typically share similar economic characteristics and understand each other's financial behavior.

The model assumes that group members possess better information about one another than external lenders, which allows peer monitoring to reduce information asymmetry. It further assumes that

social pressure and the threat of losing group membership provide strong incentives for borrowers to repay their loans on time. Through joint liability, borrowers internalize the consequences of default, thereby enhancing repayment performance and reducing agency costs for the lending institution.

Armendáriz and Morduch (2010) critique the Group Lending Model by arguing that social pressure within borrowing groups can lead to excessive stress, coercion, or unfair burden-sharing among members. They explain that peer monitoring may not function effectively in environments where social cohesion is weak, such as urban areas with diverse and transient populations. Their critique also highlights that joint liability may fail when borrowers face systemic shocks that affect entire groups simultaneously, thereby weakening the social collateral assumed by the model. This indicates that group lending may not be universally effective across all socio-economic contexts.

Despite these concerns, the model remains relevant to this study because Microfinance Banks in Nairobi City County still rely on group-based lending structures to manage risk and enhance credit performance. Group lending mechanisms reduce default likelihood, improve loan portfolio quality, and strengthen repayment discipline, all of which contribute to profitability. The model therefore provides a conceptual foundation for assessing how group lending influences financial outcomes among MFBs in Nairobi.

2.2.3 Financial Literacy Theory

The Financial Literacy Theory, advanced by Lusardi and Mitchell (2014), argues that individuals make better borrowing, saving, and investment decisions when they possess adequate financial knowledge. The theory suggests that financially informed individuals are more capable of evaluating loan terms, budgeting effectively, avoiding excessive indebtedness, and managing credit responsibly. Through enhanced understanding of financial concepts, clients are better

positioned to participate in formal financial systems, reducing information asymmetry and improving overall credit behavior.

The theory is grounded in the assumption that financial knowledge enables individuals to process financial information accurately and make rational economic decisions. In microfinance contexts, the theory implies that well-informed borrowers are more likely to utilize loans productively, repay on schedule, and maintain financial discipline. As a result, strong financial literacy contributes to improved loan portfolio performance, reduced credit risk, and enhanced institutional profitability. Willis (2017) criticizes the Financial Literacy Theory by arguing that it places excessive emphasis on individual knowledge as the main determinant of financial behavior while neglecting structural and contextual factors that constrain borrowers' choices. Willis notes that financial education alone may not lead to improved financial outcomes when clients face unstable incomes, limited market opportunities, or adverse economic conditions. She further explains that the theory assumes individuals will behave rationally once they receive financial education, even though financial stress, cognitive biases, and market imperfections often interfere with rational decision-making.

The theory is relevant to the present study because financial literacy programs implemented by Microfinance Banks in Nairobi City County aim to improve clients' understanding of budgeting, loan management, and financial planning. Enhanced financial knowledge can reduce default rates, promote better loan utilization, and strengthen repayment behavior. These improvements help Microfinance Banks reduce credit losses, improve portfolio quality, and ultimately enhance profitability.

2.2.4 Profit Maximization Theory

The Profit Maximization Theory originated from Alfred Marshall's work in 1890 and was later supported by Milton Friedman (1953). The theory asserts that firms primarily exist to maximize

profits, which are taken as the key indicator of efficiency, sustainability, and long-term viability. Organizations pursue strategies, such as pricing, investment choices, and operational decisions, that yield the highest possible returns. Profitability is therefore viewed as the primary measure of successful performance in competitive markets.

The theory is based on the assumption that firms behave rationally and systematically adjust their operations to achieve maximum profit. It assumes the existence of competitive markets in which firms can respond to price fluctuations, cost changes, and consumer preferences. The theory also assumes that firms have clear financial incentives guiding their decisions and that maximizing profit aligns with maximizing shareholder value.

Fama and Jensen (1983) critique the Profit Maximization Theory by noting that firms may pursue objectives beyond profit, including risk reduction, governance effectiveness, regulatory compliance, and broader social responsibilities. They argue that managerial decisions are not always driven solely by profit motives, especially in financial institutions that serve vulnerable populations. Their critique further highlights that real-world markets are characterized by imperfect information, behavioral biases, and external shocks, which undermine the assumption of consistent rational profit-maximizing behavior. These observations suggest that profitability cannot always be explained purely through classical economic theory.

The theory is relevant to the present study because profitability is the core dependent variable used to evaluate Microfinance Banks in Nairobi City County. The theory provides a framework for assessing whether financial inclusion strategies, digital financial services, group lending models, and financial literacy programs, enhance financial performance. Digital financial services may increase efficiency and lower costs; group lending strengthens repayment and reduces credit

losses; and financial literacy programs improve client decision-making and reduce default risks. Together, these strategies can support profit maximization for MFBs.

2.3 Empirical Review

Empirical studies have examined how financial inclusion strategies influence the profitability of Microfinance Banks and related financial institutions across different contexts. This section reviews previous research in relation to each of the study variables, that is, digital financial services, financial literacy programs, and group lending models, and their effect on profitability. For each study, attention is given to the author(s), year, objectives, methods, key findings, and the specific gap that remains, so as to clearly anchor the current study within existing empirical evidence.

2.3.1 Digital Financial Services (DFS) on Profitability

Nguyen and Mensah (2025) investigated the effect of mobile money on financial inclusion among informal businesses across Sub-Saharan Africa. The objective of their study was to determine how mobile money usage influences access to savings and credit services for informal enterprises. Using a cross-sectional survey design, they collected data from 420 informal business owners and analyzed the results using descriptive statistics and regression analysis. The findings showed that mobile money services increased deposit mobilization and access to credit, indirectly supporting the profitability of financial service providers through higher transaction volumes. However, the study focused on informal enterprises rather than licensed Microfinance Banks, and did not directly examine institutional profitability in a regulated microfinance context. This leaves a gap regarding how DFS affects profitability specifically among MFBs in Nairobi City County.

Kimalit and Musau (2024) examined the impact of mobile banking, internet banking, electronic funds transfer, and card usage on the profitability of Microfinance Banks in Kenya. The main

objective was to assess how various digital banking channels affect Return on Assets. The study adopted a descriptive research design targeting all licensed MFBs and relied on secondary data from published financial statements over a five-year period. Regression analysis revealed that digital financial services had a positive and significant effect on ROA, indicating that increased usage of digital channels improved profitability. However, the study primarily concentrated on traditional digital banking platforms and did not capture emerging fintech partnerships, app-based lending, or agency banking, thereby limiting its reflection of the current digital ecosystem. This creates a gap in understanding how newer forms of DFS influence profitability.

Kipchoge (2024) assessed the impact of digital inclusion on financial performance in Kenyan Microfinance Banks. The objective was to evaluate how mobile banking and agency banking affect ROA and other financial performance indicators. Using a correlational research design, the study analyzed panel data from MFBs over a six-year period, employing multiple regression techniques. The findings indicated that mobile banking and agency banking had a significant positive effect on ROA, whereas internet banking had a relatively small influence. However, the analysis was conducted using institution-level data and did not incorporate client-level adoption or usage metrics. As a result, the study did not fully explain how the intensity of DFS utilization by clients contributes to profitability, leaving a gap in understanding the client-side dimension of digital inclusion.

Ouma (2024) evaluated firm characteristics and financial performance of Microfinance Banks in Kenya, with one of the objectives being to determine how digital capabilities affect profitability. The study applied a causal research design, using secondary data drawn from audited financial statements of MFBs over an eight-year period. Through regression analysis, the study found that digital capability, measured in terms of investment in information technology infrastructure and

digital channels, significantly enhanced operational efficiency and improved profitability. Nonetheless, digital capability was treated broadly as part of overall firm characteristics and not disaggregated into specific DFS channels such as mobile, internet, or agency banking. This broad operationalization limits insight into which specific DFS dimensions contribute most to profitability.

Luvanda (2023) examined the relationship between digital innovations and profitability among Microfinance Banks in Nairobi. The objective was to determine how the adoption of digital innovations affects financial performance. A cross-sectional research design was used, and primary data were collected from managers of selected MFBs, supplemented with secondary performance data. The study employed correlation and regression techniques and established that digital innovations improved profitability through cost efficiency and increased transaction volumes. However, the cross-sectional nature of the study made it difficult to establish causal relationships between DFS adoption and profitability over time. This temporal limitation indicated the need for further research that considers longer periods and integrates both primary and secondary data.

2.3.2 Financial Literacy and Profitability

Lang et al. (2024) conducted a global study examining the relationship between financial literacy and poverty reduction. The main objective of their research was to determine how financial knowledge affects household saving, borrowing decisions, and overall economic well-being. Using a cross-country survey design, the study collected data from 2,500 households across 12 countries and employed logistic regression to analyze the probability of poverty relative to financial literacy levels. The findings indicated that financial literacy significantly reduced the likelihood of poverty by enabling individuals to make informed financial decisions. However, the

study focused on household welfare outcomes rather than institutional indicators such as profitability, Return on Assets, or net income. This limits its direct applicability to understanding how financial literacy influences the performance of Microfinance Banks.

In Indonesia, Atahau (2023) examined the role of financial literacy in the sustainability of rural microfinance institutions. The objective was to assess how financial knowledge among clients influences institutional sustainability through improved governance and repayment discipline. The study used a mixed-methods approach involving surveys from 380 microfinance clients and interviews with institutional managers. Structural equation modeling revealed that financial literacy enhanced loan repayment and institutional governance, which indirectly supported sustainability. However, the context of rural Indonesia differs significantly from Kenya's urban MFB market in regulation, client demographics, and technological adoption, limiting the generalizability of these findings to licensed MFBs in Nairobi City County.

In Kenya, Riro (2022) investigated the effect of financial literacy and microfinance services on household income among beneficiaries of microfinance programs. The objective was to determine how financial knowledge influences household welfare outcomes. Using a descriptive research design, the study collected primary data from 260 respondents and analyzed the results using regression analysis. The findings showed that financial literacy improved financial decision-making, budgeting, and debt management, ultimately increasing household income. However, this study examined household welfare rather than institutional profitability, making its conclusions insufficient for explaining how financial literacy programs influence the financial performance of Microfinance Banks.

Chepkoech (2022) studied the relationship between financial literacy initiatives and the financial performance of Savings and Credit Cooperative Organizations (SACCOs) in Kenya. The objective

was to determine whether financial literacy programs enhance the sustainability and profitability of SACCOs. The study adopted a correlational research design, collected data from 42 SACCOs, and used regression analysis to test the relationship. The findings indicated that financial literacy initiatives improved financial sustainability and operational efficiency. However, SACCOs operate under cooperative principles and differ structurally from MFBs in governance, customer profiles, and regulatory frameworks, making the findings less suitable for direct application to Microfinance Banks.

Mwangi and Kimani (2021) investigated the effect of financial literacy on loan repayment performance among microfinance clients in Kenya. Their objective was to determine whether financial education enhances credit discipline. The study employed a descriptive survey design and collected data from 310 microfinance clients, which was analyzed using correlation and regression techniques. The results showed that financial literacy significantly reduced loan default rates and strengthened repayment behavior. However, the study concentrated on client repayment outcomes and did not directly examine institutional profitability indicators such as ROA, net income, or operational costs. This creates a gap in understanding how improved repayment behavior translates into profitability for Microfinance Banks.

2.3.3 Group Lending Models and Profitability

Bashir and Hassan (2022) conducted a study in South Asia to examine the effect of group accountability on loan repayment and institutional performance among microfinance institutions. The objective was to determine whether group-based lending structures reduced default risks and enhanced financial stability. The study adopted a descriptive research design and analyzed data from 54 microfinance institutions using regression and panel analysis. The findings showed that joint liability and peer monitoring significantly reduced default rates and improved institutional

sustainability. However, the study measured sustainability using operational self-sufficiency indicators rather than profitability metrics such as Return on Assets (ROA) or net income, limiting its relevance to profitability-focused research.

In Kenya, Njagi and Njoka (2021) investigated the role of group lending within the broader process of microfinance reforms and financial inclusion. Their objective was to assess how group-based credit mechanisms influenced loan repayment and credit risk management. The researchers used a mixed-method approach combining surveys from 180 respondents with interviews from microfinance practitioners. The results indicated that group lending enhanced repayment discipline and reduced credit risk, thereby contributing to institutional stability. However, the study did not measure profitability indicators, leaving unanswered the question of how improved repayment performance translates into financial gains such as increased ROA.

Ahmed (2021) examined the relationship between group lending mechanisms and repayment performance among microfinance borrowers in Nigeria. The objective of the study was to determine whether group accountability and peer monitoring improved repayment rates. Using a cross-sectional survey design with data from 300 microfinance clients, the study employed logistic regression to analyze repayment outcomes. The findings demonstrated that group lending significantly increased repayment rates and reduced default behavior. Nevertheless, the study did not analyze profitability outcomes for financial institutions, leaving an indirect link between repayment performance and institutional financial performance.

In Tanzania, Mwaipopo (2020) analyzed the effect of group lending on the financial outcomes of microfinance institutions. The objective was to determine how peer monitoring, joint liability, and social collateral influence institutional stability. The study used panel data from 21 microfinance institutions over a five-year period and applied fixed-effects regression analysis. The findings

indicated that strong group lending structures improved repayment consistency and strengthened institutional stability. However, the study focused on a different regulatory and economic environment, which limits the comparability of its findings to Kenya's urban microfinance sector. Additionally, profitability measures were not examined directly.

In Kenya, Karanja and Gachanja (2019) conducted a study to assess the effect of group lending mechanisms on the financial performance of microfinance institutions. The study adopted a correlational research design and collected data from 15 microfinance institutions using structured questionnaires. Regression analysis revealed that group lending improved repayment discipline and loan portfolio quality, suggesting potential positive effects on financial performance. However, the study was conducted before major digital transformations in the sector and did not incorporate profitability indicators such as ROA or net income. This limits its relevance to understanding current profitability dynamics among Microfinance Banks.

2.4 Summary and Research Gaps

The reviewed literature demonstrates that financial inclusion strategies have increasingly been recognized as important drivers of financial performance among Microfinance Institutions across various global contexts. Studies on digital financial services (DFS) generally agree that digital platforms enhance operational efficiency, expand outreach, and lower transaction costs, thereby contributing positively to financial performance. However, many of these studies focus either on informal enterprises, broad digital capabilities, or single-channel technologies without isolating specific DFS constructs such as active digital accounts, transaction volumes, or service uptake rates. Furthermore, several studies rely heavily on cross-sectional or institution-level data, limiting the ability to understand client-level adoption patterns and their contribution to institutional profitability. This creates a conceptual and methodological gap regarding the extent to which

clearly defined DFS indicators influence profitability among licensed Microfinance Banks, particularly in Nairobi City County.

Similarly, research on financial literacy programs consistently shows that financial knowledge improves borrowing behavior, repayment discipline, and financial decision-making. While these outcomes indirectly support the performance of lending institutions, most existing studies concentrate on household welfare, client behavior, or cooperative movements such as SACCOs rather than licensed Microfinance Banks. Moreover, none of these studies explicitly examine the connection between financial literacy programs and profitability indicators such as Return on Assets (ROA) or net income. This points to a conceptual gap in linking financial literacy interventions to institutional-level financial outcomes within the microfinance banking sector. Additionally, many studies are contextually limited, focusing on rural areas or non-Kenyan settings, thereby limiting their relevance to urban-based MFBs operating in Nairobi's dynamic digital environment.

Evidence from group lending studies shows that joint liability, peer monitoring, and social collateral play a crucial role in reducing default rates and strengthening credit discipline. Although these findings support the argument that group lending improves loan portfolio quality and institutional stability, most studies prioritize repayment performance and sustainability metrics rather than profitability indicators. In addition, the majority of the studies are based in different regulatory and socio-economic environments, such as Nigeria, Tanzania, or South Asia, limiting their applicability to the Kenyan microfinance context. Even Kenyan studies on group lending do not incorporate profitability measures and were often conducted before major digital and regulatory transformations, creating a temporal gap in understanding the current contribution of group lending models to institutional profitability.

Overall, the empirical literature highlights several conceptual, contextual, and methodological gaps. Conceptually, previous research has not integrated the three financial inclusion strategies, digital financial services, group lending models, and financial literacy programs within a unified framework for explaining profitability in Microfinance Banks. Contextually, most studies focus on rural areas, SACCOs, informal enterprises, or foreign microfinance settings, making their applicability to Nairobi City County limited. Methodologically, many studies rely either on cross-sectional designs, institution-level data, or narrow profitability indicators, failing to provide a comprehensive analysis of how inclusion strategies influence financial performance over time. These gaps underscore the need for a focused study that examines how financial inclusion strategies collectively and individually affect the profitability of licensed Microfinance Banks in Nairobi City County. The present study addresses these gaps by operationalizing each inclusion strategy into measurable constructs and assessing their direct and combined effects on profitability indicators such as ROA and net income.

Table 2.1 outlines each study's findings, pinpoints research gaps, and suggests possible solutions to address them.

Table 2.1 Summary and Research Gaps

Author & Year	Topic of Study	Key Findings	Research Gaps Identified	Focus of the Present Study
Nguyen & Mensah (2025)	Mobile money and financial inclusion in Sub-Saharan Africa	Mobile money increased deposits and credit access, indirectly improving performance.	Focused on informal enterprises; did not examine licensed MFBs or profitability metrics.	Examined licensed MFBs in Nairobi to generate institution-specific insights into DFS and profitability.
Kimalit & Musau (2024)	DFS and profitability of MFBs in Kenya	DFS significantly increased profitability (ROA).	Did not examine emerging fintech channels (apps, digital platforms).	Assessed a broader set of DFS components including app-based and multi-channel digital services.

Kipchoge (2024)	Digital inclusion and MFB performance	Mobile and agency banking improved ROA; internet banking insignificant.	Used institutional aggregates; did not consider client-level digital uptake.	Linked client adoption of DFS to profitability outcomes.
Ouma (2024)	Firm characteristics and performance of MFBs	Digital capability predicted efficiency and performance.	Did not isolate DFS components to identify channel-specific impacts.	Disaggregated DFS into measurable channels (mobile, agency, internet).
Luvanda (2023)	Digital innovation adoption and profitability	Digital innovations improved cost efficiency and profitability.	Cross-sectional design prevented causal inference.	Applied 2016–2024 longitudinal financial data to infer trends and causality.
Lang et al. (2024)	Global study on financial literacy and poverty	Financial literacy reduced poverty through better decisions.	Focused on households, not institutional outcomes or profitability.	Examined financial literacy interventions at MFB level and linked them to profitability indicators.
Atahau (2023)	Financial literacy, governance, and rural MFIs	Literacy improved sustainability via governance and repayment.	Conducted outside Kenya; rural settings differ from Nairobi's regulated urban MFB markets.	Contextualized financial literacy effects within Kenya's urban MFB environment.
Riro (2022)	Financial literacy & microfinance services in Kenya	Literacy improved debt management and decisions.	Measured household income, not MFB profitability.	Linked financial literacy programs directly to ROA and net income for MFBs.
Chepkoech (2022)	Financial literacy & SACCO performance	Literacy initiatives improved sustainability.	Conducted in SACCOs; structural differences limit generalization to MFBs.	Isolated MFB context to assess sector-specific effects.
Mwangi & Kimani (2021)	Financial literacy & loan repayment	Literacy reduced default and enhanced repayment.	Focused on repayment but did not link to institutional profitability.	Connected improved repayment discipline to profitability outcomes.
Bashir & Hassan (2022)	Group lending & sustainability of MFIs	Group lending reduced defaults	Measured sustainability, not	Assessed group lending effects specifically on

		and improved sustainability.	profitability metrics (ROA).	profitability indicators.
Njagi & Njoka (2021)	Group lending & microfinance reforms	Group lending improved inclusion and monitoring.	Did not test profitability outcomes.	Explicitly modeled group lending's relationship with profitability.
Ahmed (2021)	Group lending & repayment in Nigeria	Group mechanisms increased repayment and reduced defaults.	No linkage between repayment improvements and profitability.	Linked group repayment effects to institutional profitability measures.
Mwaipopo (2020)	Group lending & financial outcomes in Tanzania	Peer monitoring improved repayment and stability.	Different regulatory environment; limited generalizability to Kenya.	Examined group lending within Kenya's regulatory and market context.
Karanja & Gachanja (2019)	Group lending mechanisms & MFI performance	Group lending improved portfolio quality.	Omitted profitability measures and predated digital shifts.	Incorporated profitability (ROA, net income) and aligned analysis with digital-era dynamics.

2.5 Conceptual Framework

Figure 2.1 below, represents the correlation between digital financial services, group lending models, financial literacy program, and profitability diagrammatically.

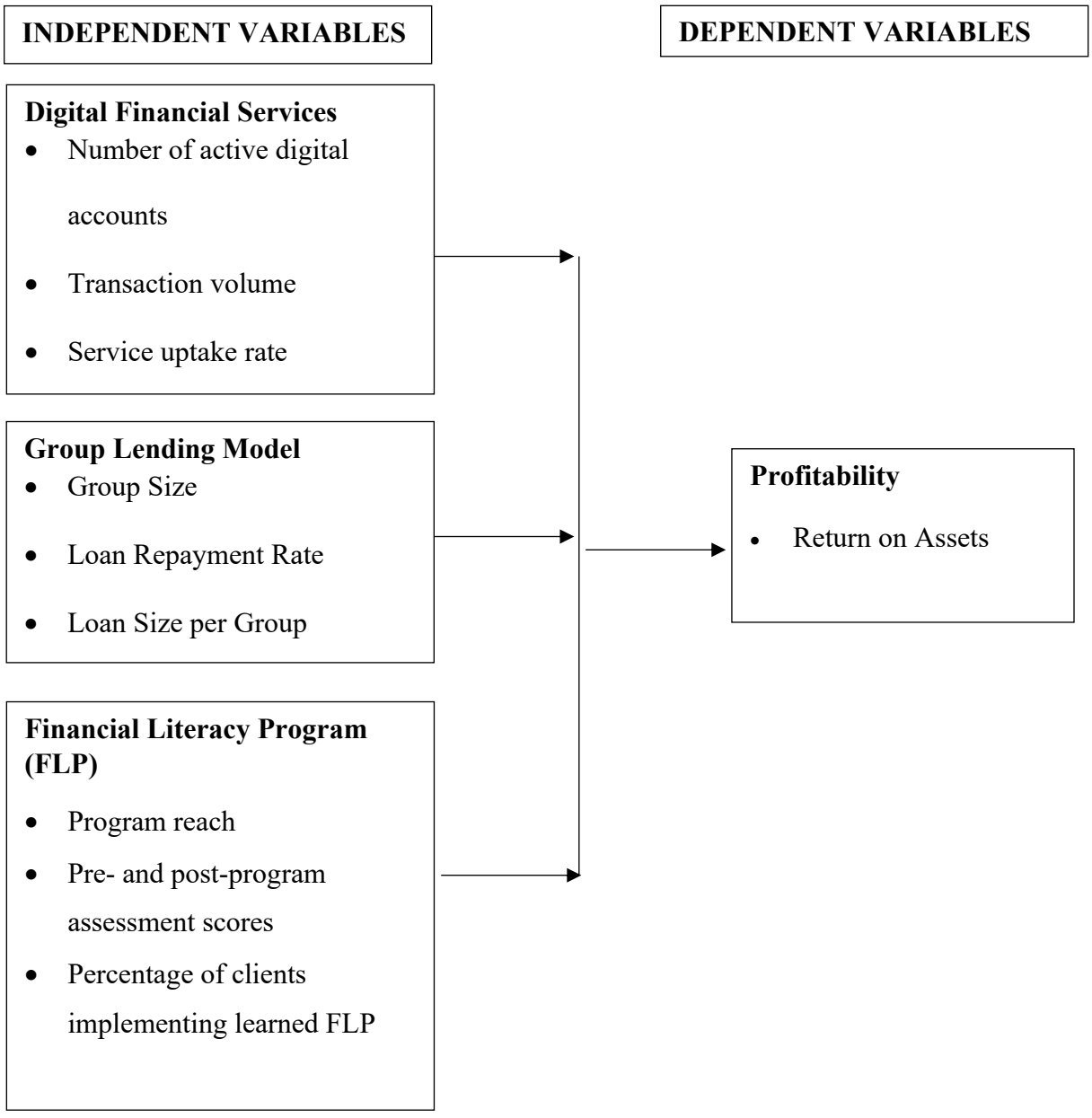

Figure 2.1: Conceptual Framework (Source: Researcher, 2025)

Figure 2.1 above illustrates the relationship between financial inclusion and profitability in MFBs. DFS, evaluated by active digital accounts, transaction volume, and service uptake rate, influences profitability by enhancing accessibility and efficiency. The group lending model, assessed through group size, loan repayment rates, and loan sizes, effects profitability by improving loan performance and reducing default risks. Financial literacy programs, evaluated based on program reach, assessment scores, and implementation rates, contribute to profitability by enhancing MFBs financial management skills. The framework highlights how these financial inclusion strategies collectively influence key profitability indicator, which include return on assets that reflect on the financial sustainability of MFBs.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This section outlines the methodology, including the design, study area, target population, sampling, data collection tools and procedures, as well as methods for analyzing and presenting the data.

3.2 Research Design

An explanatory research design was used to interrogate financial inclusion strategies in terms of digital financial services, group-lending models, and financial literacy programs, and how these influence the profitability of MFBs in Nairobi. The design was particularly suitable because it enables the clarification of cause-and-effect dynamics, especially in contexts where observable associations require deeper analytical interpretation to generate knowledge about the phenomena (Malik & Gupta, 2022). This design was therefore appropriate for assessing the effect of financial inclusion mechanisms on profitability and for testing hypotheses derived from theoretical and empirical insights. It further allowed the study to identify, quantify, and describe the relationships between financial inclusion strategies and profitability in order to show how these initiatives contribute to financial sustainability within the microfinance industry.

To align with the study objectives, the explanatory design was further justified by its ability to empirically test the extent to which digital financial services, group lending models, and financial literacy programs affect profitability outcomes. Since each specific objective sought to determine directional influence and statistical significance, the design provided the analytical rigor necessary for hypothesis testing. It also enabled the study to determine whether variations in financial

inclusion strategies account for differences in financial performance across MFBs in Nairobi City County, thereby supporting the core intention of the research.

3.3 Operationalization and Measurement of Variables

Table 3.1: Operationalization and Measurement of Variables

Category of Variable	Variables of the Study	Operationalization	Measurement	Hypothesized Direction
DV	Profitability	Financial performance of MFBs	ROA = (Net Income ÷ Total Assets)	Positive Negative No association
IV	Digital Financial Services	Extent of adoption of mobile banking, agency banking, and internet banking	Likert-scale items on DFS usage and uptake rates; transaction volume indicators	Positive Negative No association
IV	Group Lending Models	Use of joint liability, peer monitoring, and social collateral in lending	Likert-scale items on group repayment discipline, default rates, and loan structures	Positive Negative No association
IV	Financial Literacy Programs	Client training on budgeting, savings, credit management, and financial planning	Likert-scale items on frequency, scope, and effectiveness of financial literacy programs	Positive Negative No association

3.4 Target Population

The present study focused on the fully operational microfinance banks (MFBs) in Nairobi County that are licensed and regulated by the Central Bank of Kenya (CBK). According to the CBK's 2023 directory, a total of fourteen MFBs are formally registered and active within the county. These institutions formed the unit of analysis, as the study sought to understand institutional-level financial inclusion strategies and their influence on profitability.

The units of observation comprised senior and assistant managers drawn from six core departments: finance, marketing, operations, risk management, human resource, and ICT. These individuals were selected because they are directly involved in the formulation, implementation,

monitoring, and evaluation of financial inclusion strategies within their respective institutions. Their managerial roles position them to provide informed perspectives on how institutional strategies such as digital financial services, group lending practices, and financial literacy initiatives are operationalized and how they influence overall financial performance.

The selection of these departmental categories was informed by their functional contributions to both financial inclusion and profitability outcomes. Staff in finance, operations, and risk management play central roles in managing credit portfolios, structuring financial products, monitoring repayment performance, and evaluating financial outcomes. Marketing and human resource departments contribute to customer acquisition, client engagement, and staff capacity development, all of which are critical for effective uptake and execution of financial inclusion strategies. The ICT department oversees technological infrastructure and digital platforms that support mobile banking, internet banking, and other digital service delivery channels.

These departments were therefore appropriate for the study because their operational mandates intersect directly with key components of financial inclusion and institutional profitability. Their perspectives ensured the study captured comprehensive, practice-based insights into how financial inclusion strategies are implemented within MFBs and how these strategies influence financial performance.

3.5 Sampling Techniques

This study employed a census sampling method, which involves collecting data from every eligible unit within the target population. A census was appropriate because the number of senior and assistant managers across the licensed microfinance banks was sufficiently manageable, allowing comprehensive coverage of all relevant respondents. This approach ensured that the information

gathered was complete, accurate, and reflective of real institutional conditions (Charoenruk et al., 2023).

The respondents included senior and assistant managers from six key departments human resource, finance, marketing, operations, risk management, and ICT across each of the 14 microfinance banks in Nairobi County. A total of 168 managers participated in the study, with each institution contributing twelve respondents, representing two managers from each department. Using a census helped to eliminate sampling bias and strengthened the validity of the findings by guaranteeing that all critical decision-making units were represented equally (Grubert, 2019).

The implementation of the census method involved identifying all fourteen licensed microfinance banks from the CBK directory and incorporating all six relevant departments in each institution. Senior and assistant managers were mapped as the observation units due to their direct involvement in financial inclusion strategy execution and financial performance oversight. Questionnaires were administered to all eligible respondents within these departments, and follow-up communication was used to ensure full participation and complete coverage across the institutions. This comprehensive approach made it possible to obtain institutionally grounded insights into how financial inclusion strategies are applied and how they influence profitability in microfinance banks.

Table 3.2: Sample Frame

MFBs	Human Resource	Finance	Marketing	Operations	Risk Management	ICT	Total
Faulu	2	2	2	2	2	2	12
KWFT	2	2	2	2	2	2	12
SMEP	2	2	2	2	2	2	12
Rafiki	2	2	2	2	2	2	12
Sumac	2	2	2	2	2	2	12
U & I	2	2	2	2	2	2	12
Caritas	2	2	2	2	2	2	12
Maisha	2	2	2	2	2	2	12
Choice	2	2	2	2	2	2	12
Uwezo	2	2	2	2	2	2	12
Vision Fund Kenya	2	2	2	2	2	2	12
Century	2	2	2	2	2	2	12
Daraja	2	2	2	2	2	2	12
Momentum Credit	2	2	2	2	2	2	12
Total	**28**	**28**	**28**	**28**	**28**	**28**	**168**

3.6 Data Collection Instruments

Primary and secondary sources of data were used to offer a well-rounded perspective on the research. A questionnaire (Appendix I) gathered primary data, which included closed-ended questions. It was divided into sections covering the respondents' demographic details, the financial inclusion strategies, and the perception of effectiveness of such strategies. To evaluate perceptions, respondents had to rank a number of items using a 5-point Likert scale.

Secondary data was obtained through the reviewed financial reports of each institution and CBK disclosures from 2016 to 2024. A data collection tool (Appendix II) facilitated the gathering of this secondary information, which helped to systematically extract fundamental profitability indicators, namely, ROA which measured how efficiently an MFB utilizes its assets to generate profits. This indicator enabled a more comprehensive understanding of profitability, as it reflects dimensions of the efficiency with which an organization utilizes its assets.

3.6.1 Pilot Study

It was done with 17 respondents, that is 10 percent of the sample size, selected from Kiambu County. Kiambu is chosen because it shares similar socio-economic and financial characteristics with Nairobi City County, in terms of urban microfinance operations, client profiles, and adoption of financial inclusion strategies. The pilot tested the clarity and how reliable and valid the questionnaires were, ensuring that the items were well understood, free of ambiguity, and appropriately captured the study variables digital financial services, group lending models, financial literacy programs, and profitability of MFBs.

3.6.2 Validity of the Instrument

Validity refers to the extent to which a data collection instrument measures what it is intended to measure. Ensuring validity was essential in this study to guarantee that the questionnaire accurately captured the constructs of digital financial services, group lending models, financial literacy programs, and profitability.

Content validity was established by submitting the structured questionnaire to scholars and industry experts for review. Their evaluation assessed whether the items were relevant, comprehensive, and representative of the study variables. Feedback from these reviewers confirmed that the instrument sufficiently covered all dimensions intended for assessment and that the wording of the questions aligned with the study's conceptual framework.

Construct validity was attained by aligning each item in the questionnaire with constructs identified in existing empirical literature. This alignment ensured that the questions reflected theoretical expectations and accurately captured aspects such as digital uptake, repayment discipline, client financial knowledge, and profitability indicators. Through this process, the instrument demonstrated coherence with established measures used in previous studies.

To strengthen validity further, the questionnaire was examined for value-loaded or biased wording that could influence responses. Items that appeared ambiguous or emotionally weighted were revised to enhance clarity and neutrality. The logical flow of the instrument was improved by refining transitions between sections, and redundant items were eliminated to maintain focus and precision. These refinements ensured that the instrument was both conceptually sound and capable of generating accurate and unbiased data for the study.

3.6.3 Reliability of the Instrument

It was carried out to establish the internal consistency of responses. The study employed Cronbach's Alpha coefficient as a measure of reliability for Likert-scale items. A value equal to or greater than 0.7 was considered acceptable, as per Kline's (1999) specification.

3.7 Data Collection Procedure

Before collecting any data, approval was obtained from the university, followed by the issuance of a research permit from NACOSTI. Primary data were gathered using structured questionnaires designed to collect comprehensive information on financial inclusion strategies adopted by microfinance banks and their effects on various indicators of financial performance. To ensure that the instrument was clear, user-friendly, and capable of generating accurate responses, a pilot test was conducted with selected microfinance bank management personnel. Insights from the pilot informed refinements that enhanced the questionnaire’s clarity and effectiveness.

Once the tool was finalized, electronic copies of the questionnaire were distributed to the designated respondents across the microfinance banks. Follow-up reminders were issued to improve the response rate and ensure full participation. Throughout the process, strict confidentiality and ethical standards were observed to protect the privacy and autonomy of respondents.

The data collection exercise focused strictly on senior and assistant managers drawn from the six key departments, ensuring that the respondents had direct knowledge of financial inclusion practices and financial performance. To minimize value-loaded responses and promote honest reporting, participants were assured of anonymity and the voluntary nature of their participation. A structured checklist was also employed to confirm that all fourteen microfinance banks and the relevant departments were adequately covered, thereby ensuring completeness and consistency in the data collection process.

3.8 Data Analysis and Presentation

Primary data collected through structured questionnaires were coded, cleaned, and analyzed using STATA Version 17. Descriptive statistics were used to summarize the data and provide insights into the characteristics of respondents as well as their perceptions of the financial inclusion strategies under investigation, including digital financial services, group lending models, and financial literacy programs. These descriptive measures enabled an initial understanding of patterns within the dataset and offered a foundation for subsequent inferential analysis.

Inferential statistics were employed to examine the relationships among the study variables. Correlation analysis was conducted to determine the strength and direction of associations between financial inclusion strategies and profitability. Multiple regression analysis was then used to investigate whether digital financial services, group lending models, and financial literacy programs significantly predicted the profitability of microfinance banks. Secondary data were also analyzed using STATA, where profitability indicators were computed and subjected to descriptive statistics. This triangulation of primary and secondary data allowed for a more comprehensive and objective assessment of financial performance. The findings from both data sources were presented using tables, graphs, and charts for clarity and ease of interpretation.

To support the inferential analysis, an empirical model was applied to examine the connection between financial inclusion strategies and the profitability of microfinance banks. The model used for this assessment is expressed as follows:

$$Y_t = \beta_{0\,t} + \beta_1 X_{1t} + \beta_2 X_{2t} + \beta_3 X_{3t} + \beta_4 X_{4t} + \epsilon_t \quad \text{..... Equation [3.1]}$$

Where:

- Y_t is the profitability of MFBs for year t (2016 – 2024).
- X_{1t} is digital financial services for year t.
- X_{2t} is the group lending model for year t.
- X_{3t} is a financial literacy program for year t.
- β_0 is the intercept
- β_1 to β_4 are the regression coefficients
- ε_t is the error term

This analytical model enabled the study to quantify the extent to which each financial inclusion strategy influenced profitability, thereby supporting the overall objective of determining their collective and individual effects on the financial performance of microfinance banks in Nairobi City County.

3.9 Diagnostic Tests

To ensure the reliability and validity of the regression estimates, several diagnostic tests were conducted to confirm that the underlying statistical assumptions of the model were met. These tests assessed multicollinearity, heteroscedasticity, autocorrelation, and the normality of residuals.

3.9.1 Multicollinearity Test

Multicollinearity refers to a condition where two or more independent variables in a regression model are highly correlated, making it difficult to isolate the individual effect of each predictor on

the dependent variable. When multicollinearity is present, regression coefficients become unstable, standard errors increase, and interpretation of the model becomes unreliable. To assess this, the study used the Variance Inflation Factor (VIF), which is one of the most commonly applied methods for detecting multicollinearity. A VIF value greater than 10 was considered indicative of serious multicollinearity. If any variables exceeded this threshold, they were examined for redundancy, and corrective measures such as removing highly correlated predictors or combining overlapping variables were considered to stabilize the model.

3.9.2 Heteroscedasticity Test

Heteroscedasticity occurs when the variance of the residuals is not constant across all levels of the independent variables, which violates one of the key assumptions of Ordinary Least Squares regression. The presence of heteroscedasticity leads to biased standard errors, unreliable hypothesis tests, and inefficient regression estimates. To detect heteroscedasticity, the study employed the Breusch–Pagan test, which tests whether the variance of the residuals is dependent on the values of the independent variables. A p-value less than 0.05 indicated the presence of heteroscedasticity. When heteroscedasticity was detected, robust standard errors were applied to correct for the bias and ensure consistent and reliable estimation of the regression coefficients.

3.9.3 Autocorrelation Test

Autocorrelation refers to a situation where residuals from a regression model are correlated with each other, violating the assumption of independence of error terms. This problem is particularly common in time-series data, but may also occur in cross-sectional data when observations share similar characteristics or when important explanatory variables are omitted. The presence of autocorrelation inflates t-statistics, underestimates standard errors, and increases the risk of drawing incorrect inferences. The Durbin–Watson (DW) statistic was used to detect

autocorrelation, with values between 1.5 and 2.5 indicating no serious autocorrelation. If the DW statistic fell outside this acceptable range, the model was adjusted by considering the inclusion of missing relevant variables or employing techniques such as Generalized Least Squares to address serial dependence..

3.9.4 Normality Test

Normality of residuals is an essential assumption that ensures the accuracy of significance tests, confidence intervals, and the overall reliability of regression estimates. When residuals are not normally distributed, model inference becomes less reliable because standard errors and test statistics may be biased. The study assessed the normality assumption using the Shapiro–Wilk test, where a p-value greater than 0.05 suggested that the residuals were normally distributed. In cases where non-normality was detected, data transformations such as log transformation were considered to improve distributional properties. When transformations were insufficient, alternative methods such as bootstrapping were applied to produce robust inference despite deviations from normality.

3.10 Ethical Considerations

This study adhered to key ethical standards to ensure research integrity and participant protection. Approvals were obtained from the university and NACOSTI, and informed consent was secured. Participant privacy was maintained in line with data protection regulations, and the research process remained transparent and credible.

CHAPTER FOUR

ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents the analysis, presentation, and interpretation of data on the effectiveness of financial inclusion strategies in enhancing the profitability of MFBs in Nairobi County, Kenya. The data were analyzed in accordance with the study's objectives, which focused on digital financial services, group lending models, financial literacy programs, and the time trend. Each section of analysis is guided by these objectives to ensure targeted interpretation and relevance to the research problem.

4.2 Response Rate

Primary data was collected using a structured questionnaire administered to selected staff working in MFBs across Nairobi City County. A total of 168 questionnaires were distributed, and 152 were completed and returned, resulting in a response rate of 90.5%, as shown in Table 4.1.

Table 4.1: Response Rate

	Count	Percentage
Returned	152	90.5
Not Returned	16	9.5
Total	168	100

The response rate of 90.5% indicated in Table 4.1 reflects a commendable level of cooperation from the respondents. According to Mugenda and Mugenda (2003), a response rate of 50% is adequate, 60% is good, and 70% or more is considered very good for survey research. More recently, Holtom and MacGregor (2022) note that while survey response rates have declined globally, a rate above 70% remains highly reliable and acceptable in social science research. This high response rate enhanced the credibility, validity, and reliability of the study findings. It was

achieved through systematic follow-ups and clear communication with participants, which ensured a strong return of the distributed questionnaires.

4.3 Demographic Information

The study sought to determine the demographic characteristics of the respondents who participated, including gender, age, education level, and years of service in MFBs. This helps in understanding the background of participants and the context within which the financial inclusion strategies were implemented.

4.3.1 Gender Distribution

Both male and female staff participated in the study.

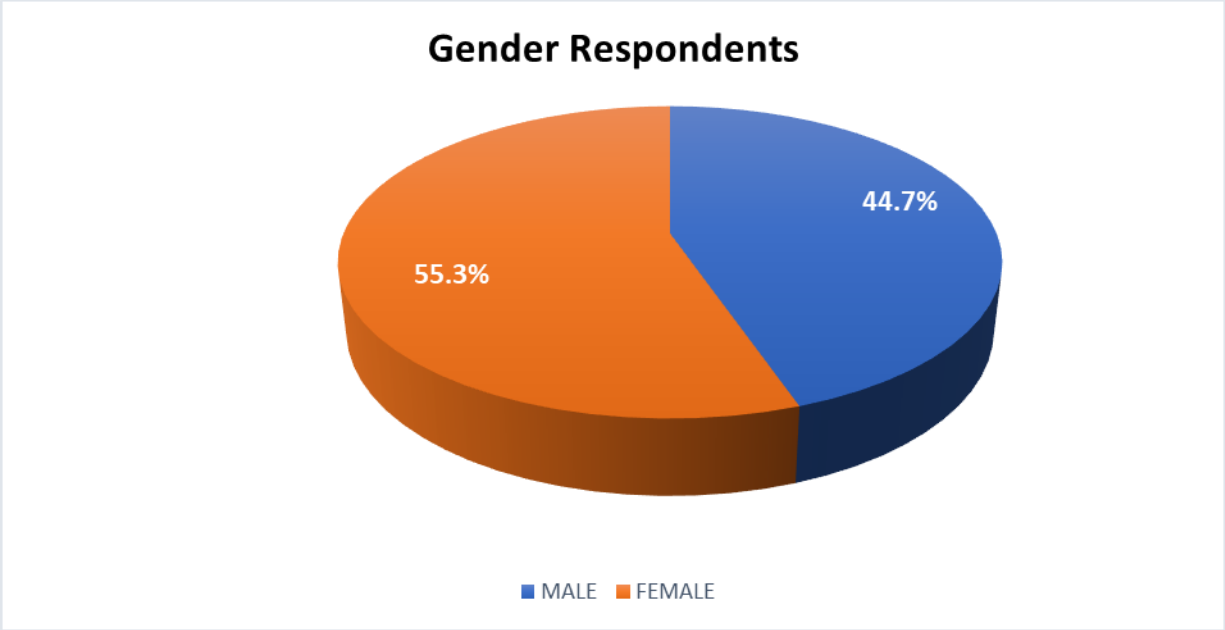

Figure 4.1: Gender Distribution

Results in Figure 4.1 reveal that the majority of respondents were female (84, 55.3%), while males accounted for 68 (44.7%). This indicates a relatively balanced distribution by gender, with a slight predominance of female participants, reflective of inclusive employment practices within the MFB sector.

4.3.2 Age Distribution

The study aimed to determine the age distribution of respondents, and the results are as in Figure 4.2.

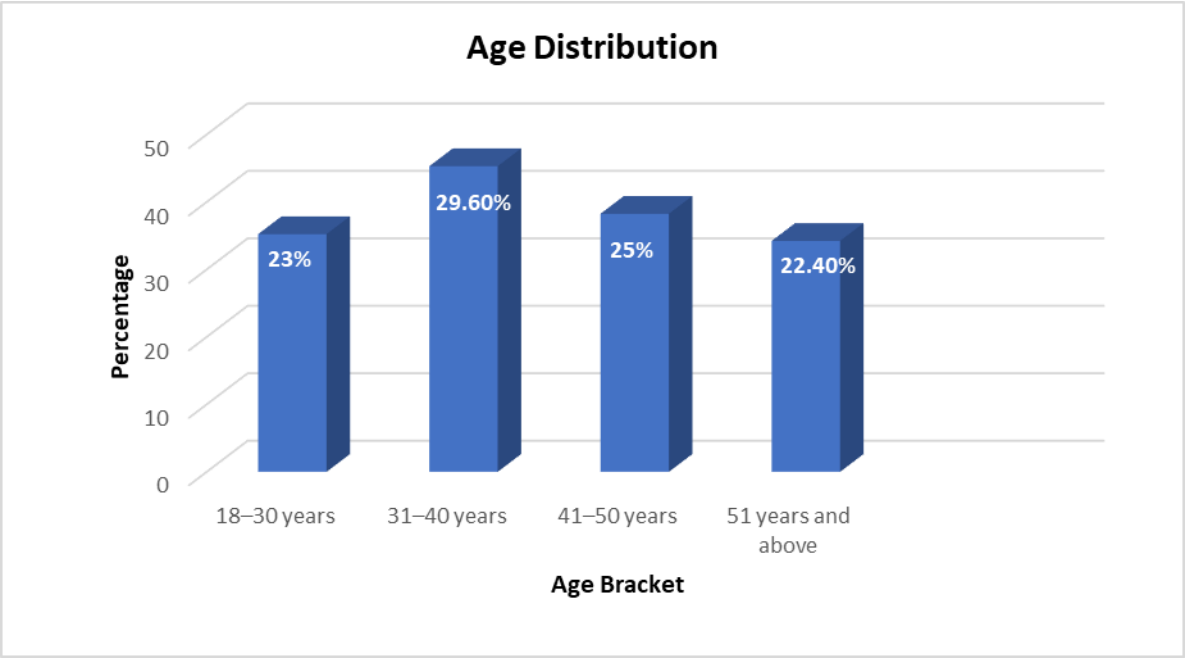

Figure 4.2: Age Distribution

The results in Figure 4.2 showed that most respondents were aged 31–40 years (45, 29.6%), followed by those aged 41–50 years (38, 25.0%), 18–30 years (35, 23.0%), and 51 years and above (34, 22.4%). These findings suggest that a majority of staff are in the productive mid-career stage, with valuable practical experience in financial inclusion and service delivery.

4.3.3 Education Level

The study also assessed the educational attainment of respondents to evaluate their potential capacity to understand and implement financial inclusion strategies. The results are in Figure 4.3.

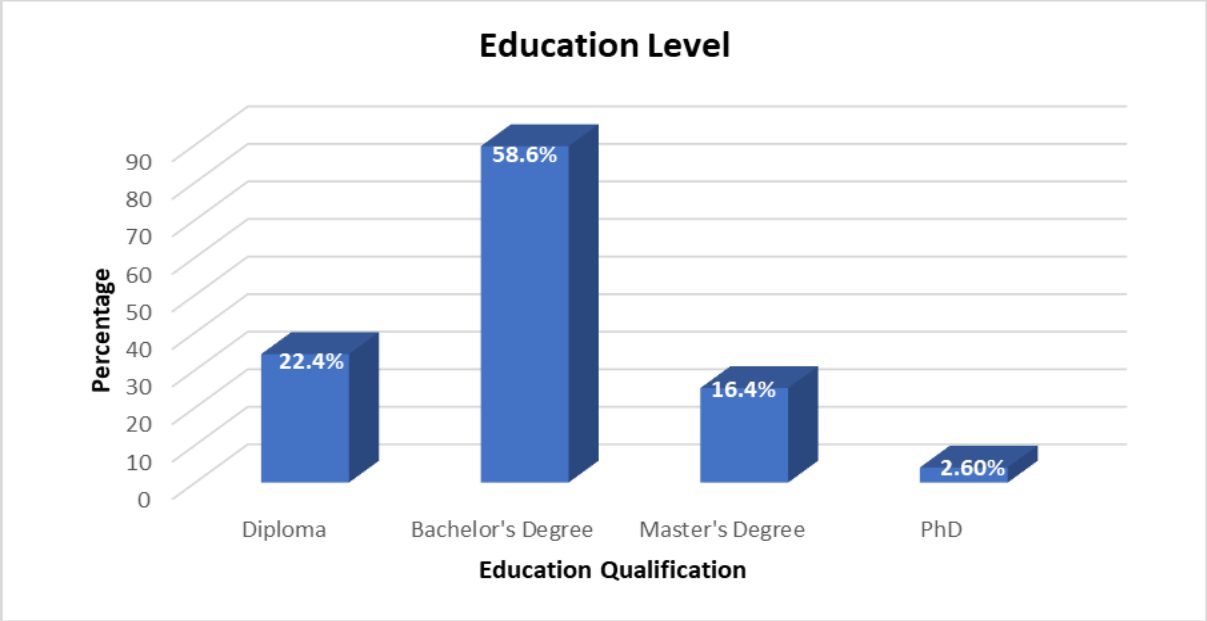

Figure 4.3: Education Level Distribution

The findings in Figure 4.3 indicate that most respondents held a bachelor's degree (89, 58.6%), followed by diploma holders (34, 22.4%), those with a master's degree (25, 16.4%), and a few with PhDs (4, 2.6%). This suggests that the workforce in MFBs is well-educated, enhancing their competence in applying and evaluating financial inclusion strategies.

4.3.4 Years of Service in MFBs

The study sought to determine how long respondents had served in their respective MFBs to assess their institutional familiarity and experience with financial inclusion practices. The results are summarized in Figure 4.4.

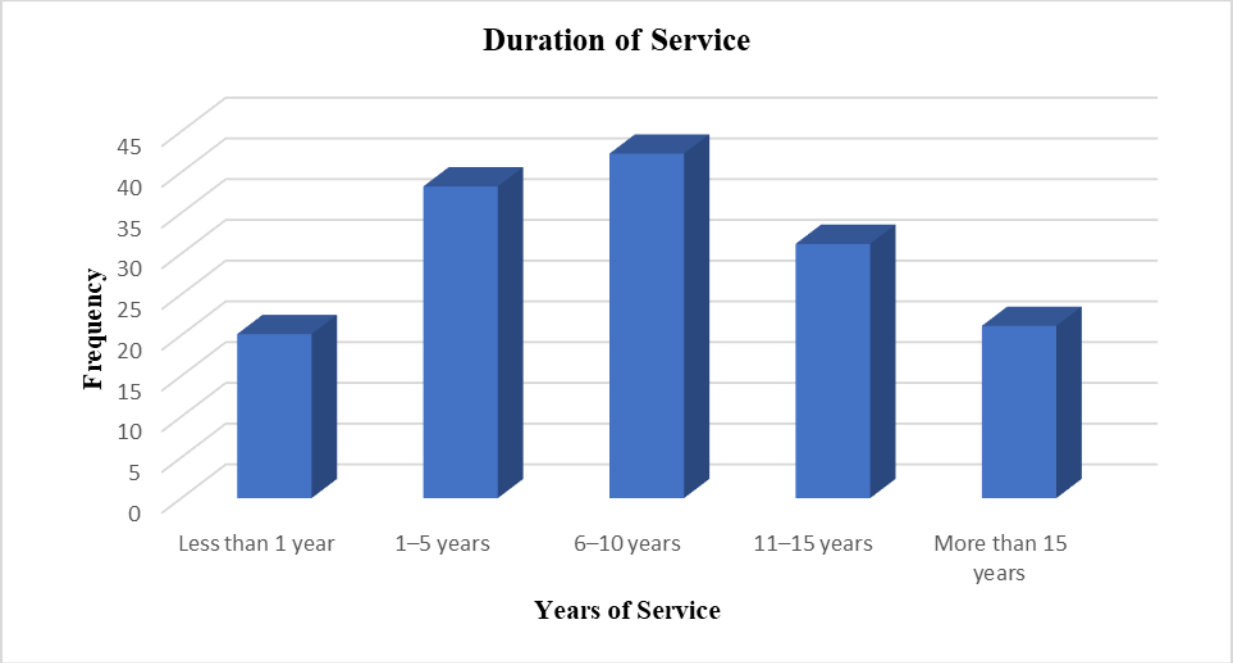

Figure 4.4: Years of Service

The findings in Figure 4.4 revealed that 20 respondents (13.2%) had served less than 1 year, 38 (25.0%) had served 1–5 years, 42 (27.6%) had served 6–10 years, 31 (20.4%) had served 11–15 years, and 21 (13.8%) had served more than 15 years. These results show a well-distributed range of service durations, suggesting diverse levels of experience and institutional knowledge across the sample.

4.4 Reliability of the Instrument

Cronbach's alpha test was utilized to determine the reliability of the instrument used in this study. It assesses internal consistency, ensuring that the items within the instrument reliably measure the same underlying construct. Table 4.1 summarizes the reliability statistics outcomes.

Table 4.1: Reliability

Variable	Cronbach's Alpha	N of Items
Digital Financial Services	0.803	3
Group Lending Models	0.816	3
Financial Literacy Programs	0.791	3
Overall	0.878	9

The highest value indicated in Table 4.2 was observed for the overall instrument at 0.878, indicating excellent reliability. Group Lending Models recorded the highest alpha at 0.816, followed closely by Digital Financial Services with 0.803. Financial Literacy Programs had the lowest but still strong reliability at 0.791. According to Hair et al., (2019), a value of 0.7 or above is considered acceptable for establishing internal consistency in research instruments, confirming that the constructs of the instrument demonstrated internal consistency and reliability.

4.5 Descriptive Analysis

Descriptive analysis was conducted using means and SDs to summarize responses on the study variables digital financial services, group lending models, financial literacy programs, and profitability. A five-point Likert scale was used. Interpretation of mean scores followed Margaret's (2017) guideline: 4.2–5.0 = Strongly Agree, 3.4–4.2 = Agree, 2.6–3.4 = Neutral, 1.8–2.6 = Disagree, and 1.0–1.8 = Strongly Disagree.

4.5.1 Digital Financial Services

The first construct assessed in this study was Digital Financial Services, which explores how respondents perceive the adoption and effectiveness of digital platforms in microfinance banking. Respondents were asked to indicate their level of agreement with statements regarding digital service delivery on a five-point Likert scale. Results are summarized in Table 4.2.

Table 4.2: Digital Financial Services (N = 152)

Items	SD (F/%)	D (F/%)	N (F/%)	A (F/%)	SA (F/%)	Mean	Std. Dev
Mobile banking has made loan application and processing more efficient.	4 (2.6%)	6 (3.9%)	14 (9.2%)	71 (46.7%)	57 (37.5%)	4.08	0.79
Customers can easily access financial services through mobile platforms.	5 (3.3%)	7 (4.6%)	13 (8.6%)	66 (43.4%)	61 (40.1%)	4.01	0.85
Digital financial services have reduced operational costs for the bank.	2 (1.3%)	4 (2.6%)	17 (11.2%)	74 (48.7%)	55 (36.2%)	4.06	0.76
Overall						**4.05**	**0.80**

As shown in Table 4.3, there were 152 observations on digital financial services. The mean score for mobile banking efficiency was 4.08 with a SD of 0.79. Customer access to financial services through mobile platforms had a mean of 4.01 and a SD of 0.85. Reduction of operational costs through digital platforms recorded a mean of 4.06 with a SD of 0.76. The overall average for the construct was 4.05 with a SD of 0.80, indicating general agreement among respondents. These findings are consistent with Kimalit (2024), who established that digital financial services significantly enhanced the profitability of MFBs in Kenya.

These findings support Financial Intermediation Theory, which argues that financial institutions improve efficiency by lowering transaction costs and enhancing access to services. The strong agreement among respondents on the efficiency and accessibility of digital platforms confirms the theory's assertion that technology-enabled financial services reduce operational constraints and improve institutional performance. The observed improvements in service delivery and cost reduction align directly with the theory's explanation of how intermediation innovations enhance profitability.

4.5.2 Group Lending Models (GLM)

The second objective assessed in this study was GLM, which measures respondents' perceptions of the effectiveness of group-based lending practices within microfinance institutions. Respondents were asked to indicate their level of agreement using a five-point Likert scale, and results are presented in Table 4.4.

Table 4.3: Group Lending Models (N = 152)

Items	SD (F/%)	D (F/%)	N (F/%)	A (F/%)	SA (F/%)	Mean	Std. Dev
Group lending promotes high repayment rates among clients.	6 (3.9%)	10 (6.6%)	19 (12.5%)	72 (47.4%)	45 (29.6%)	3.94	0.89
Group members hold each other accountable for loan repayments.	4 (2.6%)	6 (3.9%)	17 (11.2%)	76 (50.0%)	49 (32.2%)	4.11	0.74
Group lending has increased access to credit for low-income clients.	5 (3.3%)	8 (5.3%)	18 (11.8%)	73 (48.0%)	48 (31.6%)	4.00	0.83
Overall						**4.02**	**0.82**

As shown in Table 4.4, there were 152 observations on GLM. The mean score for repayment rate promotion was 3.94 with a SD of 0.89. Accountability among group members had a mean of 4.11 with a SD of 0.74. Increased access to credit for low-income clients recorded a mean of 4.00 with a SD of 0.83. The overall mean for the construct was 4.02 with a SD of 0.82, reflecting general agreement among respondents. These findings align with Abdirashid and Jagongo (2019), who found that group accountability mechanisms significantly improved repayment performance among microfinance clients in Nairobi City County.

The findings on group lending are consistent with the Group Lending Model, which emphasizes joint liability, peer monitoring, and social collateral as mechanisms for improving repayment performance. The descriptive results showing strong agreement on accountability and repayment discipline reflect the theoretical expectation that group structures reduce default risks and agency

costs. The high mean scores on repayment-related items illustrate how group-based mechanisms contribute to financial sustainability, aligning with the model's central proposition

4.5.3 Financial Literacy Programs (FLP)

The third objective examined was FLP, focusing on how respondents perceive the effectiveness of educational initiatives offered by MFBs. These programs aim to improve clients' financial knowledge, budgeting, and decision-making. Respondents rated their agreement with statements on a five-point Likert scale. Table 4.5 presents the descriptive results.

Table 4.4: Financial Literacy Programs (N = 152)

Items	SD (F/%)	D (F/%)	N (F/%)	A (F/%)	SA (F/%)	Mean	Std. Dev
Financial literacy programs have improved client budgeting and saving habits.	5 (3.3%)	7 (4.6%)	17 (11.2%)	75 (49.3%)	48 (31.6%)	4.03	0.81
Clients who attend financial literacy programs make better loan decisions.	6 (3.9%)	9 (5.9%)	18 (11.8%)	69 (45.4%)	50 (32.9%)	3.97	0.85
The bank tracks the implementation of skills learned through financial training.	4 (2.6%)	8 (5.3%)	16 (10.5%)	78 (51.3%)	46 (30.3%)	4.10	0.78
Overall						**4.03**	**0.81**

As shown in Table 4.5, there were 152 observations on FLP. Improved budgeting and saving habits had a mean of 4.03 with a SD of 0.81. Better loan decision-making recorded a mean of 3.97 with a SD of 0.85. The tracking of skills application through training follow-up had the highest mean of 4.10, with a SD of 0.78. The overall mean for the construct was 4.03 with a SD of 0.81, showing that respondents generally agreed on the effectiveness of financial literacy initiatives. These findings are consistent with Riro (2024), who reported that financial literacy programs

significantly improved the financial health and decision-making capacity of women microfinance clients in Kenya.

These results align with Financial Literacy Theory, which posits that financially knowledgeable clients make better borrowing, repayment, and budgeting decisions. The high mean scores on budgeting, saving, and loan decision-making demonstrate that financial education enhances clients' financial behavior, reducing information asymmetry and improving loan outcomes. This directly supports the theory's assertion that improved financial capability strengthens institutional performance through lower default rates and responsible borrowing.

4.6 Descriptive Statistics per MFB for ROA

Descriptive statistics of ROA are results are presented in Table 4.5 for the 14 licensed MFBs.

Table 4.5: Descriptive Statistics of ROA per MFB (2016–2024)

Year	Mean ROA (%)
2016	1.35
2017	1.31
2018	1.28
2019	1.15
2020	1.06
2021	0.89
2022	1.10
2023	1.28
2024	**1.42**
Overall Mean ROA (2016–2024)	**1.21%**

The results above, as shown in Table 4.5 indicate that the mean ROA across all 14 MFBs fluctuated between 0.89% in 2021 and 1.42% in 2024. The results reveal a gradual decline in profitability from 2016 (1.35%) to a low point in 2021 (0.89%), followed by a modest recovery towards 2024 (1.42%). The overall mean ROA of 1.21% (2016–2024) indicates that, on average, MFBs in

Nairobi City County operated with low profitability levels relative to their asset base. While the ratio is positive, it remains well below the 3% benchmark recommended by the CBK (2023) for sustainable financial institutions.

These results are consistent with recent empirical studies that highlight persistent profitability challenges within the microfinance sector. For instance, Luvanda (2023) observed that the profitability of most Kenyan MFBs has been erratic, with frequent fluctuations in performance. Similarly, Molla et al., (2025) found that operational and liquidity risks significantly depress profitability among MFBs in Kenya, reinforcing the vulnerability of the sector. The CBK (2023) report also acknowledged that while the subsector has shown signs of recovery, it remains weak and fragile, raising concerns about long-term financial sustainability. Overall, these studies reinforce the interpretation that the observed average ROA of 1.21% reflects a sector that, despite some recovery in recent years, continues to face profitability challenges, efficiency constraints, and financial sustainability risks.

4.7 Diagnostics Tests

It was conducted to check for violations of key regression assumptions, namely multicollinearity, normality, heteroscedasticity, and autocorrelation. Confirming these assumptions ensured the validity, reliability, and robustness of the regression results.

4.7.1 Multicollinearity

Multicollinearity arises when independent variables in a regression model exhibit strong intercorrelations, which can compromise the reliability of coefficient estimates. To assess the presence of multicollinearity, VIF and Tolerance values were computed for each predictor, as presented in Table 4.6.

Table 4.6: Collinearity

Variable	VIF	Tolerance
Digital Financial Services	1.98	0.505
Group Lending Model	2.31	0.433
Financial Literacy Program	2.08	0.481

All VIF values, as shown in Table 4.6, were below the critical threshold of 10, and tolerance values were above the minimum acceptable level of 0.1. This indicates that multicollinearity was not present among the independent variables. Therefore, each variable can be considered a distinct and reliable contributor to the regression model.

4.7.2 Normality

An essential assumption in regression analysis is that the error terms have a normal distribution. It was assessed using skewness and kurtosis statistics for each variable. Acceptable thresholds are skewness between -2 and +2, and kurtosis values less than 10. The results are presented in Table 4.7.

Table 4.7: Normality

Variable	Skewness	Kurtosis
ROA	-0.92	2.85
Digital Financial Services	-0.65	2.10
Group Lending Model	-0.71	2.74
Financial Literacy Program	-0.58	1.89

All variables in Table 4.7 exhibited skewness within the acceptable range of -2 to +2 and kurtosis values below 10. This indicates that the data is approximately normally distributed, thereby satisfying the normality assumption and supporting the appropriateness of parametric analysis techniques such as OLS regression.

4.7.3 Autocorrelation

It occurs when residuals are correlated across different observations, thereby violating the regression assumption of error term independence. The Durbin-Watson (DW) statistic was used to detect autocorrelation, where a value close to 2 suggests no autocorrelation.

Table 4.8:Durbin-Watson Statistic

Model	Durbin-Watson
ROA	1.79

As shown in Table 4.8 above the Durbin-Watson value of 1.79 is close to the ideal benchmark of 2.0, suggesting that there is no significant autocorrelation among the residuals. This confirms that the assumption of error independence was satisfied in the regression model.

4.7.4 Heteroscedasticity

It was assessed using the Breusch-Pagan test. It refers to unequal variance of error terms across values of the independent variables, which violates one of the core assumptions of regression (Zikmund, 2017).

Table 4.9: Breusch-Pagan Test

Test Statistic	p-value	Decision
2.74	0.10	Fail to Reject H_0

As indicated in Table 4.9 above, the Breusch-Pagan test yielded a test statistic of 2.74 with a p-value of 0.10, which is above the 0.05 significance threshold. This result suggests that the null hypothesis of constant variance could not be rejected, confirming that the dataset exhibited homoscedasticity. Therefore, the regression model was not affected by heteroscedasticity, ensuring efficient and reliable estimates.

4.8 Correlation Analysis

It was conducted to assess the strength and direction of the relationships between financial inclusion strategies and profitability. Results are presented in Table 4.10.

Table 4.10: Correlation for Variables

		Profitability	Digital Financial Services	Group Lending Model	Financial Literacy Program
Profitability	Pearson Correlation	1.000			
Digital Financial Services	Sig. (2-tailed)	.682**	1.000		
Group Lending Model	Pearson Correlation	.655**	.614**	1.000	
Financial Literacy Program	Sig. (2-tailed)	.608**	.599**	.589**	1.000

The results in Table 4.10 show that all the independent variables were positively and significantly associated with profitability at the 0.01 significance level. Digital financial services had the strongest correlation with profitability ($r = 0.682$, $p < 0.01$). This indicates that higher adoption and utilization of digital platforms such as mobile banking, agency banking, and online services were strongly linked to improved profitability among MFBs. These findings are consistent with Kimalit and Musau (2024) and Ondago (2024), who found that digital financial services significantly enhance financial performance in Kenyan MFBs. Similarly, Khanchel (2025) reported that FinTech adoption positively influences both social and financial performance of microfinance institutions, underscoring the critical role of technology in driving profitability.

The group lending model also exhibited a strong positive correlation with profitability ($r = 0.655$, $p < 0.01$). This implies that collective lending approaches, particularly those relying on peer monitoring and social collateral, contribute significantly to MFB profitability. Group lending enhances repayment performance by reducing default risks and promoting accountability among

borrowers. These results align with findings by Bashir and Hassan (2022) and Ahmed (2021), who observed that group lending mechanisms improve repayment discipline and strengthen institutional financial performance.

Similarly, financial literacy programs showed a significant positive correlation with profitability ($r = 0.608$, $p < 0.01$). This suggests that when clients are equipped with financial knowledge and skills, they are better positioned to manage loans responsibly, make informed financial decisions, and avoid default. Such improvements in client financial behavior ultimately benefit MFBs by reducing credit risks and supporting sustainable profitability. These results are in line with Mwangi and Kimani (2021) and Chepkoech (2022), who found that financial literacy improves repayment behavior and institutional sustainability. Further, Mwangi, Musau, and Muathe (2018) demonstrated that financial inclusion dimensions significantly influenced credit risk among Kenyan commercial banks, reinforcing the broader financial relevance of literacy and inclusion strategies.

In addition to the relationship with profitability, the results show that the independent variables were also positively correlated with each other, with coefficients ranging from 0.589 to 0.614. These values suggest that digital financial services, group lending, and financial literacy, tend to complement one another in strengthening institutional performance. However, since none of the inter-correlations exceeded 0.7, the results also indicate that multicollinearity was not a major concern for further regression analysis.

The findings confirm that digital financial services, group lending, and financial literacy programs are all positively related to the profitability of MFBs in Nairobi City County. This outcome is consistent with both the study's conceptual framework and prior empirical evidence, which

emphasize that financial inclusion strategies significantly influence institutional financial performance and sustainability.

4.9 Multiple Regression Analysis

It was conducted to evaluate the effect of financial inclusion strategies on the profitability of MFBs in Nairobi City County between 2016 and 2024.

4.9.1 Model Summary

It provides the explanatory power of the regression model.

Table 4.11: Model Summary

Model	R	R-Squared	Adjusted R-Squared	Std. Error
OLS Regression	.831	.691	.681	2.094

The regression model, as shown in Table 4.11, demonstrated a strong fit, with an R^2 value of 0.691. This indicated that 69.1% of the variation in the profitability of MFBs was explained by the predictors (DFS, GLM, and FLP). According to Cohen (1988), an R^2 above 0.60 is considered a strong fit. The adjusted R^2 (.681) further confirmed the robustness of the model by accounting for the number of predictors. The standard error (2.094) suggested a close alignment between the predicted and observed profitability values.

4.9.2 Analysis of Variance

It was conducted to evaluate the overall significance of the regression model. This test determined whether the combined set of independent variables significantly explains the variation in the profitability of MFBs. Results of the findings are as shown in Table 4.12.

Table 4.12: ANOVA Summary

Source	Sum of Squares	df	Mean Square	F	Sig. (p-value)
Regression	1242.456	3	414.152	70.52	0.000
Residual	647.143	148	4.374		
Total	1889.599	151			

As shown in Table 4.12, the F-statistic of 70.52 and the p-value of 0.000 indicate that the regression model is statistically significant at the 1% level. This means that the probability of observing these results due to chance is extremely low. Hence, the null hypothesis that all regression coefficients are equal to zero is rejected. This confirms that the set of financial inclusion strategies, when considered together, significantly affects the profitability of MFBs in Nairobi. The model is therefore suitable for making inferences about the relationships between the variables.

4.9.3 Regression Coefficients

This subsection presents the specific contributions of the individual contribution of each predictor variable to profitability.

Table 4.13: Regression Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-34.582	13.201	-	-2.62	0.010
	Digital Financial Services	0.328	0.054	0.442	6.07	0.000**
	Group Lending Model	0.291	0.062	0.388	4.69	0.000**
	Financial Literacy Program	0.253	0.057	0.359	4.44	0.000**

As shown in Table 4.13, all the financial inclusion strategies, digital financial services, group lending models, and financial literacy programs had positive and statistically significant effects on the profitability of MFBs. Digital Financial Services recorded the highest standardized beta (β = 0.442), meaning it explained the largest proportion of profitability variation among the predictors.

Group Lending Models followed with a beta of 0.388, while Financial Literacy Programs had a beta of 0.359. The significance levels ($p < 0.01$) for all variables confirmed that these predictors reliably contributed to changes in profitability. Together, these predictors accounted for 69.1% of the variation in profitability, as indicated by the R-squared value in the model summary. This demonstrates that financial inclusion strategies are strong determinants of MFBs' performance in Nairobi. The final regression model equation is as follows**:**

$Y = -34.582 + 0.328X_1 + 0.291X_2 + 0.253X_3 + 0.018X_4 + \varepsilon$…………………………[Equation 4.1]

Where:

Y = Profitability of MFBs

X_1 = Digital Lending Services

X_2 = Group Lending Model

X_3 = Financial Literacy Program

ε = Error Term

All the predictors, namely digital lending services, group lending models, and financial literacy programs, showed statistically significant and positive effects on profitability. These results strongly support the effectiveness of financial inclusion strategies in improving the performance and sustainability of MFBs in Nairobi.

From the findings, DFS had a significant positive effect on profitability ($\beta = 0.328$, $p = 0.000$). This indicates that a unit increase in DFS adoption improves profitability (ROA) by 0.328 units. The results align with Kimalit (2024), who established that DFS significantly enhances MFB profitability in Kenya, and with Umba, Croquet, and Godfroid (2024), who noted that digitization strengthens both financial and social performance of MFBs. Therefore, the H_{01} that DFS has no significant effect on profitability is rejected. Operationally, the coefficient for digital financial

services (β = 0.328) means that when MFBs increase their adoption or improvement of DFS, such as expanding mobile banking features, enhancing USSD platforms, or integrating agency banking, profitability rises accordingly. This increase occurs because digital channels lower staff workload, reduce branch operating costs, accelerate loan processing, and allow clients to transact more frequently and conveniently. In real practice, an improvement in DFS translates to faster turnaround times, reduced cash-handling expenses, higher loan uptake, and lower default risks due to automated reminders and digital tracking. These operational gains directly contribute to improved ROA, reflecting the financial benefits of digital transformation in microfinance banking. This finding aligns with Financial Intermediation Theory, which asserts that financial institutions enhance efficiency and profitability by lowering transaction costs and reducing information asymmetry through technological innovation. The positive and significant effect of DFS confirms the theory's position that digital platforms improve operational efficiency, streamline service delivery, and expand customer reach, ultimately enhancing financial performance. By demonstrating that increased adoption of digital financial services improves ROA, the results provide direct theoretical support for the intermediation role of MFBs.

From the findings, GLM was found to have a significant positive effect on profitability (β = 0.291, p = 0.000). A unit increase in group lending enhances profitability by 0.291 units. These results are consistent with Abdirashid and Jagongo (2019), who reported that group accountability mechanisms improved loan performance at KWFT. Similarly, Ba-Tri (2024) observed that peer monitoring in group lending reduces default rates and strengthens institutional sustainability. Hence, the H_{02} that GLM has no significant effect on profitability is rejected. The coefficient for group lending models (β = 0.291) indicates that strengthening group-based practices has a tangible positive effect on profitability. In operational terms, when MFBs enhance peer-monitoring

systems, improve group vetting processes, or reinforce joint liability arrangements, they reduce loan defaults and improve repayment discipline. Group structures help institutions cut costs related to credit appraisal, client follow-up, and collateral management. Because group members share responsibility for each other's behavior, MFBs spend fewer resources on loan recovery and mitigate credit risk more effectively. These operational efficiencies directly raise profitability by protecting the institution's loan portfolio, ensuring steady cash flow, and reducing write-offs.

The strong positive effect of group lending models corresponds with the Group Lending Model, which explains that joint liability and peer monitoring reduce default rates, strengthen repayment discipline, and lower agency costs. The regression results support this theoretical mechanism, demonstrating that enhanced group accountability and risk-sharing directly contribute to higher profitability. The evidence that group lending improves ROA validates the theory's proposition that social collateral structures improve credit performance and institutional sustainability

The findings also revealed that FLP significantly improved profitability ($\beta = 0.253$, $p = 0.000$). A unit increase in financial literacy initiatives increased profitability by 0.253 units. This result is supported by Omowole, Urefe, Mokogwu, and Ewim (2024), who showed that financial literacy is a key determinant of microfinance outcomes, and Hasan and Hoque (2021), who found that financial education improves repayment discipline and enhances microfinance sustainability. Accordingly, the H_{03} that FLP has no significant effect on profitability is rejected. The coefficient for financial literacy programs ($\beta = 0.253$) demonstrates that when MFBs invest in client training initiatives—such as budgeting workshops, loan management sessions, or business skills development—they obtain measurable profitability gains. Practically, better-informed clients make fewer borrowing mistakes, manage their businesses more effectively, and maintain stronger repayment behavior. Financial education reduces incidences of arrears, improves loan renewal

rates, and encourages savings mobilization, all of which enhance the MFB's earnings. By lowering non-performing loans and strengthening client retention, financial literacy programs improve operational efficiency and contribute directly to higher ROA.

The positive and significant effect of financial literacy programs supports Financial Literacy Theory, which posits that financially informed clients exhibit better financial behavior, make prudent borrowing decisions, and maintain discipline in loan repayment. The regression evidence showing that FLP increases profitability affirms the theoretical claim that improved client capability reduces information asymmetry and enhances loan performance. These results demonstrate that financial literacy initiatives are critical in strengthening MFB sustainability, consistent with the theoretical foundation.

The multiple regression analysis confirmed that all the financial inclusion strategies, namely the digital financial services, group lending models, and financial literacy programs, had significant and positive effects on the profitability of MFBs in Nairobi County. Together, they explained 69.1% of the variation in ROA. The rejection of all three null hypotheses reinforces that financial inclusion strategies are vital drivers of MFB performance and profitability.

Taken together, the regression results show strong alignment with the theories anchoring this study. The combined explanatory power of the model ($R^2 = 0.691$) supports Profit Maximization Theory, which argues that firms adopt strategic interventions that enhance efficiency and revenue generation. The significant effect of DFS, GLM, and FLP demonstrates that financial inclusion strategies act as profit-enhancing mechanisms, confirming the theory's assertion that strategic actions geared toward lowering costs, reducing risks, and improving client behavior ultimately lead to higher profitability. Thus, the regression findings provide comprehensive theoretical collaboration with all the theories.

CHAPTER FIVE

FINDINGS, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

In this chapter, the study summarizes the major findings, drawing relevant conclusions and offering practical recommendations. The study's objectives assessed the effect of financial inclusion strategies and the profitability of MFBs.

5.2 Summary of the Findings

The findings are presented in line with the study objectives and hypotheses. The analysis focused on whether the effects of digital financial services, group lending models, and financial literacy programs on profitability were positive or negative and statistically significant or insignificant. Descriptive analysis, correlation results, and regression findings were all used to support the interpretation of effects.

Descriptive results showed strong agreement among respondents that digital financial services enhance operational efficiency and service delivery. Mobile banking efficiency recorded a mean of 4.08, customer access through mobile platforms recorded a mean of 4.01, and reduction of operational costs had a mean of 4.06, giving an overall mean of 4.05. This indicates widespread agreement that DFS positively supports MFB operations. Correlation analysis showed that DFS had the strongest relationship with profitability ($r = 0.682$, $p < 0.01$), demonstrating that increased adoption and utilization of digital platforms are strongly linked to improved financial performance. Regression analysis confirmed that DFS had a positive and statistically significant effect on profitability ($\beta = 0.328$, $p < 0.01$). This implies that greater adoption of mobile banking, agency banking, and online platforms improves efficiency, reduces operational costs, and increases profitability. The null hypothesis (H_{01}) was therefore rejected. Atinga, Musau, and Mwangi (2023)

found that mobile banking, digital credit platforms, and agency banking significantly improved profitability among Kenyan microfinance institutions, reinforcing that digitalization enhances financial performance.

Descriptive findings also indicated that group lending models are perceived as effective, with repayment rate promotion (M = 3.94), group accountability (M = 4.11), and increased credit access (M = 4.00) all receiving high agreement. The overall mean of 4.02 shows broad support for the GLM approach. Correlation analysis showed that GLM had a strong and positive relationship with profitability ($r = 0.655$, $p < 0.01$), suggesting that peer monitoring, joint liability, and social collateral mechanisms strongly support financial performance. Regression findings indicated that GLM had a positive and statistically significant effect on profitability ($\beta = 0.291$, $p < 0.01$). This confirms that peer-based lending structures enhance repayment performance, reduce default risk, and improve financial sustainability. The null hypothesis (H_{02}) was therefore rejected. Kyereboah-Coleman and Osei (2021) found that group lending mechanisms, especially peer monitoring and social collateral, significantly improved repayment rates and financial sustainability among microfinance institutions in Sub-Saharan Africa.

Descriptive analysis revealed strong agreement on the effectiveness of FLPs. Budgeting and saving improvements had a mean of 4.03, responsible loan decision-making had a mean of 3.97, and tracking of skills had a mean of 4.10. The overall mean (4.03) showed that FLPs significantly enhance client behavior. Correlation results showed that FLP had a strong positive association with profitability ($r = 0.608$, $p < 0.01$), indicating that financially knowledgeable clients are more disciplined, make better borrowing decisions, and maintain lower default risks. Regression analysis showed that FLP had a positive and statistically significant effect on profitability ($\beta = 0.253$, $p < 0.01$). Clients who attended financial training demonstrated improved financial

management and repayment discipline, strengthening institutional profitability. The null hypothesis (H_{03}) was therefore rejected. Djoumessi (2022) found that financial literacy significantly improves borrower repayment behavior and reduces default rates in microfinance institutions in emerging economies, confirming the role of financial education in institutional performance.

The regression model explained 69.1% ($R^2 = 0.691$) of the variation in profitability, with all three predictors showing positive and statistically significant effects. This underscores that digital financial services, group lending models, and financial literacy programs are strong determinants of microfinance bank profitability in Nairobi City County.

5.3 Conclusions

The study set out to examine the effect of digital financial services, group lending models, and financial literacy programs on the profitability of MFBs in Nairobi City County. The regression results showed that DFS had a positive and statistically significant effect on profitability ($\beta = 0.328$, $p < 0.01$). This confirms that adoption of mobile banking platforms, agency banking, and digital payment systems substantially improves profitability. While operational challenges such as limited infrastructure and digital literacy remain, the evidence demonstrates that DFS are not just supportive tools but strong predictors of profitability. Therefore, strengthening digital service delivery can meaningfully boost MFB performance.

The findings revealed that GLM also had a positive and statistically significant effect on profitability ($\beta = 0.291$, $p < 0.01$). This underscores that peer monitoring, social collateral, and group accountability directly translate into higher repayment rates and lower defaults, thereby raising profitability. However, the conclusion also highlights that effectiveness depends on strong

group governance without standardized monitoring and conflict resolution mechanisms, the potential gains of this model may be diluted.

The regression results further confirmed that FLP had a positive and statistically significant effect on profitability ($\beta = 0.253$, $p < 0.01$). This provides evidence that client education on budgeting, savings, and responsible credit use enhances repayment discipline and reduces credit risks, which in turn improves profitability. Nonetheless, the study concludes that the full potential of these programs is yet to be realized, as inconsistencies in training delivery and weak follow-up mechanisms limit their effect.

All three financial inclusion strategies, that is, DFS, GLM, and FLP, were found to have positive and significant effects on MFB profitability, collectively explaining 69.1% of the variation in profitability. This reinforces the conclusion that inclusive financial strategies are not peripheral but central drivers of institutional performance and sustainability. MFBs that integrate digital innovations, strengthen group lending mechanisms, and institutionalize financial literacy programs are more likely to achieve stable and sustainable profitability over time.

5.4 Recommendations

The study established that digital financial services have a strong and significant effect on the profitability of microfinance banks. This indicates that mobile banking, agency banking, and digital transaction channels play an essential role in reducing operational costs and improving service efficiency. To strengthen these gains, the Central Bank of Kenya should develop clear regulatory guidelines that enhance platform interoperability, enforce cybersecurity standards, and promote consumer protection in digital finance. At the institutional level, managers of MFBs should allocate sufficient financial and technical resources to expand digital service channels, maintain stable system infrastructure, and implement continuous digital literacy training for

clients. These efforts will increase customer adoption of digital platforms, enhance operational efficiency, and further improve profitability.

The findings also showed that group lending models significantly enhance MFB profitability by improving repayment rates and minimizing default risks. This highlights the importance of peer monitoring, social collateral, and group accountability as pillars of loan performance. Policymakers, especially the Ministry of Cooperatives and the MSME Authority, should therefore formalize group lending structures by developing standardized guidelines, credit guarantee mechanisms, and oversight frameworks that safeguard borrowers and lenders. Within MFBs, credit departments should institutionalize group performance tracking tools, continuous supervision of loan groups, and conflict-resolution training for loan officers to maintain strong group governance. Such actions will sustain the repayment discipline that makes group lending a profitable and reliable model.

The study further confirmed that financial literacy programs positively influence profitability by improving borrower decision-making, repayment discipline, and financial management practices. To maximize these benefits, the CBK and other sector regulators should require every licensed MFB to integrate mandatory financial literacy components into their lending procedures. Each MFB should establish or strengthen a dedicated training unit responsible for designing standardized financial literacy modules that emphasize budgeting, savings, loan management, and responsible borrowing. Follow-up mechanisms should be embedded into the training process to ensure that skills learned are consistently applied by clients. Linking these programs directly to credit processes will empower clients and enhance institutional profitability.

Given that digital financial services, group lending models, and financial literacy programs jointly explain 69.1% of profitability variations, coordinated implementation is crucial for institutional

sustainability. Executive management should therefore develop an integrated framework that aligns ICT, credit, training, compliance, and risk management departments. This ensures that financial inclusion initiatives are not implemented in isolation but are mutually reinforcing. Innovation units within MFBs should continually develop new inclusive finance products, test emerging digital tools, and incorporate client feedback to refine services. This coordinated approach would embed financial inclusion strategies into the institution's long-term operational plans, ensuring sustainable profitability rather than treating inclusion as a standalone initiative.

In addition to practical and institutional recommendations, this study contributes significantly to policy and theory. The results provide evidence to guide policymakers in strengthening digital finance regulations, formalizing group lending, and standardizing financial literacy programs nationwide. The findings also reinforce existing theories—Financial Intermediation Theory, Group Lending Model, Financial Literacy Theory, and Profit Maximization Theory—by confirming that financial inclusion mechanisms directly enhance institutional profitability. These theoretical and policy contributions demonstrate that the financial inclusion strategies examined in this study are not peripheral interventions but central drivers of financial sustainability within Kenya's microfinance sector.

5.5 Suggestions for Further Study

This study examined three financial inclusion strategies, such as digital financial services, group lending models, and financial literacy programs, as determinants of profitability of MFBs. Future research, however, could look at other factors affecting profitability, such as credit risk management, leadership styles, operational efficiency, levels of digital literacy, and the use of fintech innovations. Comparative studies with both urban and rural MFBs in different counties would help generalize the findings and shed light on regional variations in the effectiveness of

financial inclusion. Similarly, cross-institution studies elsewhere that compared MFBs with other providers of financial services could teach these institutions about strategic differentiation and market positioning.

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APPENDICES

Appendix I: Introduction Letter

Christine Bukokhe Cheteka

Kenyatta University

Dear Respondent,

Subject: Request to Participation

Dear Participant,

I am Christine Bukokhe Cheteka, a master's student, conducting research on Financial Inclusion Strategies and Profitability of MFBs in Nairobi City County.

Your input would be greatly appreciated through completion of the attached questionnaire. All responses will be kept strictly confidential and will solely be used for academic purposes.

Thank you

Kind regards,

…….

Christine Bukokhe Cheteka

Appendix II: Questionnaire

This tool gathers information on the financial inclusion strategies and profitability of MFBs in Nairobi City County. Answer all questions.

INSTRUCTIONS

1. No Individual Information.

PART A: BACKGROUND INFORMATION

1. **Gender:**

Male	[ ]	Female	[ ]

2. **Age:**

20 – 30	[ ]	31 – 40	[ ]
41 – 50	[ ]	51 and above	[ ]

3. **Education:**

Certificate	[ ]	College Diploma	[ ]
University Degree	[ ]	Master's Degree	[ ]
Others, specify: ……			

4. **Years of Service in MFB**

<1 yr	[ ]	1 – 5	[ ]
6 – 10	[ ]	11 – 15	[ ]
> 15	[ ]		

PART B: FINANCIAL INCLUSION STRATEGIES

Rate your agreement on a scale (1 Strongly Disagree, 2 Disagree, 3 Neutral, 4 Agree, 5 Strongly Agree).

I. Digital Financial Services

ITEMS	**1**	**2**	**3**	**4**	**5**
A large percentage of clients use digital platforms.					
Clients prefer conducting transactions online.					

The number of digital transactions has increased.					
Clients make more digital transactions than in-person.					
We have invested heavily in technology infrastructure.					
Technology investments have improved our services.					

II. Group lending Models

ITEMS	**1**	**2**	**3**	**4**	**5**
Effective group enhance loan repayment rates.					
Well-coordinated groups improve loan management efficiency.					
Group lending mechanisms strengthen repayment performance.					
Group lending ensures more reliable loan repayment than individual lending.					
Improved group lending effectiveness has led to larger average loan sizes.					
Higher group lending efficiency facilitates larger loan disbursements.					

III. Financial Literacy Training Program

ITEMS	**1**	**2**	**3**	**4**	**5**
Client enrollment in literacy programs is increasing.					
More clients are enrolling in our financial literacy programs.					
Most clients complete the financial literacy training.					
The completion rate for financial literacy programs is high.					
Clients improve their financial knowledge after training.					
Financial literacy enhances clients' financial understanding.					

Appendix III: Data Collection Sheet

SECTION A: General Information

Official financial documents and reports to gather secondary data for evaluating profitability based on Return on Assets.

1. **Data Source:**

MFBs Financial Reports	[ ]	Central Bank Reports	[ ]
KNBS Reports	[ ]	Other (Specify): _____	

2. **Period Covered:** Start: 2016 End: 2024

SECTION B: Profitability Data

1. **Return on Assets Analysis**

Financial Year	**Net Income (KES)**	**Total Assets (KES)**	**Return on Assets (%)**
2015/2016			
2016/2017			
2017/2018			
2018/2019			
2019/2020			
2020/2021			
2021/2022			
2022/2023			
2022/2023			

ROA (%) = (Net Income / Total Assets) × 100

Appendix IV: Work Plan

Activity	Nov	Dec	Jan	Feb	March	April
Preparation of Initial Proposal						
Finalization of Proposal Document						
Presentation and Defense of Research Plan						
Preliminary (Pilot) Research Exercise						
On-Site Data Gathering						
Processing and Interpreting Data						
Compilation and Submission of Final Report						

Appendix V: Approval Letter

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 810901 Ext. 4150

Internal Memo

FROM: Executive Dean, Graduate School

DATE: 9th July, 2025

TO: **Christine Bukokhe Cheteka**
C/o Accounting and Finance Dept.

REF: D53/OL/CTY/27787/2019

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

We acknowledge receipt of your revised Research Proposal as per our recommendations raised by the Graduate School Board of 21st May, 2025 entitled **"Financial Inclusion Strategies and Profitability of Microfinance Banks in Nairobi City County, Kenya."**

You may now proceed with your Data Collection, Subject to Clearance with the Director General, National Commission for Science, Technology and Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School Completed Supervision Tracking and Progress Report Forms per semester. The forms are available at the university's website under Graduate School webpage downloads.

Also, please ensure that you publish article(s) from your project before submitting it to Graduate School for examination as per the Commission for University Education and Kenyatta University guidelines.

Thank you.

SARAH RIUNGU
FOR: EXECUTIVE DEAN, GRADUATE SCHOOL

C.c. Chairman, Department of Accounting and Finance

Supervisors:

1. Dr. Lucy Wamugo
C/o Department of Accounting and Finance
Kenyatta University

SR/mo

Appendix VI: PERMIT

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **952581**

Date of Issue: **16/July/2025**

RESEARCH LICENSE

This is to Certify that Ms.. CHRISTINE BUKOKHE CHETEKA of Kenyatta University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: FINANCIAL INCLUSION STRATEGIES AND PROFITABILITY OF MICROFINANCE BANKS IN NAIROBI CITY COUNTY, KENYA for the period ending : 16/July/2026.

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Appendix VI: Budget

Description of Activity	**Cost in Kshs**
Drafting the research proposal using internet resources	6,000
Producing hard copies of the proposal and professionally binding them.	7,000
Tools and materials used for conducting the research.	8,000
Travel and living expenses incurred during the data-gathering process.	15,000
Inputting, refining, and examining collected data.	5,000
Preparing, proofreading, and duplicating research reports for assessment.	5,000
Reproducing, binding, and officially submitting the final report.	8000
Miscellaneous expenses	9000
Total	**61,000**

Appendix VII: MFBs in Nairobi City County

NO.	MICROFINANCE BANK NAME
1	Faulu Microfinance
2	Kenya Women Microfinance
3	SMEP Microfinance
4	Rafiki Microfinance
5	Sumac Microfinance
6	U & I Microfinance
7	Caritas Microfinance
8	Maisha Microfinance
9	Choice Microfinance
10	Uwezo Microfinance
11	Vision Fund Kenya Microfinance
12	Century Microfinance
13	Daraja Microfinance
14	Momentum Credit Microfinance

Source: CBK 2024