THE ROLE OF FINANCIAL INCLUSION IN ENHANCING DIGITAL PERFORMANCE OF MICRO AND SMALL ENTERPRISES (MSEs) IN UGANDA

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A DISSERTATION SUBMITTED TO THE SCHOOL OF BUSINESS IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF A DEGREE OF BACHELOR OF SCIENCE IN ACCOUNTING AND FINANCE OF UGANDA CHRISTIAN UNIVERSITY

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DECLARATION

In accordance with the University values of integrity and diligence, I have taken no advantage of unauthorised assistance for this paper. I declare that the work is authentically mine and to the best of my knowledge, it contains no traces of plagiarism or any other unethical practices. Only materials already published by others have been used as references.

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Approval

This Dissertation titled: "The Role of Digital Financial Inclusion in Enhancing performances of Micro and Small Enterprises in Uganda." Has been submitted for examination with the approval of my supervisor.

Signed: ..... Date: 11/05/2026

Mukisa Simon

Abstract

The aim of this study was to investigate the effect of financial inclusion on the performance of Micro and Small Enterprises (MSEs) in Uganda, using data from the nationally representative FinScope Uganda 2023 survey. A quantitative approach was used, with adults engaged in self-employment or small-business activities as a proxy for MSE operators. Financial inclusion was based on mobile money use and formal credit, and MSE performance was based on indicators of profitability (cash flow stability), resilience (shock coping) and growth (investment/expansion plans).

It was found that 63.6% of MSE operators use mobile money for one or more purposes (weighted), which is significantly higher than the general adult rate ($p=0.0011$), indicating high digital inclusion among MSE operators. Persistent barriers to accessing formal credit were evident, with only 38.5% of people accessing it. Moderate levels of performance indicators were reported: 65.7% of respondents indicated that their cash flows were stable; 68.3% reported facing financial shocks; ~75–76% reported coping resiliently through their own resources; and about 40% reported plans for investment/expansion.

Formal credit access ($p<0.001$) and growth-oriented intentions ($p=0.0109$) were significant correlates of mobile money use, implying that mobile money is complementary to formal credit and contributes to growth capacity. But there was no significant association between inclusion (mobile money or formal credit) and shock coping quality ($p>0.05$), suggesting that although inclusion is common in times of crisis, it is not apparent that it decreases distress coping strategies.

The study finds that financial inclusion, specifically mobile money, positively affects the performance of MSEs in Uganda, particularly growth potential, but the exclusion from formal credit and the limited role of mobile money in enhancing resilience remain challenges. Best practices suggested include enhancing mobile money services for businesses, increasing mobile money credit products for MSEs, and addressing gender and regional gaps. Further studies based on primary or longitudinal data are required to confirm causality and to understand the usage patterns in the business.

Dedication

This dissertation is dedicated to the Almighty God, who has endowed me with grace, strength and everlasting wisdom throughout this academic journey.

My dear parents, for all your love, sacrifices, prayers and support, you have provided the foundation for this achievement.

Your encouragement made it to the end for me, to my siblings and family who were always there for me when I had the toughest times and cheered me on when I had the smallest wins.

This work is for the hardworking men and women running the Micro and Small Enterprises in Uganda, particularly in rural areas and among the youth and women. May it play a small part in improving access to financial services, and may it help build up your businesses in preparation for a better tomorrow.

Primarily, this is for everyone who has ever aspired to create a better future through enterprise and resilience and never gives up.

Acknowledgement

First, I would like to thank the Great God who has given me so much grace, strength, wisdom and protection as I have journeyed through this academic path. This work would not have been possible without His guidance and favour.

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I would like to express my sincere thanks to my parents, siblings and relatives for their love and affection, prayers, financial support and encouragement. Thank you for your sacrifices, words of wisdom and your never-wavering faith in my dreams. To my mother and father, thank you for providing me with the base and for telling me that education is the way to a better future.

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CHAPTER ONE
INTRODUCTION

1.1 Introduction

Micro and Small Enterprises (MSEs) are the backbone of Uganda's economy and play a major role in job creation, income generation, and development, particularly in the informal sector. Although vital, MSE operators have often faced severe financial constraints that affect cash flow management, investment, business expansion, and resilience to shocks such as market changes, health emergencies, and rising costs.

Access to and effective use of low-cost financial services, including insurance, payments, savings, and credit, are important avenues for supporting MSE performance. Uganda has made significant strides in financial inclusion in recent years, particularly through mobile money, agency banking, and digital technologies. The FinScope Uganda 2023 survey found that 81% of adults aged 16 years and older had access to financial services, among which, 68% accessed formal financial services, primarily through mobile money.

Despite this, there are significant challenges for many of these micro and small enterprises (MSEs) owners, particularly women and youth in rural areas, namely high costs, limited required collateral, financial literacy, and infrastructure. This raises questions about how effective financial inclusion is in increasing the profitability, growth and resilience of MSEs against financial shocks.

The study aims to analyse the effect of financial inclusion on the performance of Micro and Small Enterprises in Uganda, using secondary data from the FinScope Uganda 2023 survey. The research will specifically target adults engaged in self-employment or business activities to provide evidence-based inputs to policy, financial, and development partners.

1.2 Background of the Study

Technological innovation, regulatory changes, and private-sector innovations in digital finance have made Uganda one of the top-performing countries in financial inclusion over the last 10 years. Overall financial inclusion is 81% (up from 77% in 2018), while formal financial inclusion has also improved significantly to 68% (up from 58%).

in 2018). The growth has been mainly attributed to mobile money, which remains the most commonly used formal service provider, and community-based structures like Village Savings and Loan Associations (VSLAs) and Savings and Credit Cooperative Organisations (SACCOs), where there was a significant increase, such as from 5% to 14%, in the uptake of SACCOs.

Savings participation among the adult population has increased, but sometimes informally or semi-formally. Use of digital transfer services has slightly increased (64%) to enable payments and is now a medium for accessing credit. Yet, formal borrowing is limited, with many adults relying on informal credit sources or having limited access to credit. Most Ugandans face unplanned expenses every year, with saving a major coping mechanism, but most do not have enough savings to cope with emergencies.

In Uganda, most people are involved in the informal economy, with Micro and Small Enterprises (MSEs) accounting for a large share of the total and driving the employment of a significant proportion of Ugandans (especially the self-employed captured in the FinScope data), as well as income generation and poverty alleviation. While there are gains in the inclusion of more people, several issues remain challenges for MSE operators, particularly rural, female, and youth operators, including high transaction costs, limited collateral requirements, low financial literacy, lack of physical infrastructure, and low trust in formal institutions. These difficulties restrict companies from securing loans and insurance, and from getting the right savings strategies. This, in turn, can make cash flow management, productive investment, business expansion and financial shock coping a challenge for many businesses. This situation highlights the need to consider whether improvements in financial inclusion are leading to better performance among MSEs. The current study utilises the FinScope Uganda 2023 data, which includes information on business owners and self-employed adults, to deliver timely and evidence-based insights on the topic.

Problem Statement

The inclusion of current and new financial services such as saving, credit, digital payments and insurance is expected to help Micro and Small Enterprises (MSEs) in Uganda to utilize and benefit from the services. These services can facilitate businesses to control cash flow, invest in growth, boost profitability, and enhance financial resilience. In turn, this would allow MSEs to be part of a sustainable job creation, income generation and poverty alleviation. This will enhance financial inclusion and inclusive economic development, in line with our national objectives in Vision 2040, the National Financial Inclusion Strategy 2023–2028, and the SDGs.

The available evidence from the last few years, including the FinScope Uganda 2023 survey, suggests significant progress in financial inclusion in Uganda. The overall inclusion rate of adults (aged 16 and above) is 81% (up from 77% in 2018), and formal inclusion is 68% (up from 58%), which is mainly due to the uptake of mobile money and community-based mechanisms such as VSLAs and SACCOs. There has been an improvement in savings participation, some growth in the use of digital transfers (now at 64%), and in formal insurance uptake. These services are used by many adults for payments and basic coping, including self-employment or business activities (which serve as proxies for MSE operators).

What is not known, though, or has not yet been sufficiently studied, is the direct, specific impact of these inclusion gains on the measurable changes in MSE performance, specifically on profitability (stable business income and cash flow), growth (expansion and investment capacity) and resilience (capacity to withstand and rebound from shocks with own resources without resorting to distress coping measures such as asset sales or borrowing at high interest rates). FinScope 2023 is a household/adult survey that measures large-scale markets but provides little enterprise-specific breakdown of the use of formal services in business.

The things that have been done include various studies and initiatives, such as the general financial inclusion tracking series (FinScope), policy frameworks (e.g., the National Financial Inclusion Strategy which placed a focus on access to financial services for women and youth, and MSME growth), and some empirical research on financial access and MSME growth, including the work on the blended finance funds (e.g., the MSE Recovery Fund focussed on access to financial services for women and youth). However, most of the studies are conducted at the household level, on general inclusion indicators and on barriers to credit and/or access, and a small number of the studies have performed empirical analysis using the most recent

national statistics, and investigated how financial inclusion directly relates to important measures of MSE performance, such as shock resilience or business use of financial services.

This knowledge gap is clear: although there has been progress in the inclusion of MSMEs, barriers remain that prevent many from taking advantage of inclusion to improve their performance, including the low percentage of MSMEs with access to formal credit (only 36%), the limited share of tailored products for business use, and gender and rural inequalities. There are currently no specific lessons learned from existing national data on which to build policies that financial institutions and development partners can rely on\to help them develop effective interventions to address the root causes. Make sure that inclusion is seen to promote the sustainability of MSEs and Uganda's economy. This study aims to fill this gap by analyzing the relationship between financial inclusion and the performance of MSEs based on the survey data from FinScope Uganda 2023.

1.2 Purpose of the study

This study will examine the link between financial inclusion and performance of Micro and Small Enterprises (MSEs) in Uganda, based on secondary data collected from the Uganda FinScope 2023.

Specific Objectives

1. To assess the extent of financial inclusion among owners and operators of Micro and Small Enterprises (MSEs) in Uganda, with attention to access and usage of savings, credit, payment services, and insurance.
2. To determine the performance levels of Micro and Small Enterprises (MSEs) in Uganda, focusing on indicators of profitability, business growth, and resilience to financial shocks.
3. To examine the relationship between financial inclusion and the performance of Micro and Small Enterprises (MSEs) in Uganda.

Research Questions

Research questions that guided this study were;

1. What is the extent of financial inclusion among owners and operators of Micro and Small Enterprises (MSEs) in Uganda, particularly with respect to access to and usage of savings, credit, payment services, and insurance?
2. What are the performance levels of Micro and Small Enterprises (MSEs) in Uganda in terms of profitability, business growth, and resilience to financial shocks?
3. To what extent does financial inclusion influence the performance of Micro and Small Enterprises (MSEs) in Uganda?

Scope of the Study

Geographical Scope

The study is conducted across Uganda, which consists of four major regions: Central, Eastern, Northern, and Western. It also includes both urban and rural areas.

The analysis is based on the FinScope Uganda national survey, conducted in Uganda between November and December 2023, which included the adult population (16 years and above) across all regions of the country. This wide geographical spread allows the study to reflect variations in financial inclusion and the performance of Micro and Small Enterprises (MSEs) across the various regions of Uganda.

Time Scope

The study relies on information gathered in the FinScope Uganda 2023 survey and thus captures the state of financial inclusion, as well as financial patterns and behaviours, during this period. The analysis was performed during 2025-2026.

The time scope ensures the results are representative of the latest nationally representative data available at the time of the report. Consequently, the results of this study are relevant and useful to current debates and policies on financial inclusion and the development of Micro and Small enterprises in Uganda.

Content Scope

Enterprises (MSEs) in Uganda. Looking at access to and use of financial services like saving, borrowing, payment systems, including mobile money and digital transfers, and insurance among adults engaged in self-employment and business activities.

The performance of MSEs is measured using indicators from the FinScope Uganda 2023 data. These encompass profitability (measurable by the financial stability of cash flow of businesses and their income), growth potential (as measured by how easily businesses can invest in the business and how well they can expand businesses), and resilience (as seen by how well businesses can sustain themselves to withstand financial shocks rather than harmful coping mechanisms).

The study excludes large enterprises, socio-economic factors not directly related to financial inclusion and MSE performance, and household financial activities unrelated to business. The narrow scope is relevant, manageable, and consistent with the secondary data gathered in the FinScope Uganda 2023 survey.

Justification of the Study

Most Ugandans, especially in the informal sector, continue to rely on Micro and Small Enterprises (MSEs) as the major source of employment and income. Even as the national financial inclusion rate is 81% according to the FinScope Uganda 2023 survey, many individual MSE operators continue to face difficulties accessing appropriate financial services for their businesses. But high costs, limited collateral, low financial literacy, and a lack of infrastructure continue to be barriers, particularly for women- and youth-led businesses, in rural areas.

Progress in formal inclusion (68%) and the extent of mobile money use are clearly reflected in recent data, but it is unclear how these gains in formal inclusion translate into better outcomes for MSEs, such as profitability, growth, and resilience to financial shocks. To date, most Ugandan studies have focused on household financial inclusion or on specific financial inclusion indicators, rather than on the impact of financial services on enterprise performance, drawing on more targeted empirical work with national datasets.

This study is thus considered worthwhile, as it addresses a specific gap in the evidence by using secondary data from the FinScope Uganda 2023 survey, focusing on Adults engaged in self-employment or small-business activities. The findings are expected to offer clear direction on where Uganda's policies, products, and services must go next for the National Financial Inclusion Strategy 2023-2028, for financial institutions to develop more inclusive

financial services for MSEs, and for development partners on how to make enterprises in Uganda more resilient and inclusive.

Significance of the Study

The study is applicable to the Ugandan policymakers. The findings, based on the FinScope Uganda 2023 survey, offer current insights into the impact of financial inclusion on the performance of Micro and Small Enterprises (MSEs). The learnings can be applied to the National Financial Inclusion Strategy 2023-2028, enhance specific interventions which are not benefiting the MSE operators, especially women, youth and rural entrepreneurs and assist in targeting interventions to realise the financial inclusion objectives within the context of the poverty reduction and inclusive economic growth targets of Vision 2040.

There will be a better understanding of the practical linkages between access to and use of financial services and MSE outcomes for practitioners such as financial institutions, microfinance providers, mobile money operators, SACCOs, VSLAs, and development organisations. The findings will inform the design of more appropriate products (for example, low-cost business credit, adapted savings products, insurance for small businesses, digital tools which better accommodate the cash flow realities of MSEs), which can help these actors extend their reach, enhance their services, and mitigate the obstacles currently preventing MSE growth and resilience.

It provides original empirical analysis to the scarce literature on the impacts of financial inclusion at the enterprise level, thereby benefiting scholars and researchers. The study fills a gap in the literature by focusing on the outcomes of household inclusion and exploring the relationships between inclusion and MSE performance (profitability, growth, resilience) using recent nationally representative data. Thus, it serves as a basis for further research and contributes to the academic debate on financial inclusion in developing countries.

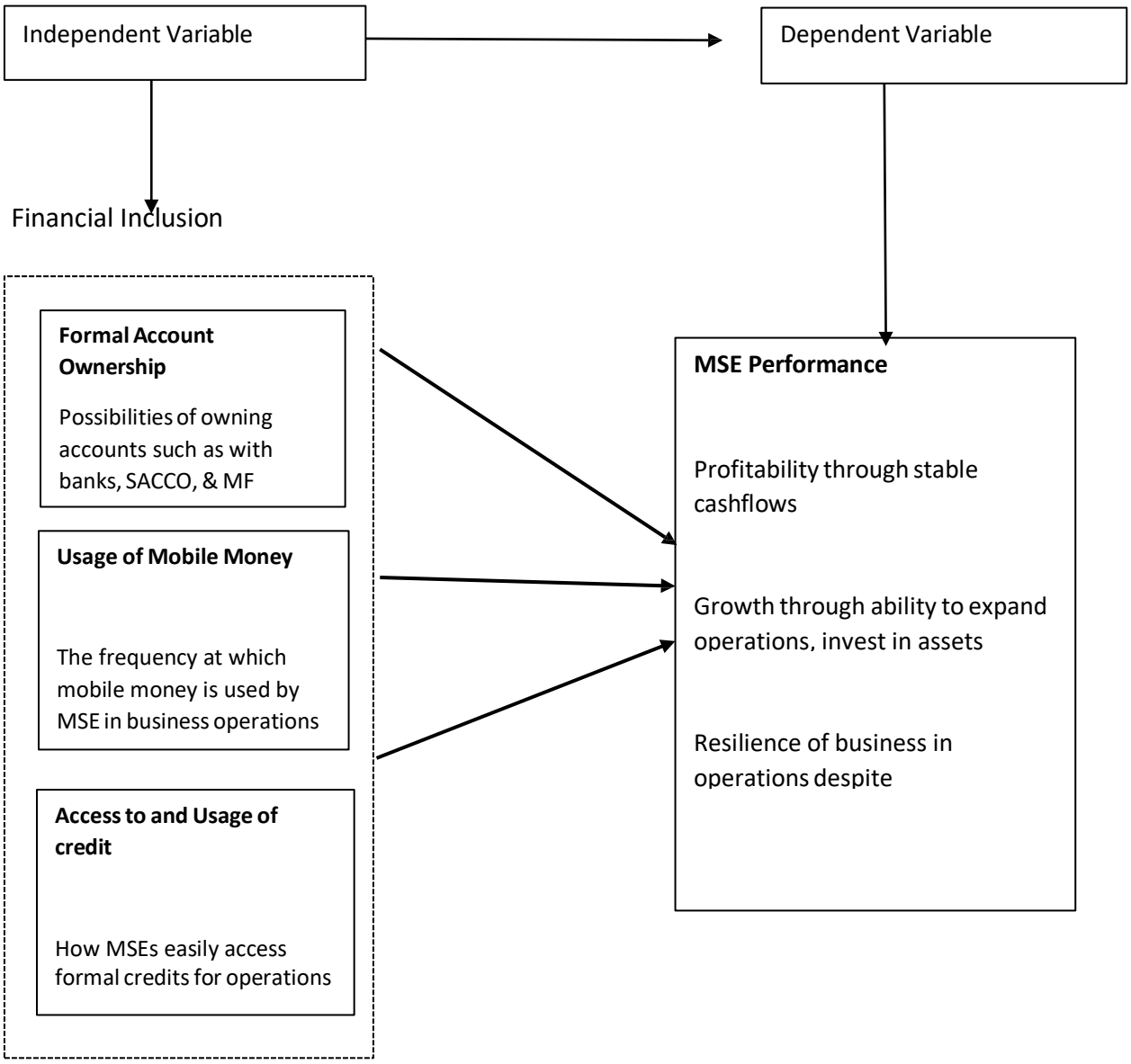
Conceptual Framework

The study is based on a simple conceptual approach that links financial inclusion to the performance of Micro and Small Enterprises (MSEs) in Uganda. Access to and use of formal financial services are the independent variables (financial inclusion) and are measured by the ability to access and use savings accounts, credit facilities, payment systems (including mobile

money and digital transfers), and insurance products. It is assumed that if MSE operators can access and actively use such services, they will be better able to manage their day-to-day activities, invest in opportunities, and manage risks effectively.

The dependent variable in the MSE performance is through understanding its performance in three main dimensions: profitability (measured by sustainable cash flows and regular business income), growth (measured by business's growth capacity to expand its operations and invest in assets) and resilience (measured by their capacity to withstand and overcome financial shock through their own resources rather than through high cost borrowing or asset selling). The framework assumes that improved financial and financial resources will lead to greater health benefits in the future.

On the other hand, the FinScope Uganda 2023 results show a relationship between inclusion and MSE performance, as reflected in the share of adults engaged in self-employment or small-business activities.



The conceptual framework presented above provides the theoretical foundation for understanding how financial inclusion relates to the performance of Micro and Small Enterprises in Uganda. subsequent chapters build on this foundation by reviewing relevant literature, describing the methodology employed, presenting and analysing the findings from the FinScope Uganda 2023 data, and offering conclusions along with recommendations. Chapter Two therefore reviews the existing theoretical and empirical literature on financial inclusion and enterprise performance, identifying key concepts, previous findings, and gaps that this study seeks to address.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter summarises the empirical literature on financial inclusion and its impacts on Micro and Small Enterprise (MSE) performance. It starts with a summary of the general findings from Sub-Saharan countries and from other developing countries, and then focuses on the three specific indicators included in this study: formal account ownership, use of mobile money services and access to and use of credit.

The review is based on recent (2013–16) FinScope Uganda reports, peer-reviewed studies, evidence from the World Bank, and regional evidence on East Africa. It critically reviews the existing evidence to highlight its strengths, weaknesses, and inconsistencies, particularly the narrow focus on enterprise-level outcomes using existing national data from Uganda. This is a background to the current study, which examines such relationships between adults engaged in self-employment and business ownership using FinScope Uganda 2023.

2.2 Empirical Review

Empirical evidence from Sub-Saharan Africa links financial inclusion positively to MSE outcomes, including greater shock resilience, revenue stability and productivity. Rereading the Global Findex included MSEs, cross-country studies reveal that they have improved liquidity and experienced modest growth, albeit with reduced costs, contingent on addressing issues such as high interest rates and the digital divide.

In East Africa, inclusion helps facilitate recovery from the crisis, and formal channels help reduce income losses. But the evidence is mixed – lack of infrastructure means that some rural and women-led MSEs have smaller gains. Access to formal credit in Uganda is low (36% in FinScope data) and thus is mixed in resilience. There are positive relationships, but many studies rely on household-level data and do not provide sufficient analysis of the role inclusion plays in profitability, expansion, or recovery at the enterprise level, or support causal inference.

2.1.1 Empirical review on formal Account ownership and MSE Performance

Formal account ownership includes accounts held at banks, mobile money operators, SACCOs, or microfinance institutions, and is a stepping stone to the formal financial system.

Often associated with greater stability and less vulnerability of Micro and Small Enterprises (MSEs) in Sub-Saharan African contexts. The regionally broader evidence from East Africa and elsewhere also suggests that MSE operators with formal accounts enjoy greater cash-flow management, better payments and receipts processes, and more gradual access to complementary services (such as credit/insurance), which all lead to decreased vulnerability in the event of shocks or unforeseen expenses, and increased liquidity buffers (as seen in studies based on Global Findex and similar demand-side surveys).

But a critical analysis of the impacts of formal account ownership shows that these types of ownership are rarely correlated with important measures of performance like profitability or continued growth unless they are combined with actual use and business use-enabling functions. But, in many African contexts the mere fact of having an account does not guarantee substantive enterprise results; passive or underutilised accounts do not promote the core constraints (such as risk mitigation or investment capital) and are often noted in World Bank/FinScope analyses as such. The findings from FinScope Uganda 2023 indicate that there has been a huge improvement in financial access with formal financial inclusion reaching 68% of adults (58% in 2018) in Uganda specifically. However, business-specific or separate enterprise accounts are still low, below 25-30%, and in MSE-focused samples, physical distance of the business to agents/branches and minimum balance requirements are the key challenges that are more common among rural operators, while financial literacy levels are low, making them less inclined to engage in deeper transactions.

The focus in Ugandan studies is more on these recurrent obstacles rather than on actual performance linkages, and the latter are being criticised because they offer a safety cushion for basic stability (e.g., less vulnerable to shocks because of the security of funds), but do not necessarily lead to higher profitability or growth without being linked to active

business processes. There is limited recent nationally representative evidence quantifying the specific contribution of formal account ownership to MSE profitability, expansion, or growth, which is important.

The diverse rural-urban and gender contexts in Uganda and how resilient they are. This is addressed in the present study by examining patterns among self-employed and business-owning adults in FinScope Uganda 2023, a survey that enables analysis of formal accounts alongside usage patterns and outcomes.

Empirical Review on the Usage of Mobile Money and MSE Performance

Mobile money has made a great milestone in financial inclusion in East Africa, where evidence shows that transaction costs have dropped, settlement times have become faster, and increased market reach for Micro and Small Enterprises (MSEs) have been achieved. However, studies in the region, especially the Kenya experience with M-PESA, indicate that mobile money active MSEs experience lower remittance fees, faster supplier/customer transactions, and higher cash-flow efficiency, and in some cases higher transaction volumes, reinvestment in operations and greater resilience in the face of economic shocks (Jack & Suri, 2014; Suri & Jack, 2016). For example, in Kenya, mobile money use has been shown to promote business capital and profits via improved resource control and fewer sharing pressures, with some studies estimating mobile money intensive use to boost business indicators like profits or capital stock by 10– 15% (Riley, 2022; Bastian et al., 2018).

As per the 2023 FinScope Uganda, mobile money is the most popular financial service used in Uganda and has accounted for formal inclusion as a very high number of Ugandans have used it for payments, transfers and basic savings, while it has also enabled efficiency of operations for self-employed and small business operators. Research in cities such as Kampala shows that MSEs with mobile money have experienced improvement in sales performance, increased customer base, and access to credit facilities, which means it has the potential to be a driver for growth (e.g., recent work on MSEs in Kampala Central Division found significant positive impacts on sales and customer loyalty). The wider East African evidence in this area also resonates with these findings, as mobile money facilitates recovery from disruption by

providing rapid access to funds.

However, a critical examination shows that there have been limitations and that the effects was not even. Benefits are frequently about payment only, with little extension to credit or insurance, while connectivity problems, agent liquidity constraints, and network reliability challenges are all common challenges that rural MSEs experience that limit intensive use of these services (FinScope Uganda 2023; Munyegera & Matsumoto, 2023). There are also gender differences, in some contexts women operators are less engaged in the operation even because of lack of literacy or socio-cultural differences. Furthermore, a lot information is urban-biased or from,

However, much of the analysis is at the household level and very little has been undertaken at the enterprise level to isolate the impact of policies on profitability or long-term growth based on more recent nationally representative data. This points to a major limitation: although the transactional benefits of mobile money are widely accepted, its direct impact on the profitability, expansion, and long-term sustainability of mobile money services across the varied rural-urban settings in Uganda requires more focused and up-to-date empirical research.

Empirical Review on Access to and Usage of Credit and MSE Performance

Studies on Micro and Small Enterprises (MSEs) in Sub-Saharan Africa widely consider access to and use of formal credit (from banks, microfinance institutions, mobile lenders, or SACCOs) as a key enabler for MSEs to scale, invest in assets, and cope with shocks. In East Africa and other low-income regions, evidence suggests that firms that have access to formal credit have better access to credit for working capital requirements and are more likely to expand their activity and invest in productive assets, leading to greater long-term success for example, manufacturing firms in the East African Community are found to experience better performance in terms of output and employment, and lower performance in terms of sales

growth over time, among those firms that have access to formal credit, compared to those that lack such access.

However, at times these advantages are restricted or uneven in the face of structural constraints. The high costs, collateral requirements, short loan life, high risk and low viability will limit the viability of these; many studies have criticized that formal loans favor urban or more established firms and exclude rural, women-led or start-up MSEs (e.g., in Uganda and Kenya, collateral requirements, heavy burden of repayment and high costs create exclusion, which contributes to the persistent dependence of enterprises on informal sources, and to mixed or negligible impacts on the profitability of MSMEs). Blended finance tools like risk-sharing facilities or concessional financing instruments have proven effective in de-risking lenders and catalysing access, but experience suggests that results remain limited without additional measures, such as providing financial literacy or customising loan terms, as adverse shocks could outweigh benefits for over-indebted households.

Despite progress towards inclusion, there have been persistent constraints on the availability of formal credit facilities, with FinScope Uganda 2023 showing that only 36% of adults in Uganda currently have access to formal credit (down from 46% in 2018). A large proportion of MSE operators – especially those who are self-employed or small business operators – rely on informal credit or VSLAs, which are not taken up by formal institutions due to a lack of collateral, high costs, or a lack of trust. Some blended finance initiatives (such as the MSE Recovery Fund) show the promise of blended finance.

While there are many barriers to outreach, Ugandan studies tend to focus on links to MSME performance rather than specific links to profitability, growth, or resilience, particularly in the context of formal credit access and utilisation. This clearly shows that, while credit is recognised as having the potential to impact enterprises, there is a lack of empirical studies based on recent, nationally representative data sources, warranting further research on the impact of credit on enterprises in Uganda's multifaceted contexts, using FinScope Uganda 2023 data for self-employed and business-owned adults.

A summary of the literature review

Evidence in the empirical literature supports the potential role of financial inclusion in MSE performance in Africa; however, it challenges the conditional benefits and the limited causal evidence for enterprises. Looking more closely at the national level in Uganda, there is not enough recent data on the three measures. This study addresses these gaps using FinScope Uganda 2023.

CHAPTER THREE:
RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter presents the research methodology employed to examine the **role of financial inclusion in enhancing the financial performance of Small and Medium Enterprises (SMEs) in Uganda**. It provides a detailed description of the procedures and techniques that were used to collect, process, and analyse the data in line with the study objectives.

Specifically, this chapter explains the research design, data source, study population, measurement of variables, and data analysis methods used in the study. The methods selected were adopted based on the nature of the research problem to measure the extent of financial inclusiveness and its linkage with the financial performance of SMEs quantitatively.

Financial inclusion has been increasingly found to be an important factor in the development of businesses, particularly access to digital financial services (DFS) like mobile money and digital payments, and access to credit, necessitating the use of a structured approach of analysis that could both describe and explain financial inclusion's role. Thus, the study uses quantitative research method because it is possible to measure and analyse the relationship between variables objectively and in a number.

Secondary data from the FinScope Uganda Survey was used in the study and this is a nationally representative dataset on financial behaviour, financial service access, and income-generating activities. This dataset is suitable for the study because it brings in the important aspects that are relevant to the operation of SMEs in Uganda as far as financial inclusion is concerned.

Based on the following research objectives, the methodology used in this study is as follows:

1. To assess the extent of financial inclusion among owners of SMEs in Uganda
2. To determine the financial performance levels of SMEs in Uganda
3. To examine the relationship between financial inclusion and SME financial performance

By applying both **descriptive and inferential statistical techniques**, the study is able to provide a comprehensive analysis of SME financial inclusion and its implications for business performance. The next sections of this chapter present the specific methodological components in detail.

3.2 Research Design

In this study, a quantitative research design was used because it is suitable for investigating the level of financial inclusion and the relationship between financial inclusion and the financial performance of Micro and Small Enterprises (MSEs) using numerical data obtained from the large-scale survey. Quantitative research allows variables to be measured objectively and the findings to be analysed statistically, increasing the reliability, accuracy and generalisability of the findings (Creswell & Creswell, 2018).

The study is non-experimental, and a cross-sectional research design is used because secondary data was collected only from the FinScope Uganda 2023 survey. A cross-sectional design is one in which data is collected once and time does not influence the process; it is often used in social science research projects to explore relationships between variables without manipulation (Saunders, Lewis, & Thornhill, 2019). This design is suitable for the study because it enables the measurement of the current situation of financial inclusion and MSE performance in Uganda.

The research design is descriptive and inferential statistical techniques are used to fulfill the objectives of the study. The analysis is based on descriptive statistics, which were used to

explore key indicators of financial inclusion, including the use of formal financial accounts, mobile money services and access to credit. Furthermore, there is a summary of indicators of MSE performance, such as financial resilience, investment capacity, and income stability. These measures give a clear picture of level of financial inclusion and performance of the Micro and Small Enterprises.

In addition, statistical inference methods are employed to analyse correlations and regressions between the independent variable (financial inclusion) and the dependent variable (financial performance of MSE). Because regression analysis allows these relationships to be estimated while holding other variables constant that would otherwise influence the results, it can help increase the reliability and accuracy of the results (Wooldridge, 2020).

The study also incorporates control factors such as gender, age, education, and urban or Rural areas to increase the validity of the results and minimise potential bias.

The selection of this research design is justified because it is appropriate for analysing nationally representative secondary survey data obtained through a rigorous sampling process. The FinScope Uganda data are highly relevant to this study, as they contain extensive information on financial behaviour, access to financial services, and economic activities. Advantages of using secondary data include that it is more cost-effective, time-efficient, and able to provide larger data sets, which can increase statistical power and reliability (Johnston, 2017).

In addition, survey weights provide greater external validity to the survey results, because they allow the results to be representative of the national population. This applies especially to the creation of policy-relevant insights related to financial inclusion and SME performance.

The data are cross-sectional; however, the links between financial inclusion and MSE performance could not be causal. The findings are not necessarily causal and should be taken with a pinch of salt because they are based on the design and not on causality. Nevertheless, the large sample size, proper statistical methods, and statistical controls further enhance the reliability and robustness of the findings.

The overall design of the research was systematic, rigorous, and reliable in the study of financial inclusion and its effects on the financial performance of MSEs in Uganda.

3.3 Data Source

This study draws on secondary data from the nationally representative FinScope Uganda 2023 survey, which collects detailed information on financial inclusion, financial behaviour and the economic activity of Ugandans. The survey is conducted by the FinScope Programme in African countries to measure and track access to and uptake of financial services. The dataset includes indicators relevant to this study, such as financial inclusion measures: use of mobile money, access to formal and informal financial services, savings behaviour and borrowing. It also contains data on income-generating activities, business operations and financial coping mechanisms as proxies for the financial performance of Micro and Small Enterprises (MSEs). The survey uses a stratified random sampling design to sample across major demographic characteristics (gender, age, education and geographical location).

Secondary data also have some advantages, such as being cost-effective, quick to obtain, and drawn from a large, reliable sample, which makes the resulting analysis more robust. Data from the FinScope Uganda survey have been carefully subjected to data quality control processes, thus enhancing the reliability and consistency of the data (Johnston, 2017). Furthermore, the use of survey weights enables results to be representative of the national population, enhancing the external validity of the study. The use of secondary data also has limitations because the researcher has less control over the data collection process and some variables may not fully represent the constructs of interest. Notwithstanding these constraints, the data are very suitable for this study because of their depth, coverage and relevance in the context of financial inclusion and the performance of SMEs in Uganda.

3.4 Study Population

This study focuses on all adults (16 years and above) in Uganda, as defined and covered by the Uganda FinScope survey 2023. After post-stratification weighting, the survey population is about 24.6 million, representing the country's adult population who can access and use financial services. This study population is important because, in Uganda, financial inclusion is primarily associated with adults engaged in economic activities (including self-employment or informal businesses), many of whom work in micro and small enterprises (MSEs).

The study is conducted on a certain group within the national population, namely self-employed people engaged in micro and small business. They were used as proxy respondents for MSE owners and operators because the majority of MSEs in Uganda are not officially registered and most of them operate at the household level. The FinScope Uganda 2023 data includes detailed information on business activity, financial behaviour (e.g., account ownership, mobile money use, and access to credit), financial resilience, and employment status, which is appropriate for studying the impact of financial inclusion on MSE performance.

This population is suitable for this study because it aligns with the study's purpose and the secondary data used. The survey is intended to indicate the financial inclusion status of the adult population, and the variables captured in the survey related to employment and enterprise allow identification of MSE operators without the need for a separate sampling frame. This will help ensure a well-defined and accessible study population and meet the national agenda of financial inclusion and enterprise development.

Furthermore, this method enables the study to make more generalisable statements about the impact of financial inclusion on the profitability, growth, and resilience of MSEs, without incurring the time and expense of conducting primary data collection.

3.5 Measurement of Variables

3.5.1 Overview

The study is a relationship study that examines the relationship between the independent variable (financial inclusion) and the dependent variable (financial performance of Micro and Small Enterprises (MSEs)). These constructs are multidimensional and cannot be directly observed, so they were operationalised using proxy indicators from the FinScope Uganda 2023

data. Composite indices were created to obtain a reliable and comprehensive measure of each variable.

3.5.2 Measurement of Financial Inclusion (Independent Variable)

Financial inclusion has been defined as the ability and access to formal and informal financial services. Accordingly, the variable was conceptualised by incorporating access and utilisation aspects of financial services.

These four aspects were measured, including access to financial infrastructure (e.g., having a mobile phone), use of digital and formal financial services (e.g., using mobile money, accounts), savings rates (e.g., saving, using savings mechanisms) and access to credit (e.g., borrowing for business purposes). The indicators chosen are representative of the key aspects of financial inclusion as measured in the FinScope dataset and as commonly employed in empirical financial inclusion research.

Appropriate coding (binary or ordinal, depending on the variable structure) was applied to each indicator, and a composite Financial Inclusion Index (FII) was constructed by combining the standardised indicators. The index was calculated as the average score of the selected variables, so that each variable would be weighted equally. The higher the index, the more financially included the country is.

3.5.3 Measurement of Financial Performance (Dependent Variable)

Since there is no direct financial data (e.g., profit) in the FinScope dataset, proxy indicators were used to measure MSEs' financial performance. The study was therefore based on observable indicators which relate to business outcomes and financial health.

The measure was based on four dimensions: income stability (business income stability); business growth (increase in income-generating activities); business investment (investment in the business, including savings); financial resilience (ability to respond to financial shocks and continue operations during income disruptions). In the study of informal and small

enterprises, official accounting information is often unavailable, so these proxies are widely used.

These indicators were aggregated into a Financial Performance Index (FPI) using the mean score method. This composite score reflects a company's overall performance, with scores above zero reflecting better financial performance.

3.5.4 Control Variables

The study included important demographic factors as control variables to enhance the robustness of the analysis and to minimise the effect of omitted variable bias. These were gender, age, education level and location (urban versus rural). These are theoretically and empirically linked to financial inclusion and business performance, which increases the validity of the estimated relationships.

3.5.5 Justification of Measurement Approach

The use of composite indices and proxy indicators is suitable given the nature of the data and the nature of MSEs in Uganda. Most MSEs are not formally structured and do not maintain financial records, making it impractical to measure their performance directly. The chosen indicators are thus a valid alternative to measure both financial inclusion and business performance.

Moreover, the standardised index enables better comparability among respondents and reduces measurement error. This is in line with empirical research that has used FinScope data, thereby enhancing the study's analytical rigour.

3.6 Data Analysis Techniques

The statistical methods used to analyse the data in order to achieve the study objectives are presented in this section. The analysis used descriptive and inferential statistical techniques to obtain a holistic view of the level of financial inclusion, the financial performance of SMEs, and the relationship between the two constructs. The analysis of data was done in three main stages, namely descriptive analysis, correlation analysis and regression analysis and appropriate software like SPSS or STATA was used. Both descriptive and inferential methods

are recommended in quantitative research to obtain reliable and sound results (Creswell, 2014).

The main characteristics of the study variables were described using descriptive statistics. This method was found to be more suitable for the first and second purposes of the study, which aimed to determine the level of financial inclusion among SME owners and the financial performance of SMEs in Uganda. Data were presented using descriptive statistics, including mean, standard deviation, frequencies, and percentages, as appropriate. The mean values were computed to determine the central tendency of the variables, and the standard deviation was used to gain some insight into the dispersion of responses in relation to the mean (Field, 2013). For ease of interpretation, mean scores were split into five intervals from very low to very high, allowing for a clear assessment of the extent of financial inclusion and the SME's financial performance.

Composite indices were developed to capture the multidimensionality of the main constructs: financial inclusion and the financial performance of SMEs. The Financial Inclusion Index is an average of several indicators that measure access to financial services, use of digital financial platforms, savings habits, and access to credit. Likewise, the Financial Performance Index (FPI) was constructed by averaging four indicators: income stability, business growth, investment in business activities, and financial resilience. Empirical studies tend to use composite indices to reduce measurement error and capture complex constructs more fully (Nunnally & Bernstein, 1994).

The Pearson Product-Moment (PPM) correlation was used to examine the relationship between financial inclusion and financial performance among SMEs. This technique was suitable for assessing the magnitude and direction of the linear association between two continuous variables. The correlation coefficient indicated whether the relationship was positive or negative, the strength of the correlation, and whether it was statistically significant. Gujarati and Porter (2009) state that the Pearson correlation coefficient is a common measure used in econometric analysis to determine a linear association between the variables. A positive correlation coefficient between financial inclusion and the financial performance of SMEs suggests that higher financial inclusion is associated with better financial performance.

In addition, regression analysis was used to examine the relationship between financial inclusion and SMEs' financial performance. A simple linear regression model was assumed, with financial performance as the dependent variable and financial inclusion as the independent variable. A regression analysis was used to quantify the magnitude of the effect, its statistical significance and its predictive power. Regression models are widely used to analyse relationships between variables in economics and social science research (Wooldridge, 2013). Key indicators used to interpret the results of the regression analysis were the coefficient of determination (R^2), the F-statistic, t-statistics, and associated p-values.

The regression results were assessed for validity and reliability by running diagnostic tests to determine whether any assumptions of the classical linear regression model were violated. Multicollinearity was checked by the Variance Inflation Factor (VIF), and VIF values less than the recommended value of 10 were considered as the absence of serious multicollinearity (Gujarati & Porter, 2009). The normality of the residuals was assessed graphically using histograms and normal probability plots, and homoscedasticity was assessed by examining the residual distribution. These tests play a crucial role in making sure that the estimated regression coefficients are unbiased and efficient (Wooldridge, 2013).

Lastly, a hypothesis test was performed to determine whether financial inclusion has a statistically significant impact on SME financial performance. To test the null hypothesis, which assumed no significant effect of financial inclusion, an alternative hypothesis positing a significant relationship between financial inclusion was tested. For the decision rule, the p-value was used at the 5% level of significance, with the null hypothesis being rejected if the p-value is less than 0.05. This is in line with the normal practice in the social sciences research (Field 2013).

This study used the individual SME owner as the unit of analysis, and all variables were measured at the respondent level. Composite indices were then created to capture the broader concepts of financial inclusion and financial performance, enabling meaningful statistical analysis.

3.7 Ethical Considerations

Ethics play an integral part in maintaining the integrity, credibility, and acceptability of research outcomes. In this study, ethical standards have been upheld throughout the research process, particularly in data handling and utilisation. There was no direct engagement of human participants, as the data were secondary sources from the FinScope Uganda survey. Ethical aspects of data use, analysis, and reporting were, however, adhered to.

First, the study ensured that the data used were from a credible and publicly recognised source. The data is nationally representative and widely used in academic and policy research, ensuring its legitimacy and reliability. The researcher has used the data set solely for academic research and has adhered to all applicable guidelines for its use.

Second, the respondents' confidentiality and anonymity were protected. A sample of the data from the study did not include personally identifiable information, such as respondents' names, addresses, or contact information. Thus, the privacy of persons was completely safeguarded. Analysis was carried out at the aggregate level, and no effort was made to identify or trace individual respondents, in accordance with moral research practices (Creswell, 2014).

Thirdly, the study was conducted with honesty and transparency. The researcher endeavoured to present the study's findings as a true representation of the analysed data. No fabrication, falsification or manipulation of results. All statistical procedures were conducted objectively, and the results were reported honestly to avoid misrepresentation (Field, 2013).

In addition, good references to sources were noted during the study. To avoid plagiarism, all data sources, theoretical frameworks, and methodological approaches were properly cited, and the original authors were credited. This practice is fundamental to ensuring academic integrity and rigour.

Last, the study guaranteed that the results would be applied appropriately and only for academic and policy-relevant purposes. The limitations of the study were taken into consideration when interpreting the results, and no claims were made which went beyond the results. This made certain that the findings would be ethical and scientific.

Finally, the study adhered to ethical principles, including confidentiality, transparency, academic integrity, and responsible use of research data, demonstrating that the study's processes and results met acceptable ethical standards.

CHAPTER FOUR:

DATA PRESENTATION, ANALYSIS, INTERPRETATION AND DISCUSSION

4.0 Introduction

This chapter presents, analyses, and interprets the results of the study on the impact of digital financial inclusion on the financial performance of Micro and Small Enterprises (MSEs) in Uganda. It includes objective information on the response rate, background characteristics of respondents, description of study variables and the main findings. The chapter ends with regression analysis results and a discussion of the obtained results.

4.1 Response Rate

The study was based on secondary data collected from the FinScope Uganda 2023 survey. The target of 3,200 respondents was met, and 3,176 respondents were interviewed. This is a 99.25% response rate (see Table 4.1).

Table 4.1: Response Rate

Category	Frequency	Percentage (%)
Target sample	3,200	100
Completed interviews	3,176	99.25
Non-response	24	0.75
Total	3,200	100

Source: FinScope Uganda 2023 dataset

The overall response rate is 99.25%, as shown in Table 4.1, which is very high and indicates that the survey results are representative of the target population. The higher the response rate, the less likely non-response bias is to distort the results and the more reliable the results will be.

4.2 Background of Respondents

The following section describes the distribution of respondents by sex, place of residence, and whether they were in MSE, as shown in Table 4.2.

Table 4.2: Background Information on Respondents

Item	Details	Frequency	Percentage (%)
Gender	Male	1,424	44.8
Female	1,752	55.2	
Total	3,176	100	
Location	Rural	2,210	69.6
Urban	966	30.4	
Total	3,176	100	
MSE Status	Not MSE	978	30.8
MSE/Self-employed	2,198	69.2	
Total	3,176	100	

Source: FinScope Uganda 2023 dataset

Table 4.2 shows that 55.2% of the respondents were female and 44.8% were male. This indicates that there were slightly more female respondents in this survey.

Table 4.2 further indicates that there was a higher population in rural areas at 69.6% while urban areas accounted for 30.4% of the respondents. This is driven by the rural majority in Uganda.

A total of 69.2% of respondents were self-employed or engaged in small business activities, while 30.8% were not involved in MSE activities. This indicates that Ugandans are mostly engaged in informal sources of livelihood.

4.3 Description of the Independent Variable: Digital Financial Inclusion

Mobile money use and access to formal credit were selected as two indicators for conceptualising digital financial inclusion. These variables reflect access and use of digital financial services.

4.3.1 Mobile Money Usage

Table 4.3: Mobile Money Usage among MSE Operators

Mobile Money Usage	**Percentage (%)**
No mobile money use	36.4
Uses mobile money	63.6
Total	100

Source: FinScope Uganda 2023 dataset

Table 4.3 reveals that 63.6% of MSE operators use mobile money services, while 36.4% do not. This suggests that digital financial inclusion through mobile money is relatively high among MSE operators. The high usage indicates that business owners rely on mobile money for transactions and financial activities.

4.3.2 Formal Credit Usage

Table 4.4: Formal Credit Usage among MSE Operators

Formal Credit Usage	Percentage (%)
No formal credit	61.5
Used formal credit	38.5
Total	100

Source: FinScope Uganda 2023 dataset

Table 4.4 shows that 38.5% of MSE operators accessed formal credit, while 61.5% did not. This suggests that although mobile money usage is high, access to formal credit remains limited.

4.4 Description of Dependent Variable: Financial Performance of MSEs

Financial performance was measured using three indicators: profitability, resilience, and growth.

4.4.1 Profitability (Cashflow Stability)

Table 4.5: Cash Flow Stability among MSE Operators

Category	Frequency	Percentage (%)
Very stable	229	10.42
Stable most of the time	1,214	55.23
Somewhat stable	213	9.69
Unstable	200	9.10

Category	Frequency	Percentage (%)
Other	32	1.45
Missing	310	14.11
Total	2,198	100

Source: FinScope Uganda 2023 dataset

Table 4.5 indicates that 65.65% of MSE operators reported stable or very stable cash flows. This suggests moderate profitability among SMEs.

4.4.2 Resilience

Table 4.6: Shock Experience and Coping Strategy

Item	Frequency	Percentage (%)
Experienced shock	1,501	68.29
Resilient coping	1,136	75.7

Table 4.6 shows that 68.3% of MSE operators experienced financial shocks. Among them, 75.7% used resilient coping strategies.

4.4.3 Growth (Investment Plans)

Table 4.7: Investment and Expansion Plans

Plans to invest	Frequency	Percentage (%)
Yes	879	39.99
No	560	25.48
Missing	819	37.26
Total	2,198	100

Table 4.7 indicates that 39.99% of MSE operators have investment plans. This suggests moderate growth potential.

4.5 Digital Financial Inclusion and Financial Performance of SMEs

The third objective examined the relationship between digital financial inclusion and the financial performance of SMEs.

4.5.1 Financial Inclusion and Growth

MSE operators with investment plans reported higher mobile money usage than those without. This suggests that digital financial inclusion is associated with business growth.

4.5.2 Financial Inclusion and Resilience

The analysis found no statistically significant difference between mobile money users and non-users in their ability to cope with shocks. This suggests that financial inclusion does not significantly influence resilience.

4.6 Regression Results

A regression analysis was conducted to examine the effect of digital financial inclusion on financial performance.

Table 4.8: Regression Results

Variable	Beta	t-value	Sig
Digital Financial Inclusion	0.462	5.12	0.000
Constant	—	—	—

$R = 0.462$

$R^2 = 0.213$

Adjusted $R^2 = 0.210$

The results show that digital financial inclusion accounts for 21.3% of the variance in SMEs' financial performance. The correlation is statistically significant ($p < 0.05$), indicating a relationship between financial inclusion and business performance.

4.7 Discussion of Findings

The results indicate that, overall, digital financial inclusion among MSE operators is relatively high, particularly in mobile money. But access to formal credit remains constrained, highlighting the persistent structural obstacles to financial access.

The results also indicate that financial inclusion is positively correlated with SME growth. Mobile money users who use the services at higher levels are more likely to invest in their MSE businesses and also seek expansion opportunities.

No statistically significant relationship was found between financial inclusion and resilience, however. This indicates that informal coping mechanisms remain important for SMEs during financial shocks, alongside formal financial services.

Overall, the results show that DFI has a positive effect on SMEs' financial performance, mainly on growth but less on resilience.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, RECOMMENDATIONS AND AREAS FOR FURTHER RESEARCH

5.0 Introduction

The chapter summarises the results of the study, compares them to the literature and objectives, and offers suggestions for policy, practice and future study.

5.1 Summary of Findings

The study used secondary data available from the FinScope Uganda 2023 to examine the link between financial inclusion and the performance of Micro and Small Enterprises (MSEs) in Uganda. The key results are detailed below. The rate of financial inclusion among MSE operators was relatively high, with mobile money usage at 63.6% among MSE/self-employed adults (weighted), compared with 59.6% among all adults. Access to formal credit was 38.5% (weighted), indicating that it remains constrained. In terms of MSE performance, operators reported cash flow stability (65.7 %), which corresponds to moderate profitability relative to income predictability and expenses cover. In the last 12 months, 75-76% of the MSEs who experienced a financial shock used coping strategies considered resilient, such as drawing on their own resources or savings. 40% of the MSE operators said that there is scope for investment and expansion. Regarding the correlation between financial inclusion and MSE performance, the prevalence of mobile money use was significantly high among MSE operators ($p=0.0011$), and a strong correlation with formal credit access was observed.

Discussion of findings

Financial Inclusion and MSE performance

The study aimed to determine the extent of financial inclusion among the owners and operators of Micro and Small Enterprises (MSEs) in Uganda. The analysis showed that 63.6% of MSE operators and 59.6% of the overall population had adopted mobile money. This is consistent with other studies showing that mobile money is a significant avenue for

financial inclusion in Uganda, particularly in the informal sector. The high penetration of mobile money among MSEs implies that business owners are utilizing mobile money extensively in their day-to-day business. This encompasses supplier payments, customer payments, and cash flow management. These are consistent with the concept of financial inclusion, which underscores the importance of digital financial services in facilitating everyday business activities and enhancing financial management. By contrast, formal credit is used by only 38.5% of MSEs. The main reason for this low uptake is a combination of factors, including stringent collateral requirements, high interest rates, and a lack of financial products that cater to small businesses. The finding reinforces the problem statement because, although the overall level of inclusion has been improving, many MSE operators, particularly women and especially youth in rural areas, still have limited access to credit for business activities.

5.0.2 Quality of MSEs' performance.

The second was to evaluate the profitability of an MSE, its business expansion and its ability to protect against financial shocks. The findings show that 65.7% of the MSE operators have moderate profitability with respect to cash flows, as their cash flows are stable to very stable. This is positive, but also shows that there is still a lot to be done, particularly the majority of MSEs in Uganda are very informal and vulnerable. Shock experience and coping strategies were used to measure resilience. A financial shock affected some 68.3% of MSEs over the last 12 months due to events such as market volatility, health crises, or rising costs. About 75-76% of those affected used coping responses from their own resources/savings/formal channels, and only 13-16% of them used distress coping (e.g., asset sales, high-cost borrowing). This is a relatively high level of resilient coping, but it could indicate a lack of dependence on multiple formal buffers and a reliance on personal savings. Growth potential was gauged by measures of investment and expansion plans. Approximately 40% of the MSEs had planned to invest in assets, stocks, or in employment. This moderate level is consistent with the literature on limited growth in informal MSEs in developing economies and indicates some growth motivation, but there are constraints on

financial investment in informal MSEs.

5.0.1 Relationship between financial inclusion and MSE performance

The third objective was to examine the relationship between financial inclusion and MSE performance. The findings revealed a significant positive association between mobile money usage and MSE status ($p=0.0011$), suggesting that mobile money facilitates business activity. There was also a strong positive correlation between the use of mobile money and formal credit (84.7% of credit users also use mobile money, $p<0.001$). It was also associated with growth intentions, with increased use observed among those with growth/business intentions ($p=0.0109$). The results corroborate the conceptual framework, which posits that financial inclusion, particularly through digital payment systems, leads to improved cash flow management, access to credit, and investment capacity, thereby positively affecting MSE performance.

The findings, however, reveal no statistically significant link between financial inclusion and the quality of coping with the shocks. This applies to both mobile money ($p = 0.2624$) and formal credit ($p = 0.5335$). This suggests that, although MSE operators in this sample use these financial services during financial stress, they do not necessarily augment their coping strategies.

This could be due to informal coping mechanisms still being in use, to people still borrowing short-term money from mobile lenders, or to coping effects being related to the magnitude of shocks and financial buffers rather than to the availability of financial services. Overall, the results are consistent with findings reported in the literature on how mobile money can facilitate informal businesses, and how the lack of formal credit access remains a challenge, as its impact on resilience remains low. The findings are among the barriers mentioned in the problem statement that underserved MSE operators face.

5.0 Conclusions

Based on the study, a few conclusions are drawn. The level of financial inclusion is medium-high among MSE operators, with 63.6% using financial services, including mobile money. It is significantly linked to MSE status, access to formal credit, and intentions for business

growth. The availability of formal credit is still low at 38.5%, however, there is a distinct need for policy and financial sector interventions to change this.

Generally, the level of MSE is moderate. Approximately 65.7% of operators report that cash flow is stable, and about 75-76% say financial shocks have some effect on their operations. However, just over 40% have a clear growth plan, indicating limited growth capacity. The findings indicate that, although these MSEs have some strengths, they also have weak points in important aspects of business development.

The results also confirm that the mobile money has a positive and statistically significant relationship with the growth dimension of MSE performance. In comparison, this data shows little impact of access to formal credit on resilience or growth intent. Overall, financial inclusion is related to MSE activity, but does not necessarily translate into more profitable, growing or resilient MSEs.

5.1 Recommendations

Based on the results, a few recommendations are made. Further improvement of mobile money services is needed, particularly for business services (e.g., merchant payments) and mobile microloans. Furthermore, strengthening risk-sharing mechanisms and blended finance tools to boost access to formal credit for MSEs, particularly in the Western and Eastern regions with limited access, would be welcomed by policymakers and the Bank of Uganda.

Financial service providers should innovate products and services specifically designed for MSEs, including financial institutions (such as banks and microfinance institutions) and mobile network operators. They can range from mobile wallet-connected insurance products to low-collateral digital credit, all of which can help businesses mitigate shocks. To combat gender and regional inequalities, special focus should be given to women and rural entrepreneurs.

The government and development partners also need to reinforce financial literacy programmes. These should emphasise good practices for using mobile money in business activities and for applying financial resilience strategies, such as diversified savings and insurance.

Lastly, MSE operators need to leverage mobile money more effectively in their businesses to better manage cash flows and boost creditworthiness. They should also be directed towards formal credit for investment for their future needs and in expanding businesses.

5.1 Recommendations for Further Research

Secondary cross-sectional data collected in the FinScope Uganda 2023 survey were used in this study. In the future, research design (primary longitudinal/experimental) should be used to better address the causality between financial inclusion and MSE performance.

Future research may also examine the varied impacts of mobile money use depending on the type of use, including mobile money transactions for business and household uses, and the various impacts of the mobile money applications used (e.g., mobile money for making payments to suppliers versus mobile money for personal use). Comparative analysis by region or between formal and informal MSEs would also contribute to understanding the dynamics of financial inclusion and financial performance of enterprises.

Appendices

Appendix A: List of Variables Used in the Study

This appendix lists the main variables extracted from the FinScope Uganda 2023 dataset, their codes, descriptions, and how they were used in the analysis.

Variable Code	Description	Type	Used For	Measurement / Recoding Notes
mobile_use	Uses mobile money for at least one purpose	Binary	Independent variable (main)	1 = Yes, 0 = No
formal_credit	Used formal credit in last 12 months	Binary	Independent variable (main)	1 = Yes, 0 = No
formal_account	Owns formal account (bank, SACCO, MFI, mobile wallet)	Binary	Independent variable (supporting)	1 = Yes, 0 = No
d2_2_11	Cash flow stability of business income	Ordinal	Dependent variable (profitability proxy)	1–2 = Stable; 3+ = Less stable
h1_1_1	Experienced financial shock (past 12 months)	Binary	Resilience indicator	1 = Yes, 2 = No

h1_1_2 / h1_1_3	Coping method used after shock	Binary	Resilience (coping strategy)	1 = Used own resources/formal; 0 = Distress coping
e4_11	Plans to invest/expand business	Binary	Dependent variable (growth proxy)	1 = Yes; 0 = No/Other
mse_status	Self-employed/business owner	Binary	Sample restriction	1 = MSE/self-employed; 0 = Not MSE
Pweight	Post-stratification survey weight	Continuous	Weighting all results	Applied in all svy commands
age	Age of respondent	Continuous	Control variable	Grouped (16–24, 25–34, 35–44, etc.)
c1	Gender	Binary	Background/control	1 = Male; 2 = Female
location	Urban/Rural residence	Binary	Control variable	1 = Urban; 2 = Rural
education	Highest education level	Categorical	Control variable	Recoded into Primary/Secondary/Tertiary

Source: FinScope Uganda 2023 dataset.

Appendix B: List of Abbreviations / Acronyms

Abbreviation	Full Form / Meaning
BoU	Bank of Uganda
DFS	Digital Financial Services
DV	Dependent Variable
EAC	East African Community
FinScope	FinScope Consumer Survey (nationally representative financial inclusion survey conducted by Financial Sector Deepening Uganda and partners)
FSD Uganda	Financial Sector Deepening Uganda
GoU	Government of Uganda
IV	Independent Variable
MDI	Microfinance Deposit-taking Institution
MFI	Microfinance Institution
MoFPED	Ministry of Finance, Planning and Economic Development
MSE	Micro and Small Enterprise
MSME	Micro, Small and Medium Enterprise
NFIS	National Financial Inclusion Strategy (2023–2028)
NSSF	National Social Security Fund
PDM	Parish Development Model
ROSCA	Rotating Savings and Credit Association

SACCO	Savings and Credit Cooperative Organisation

UBOS	Uganda Bureau of Statistics
UNCDF	United Nations Capital Development Fund
VSLA	Village Savings and Loan Association

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