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Small and Medium Enterprises in Kibra,  
Nairobi: moderated by financial literacy.

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**Determinants of Access to Credit Among the Small and Medium Enterprises in  
Kibra,Nairobi: Moderated by Financial Literacy**

**Felix Odhiambo Ogada**

**Adm No.147177**

**Submitted in Partial Fulfillment of the Requirements for the Award of The Degree of  
Masters of Science in Development Finance**



**Nairobi,Kenya**

**June 2025**

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### Approval

The dissertation of Felix Ogada was reviewed and approved by the following:

Dr. Moses Nyangu

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## ABSTRACT

The research examined critical determinants affecting SME access to financial resources for Small and Medium Enterprises (SMEs) in Kibra Constituency, Nairobi County. The global economy depends critically on SMEs, which support substantial employment and GDP growth but still have difficulty accessing funding. The research focuses on three key factors: firm characteristics, financial characteristics, and entrepreneurial characteristics, with financial literacy as a moderating variable. Using a quantitative research design, data was collected through self-administered questionnaires to owners and managers, obtaining a sample of 200 respondents. Multiple linear regression models were used to examine the relationships between the variables, while hierarchical regression analysis was employed to assess the moderating effect of financial literacy. This approach measured how financial literacy influences the pattern of finance accessibility in relation to entrepreneurial characteristics. The findings reveal that firm size and financial characteristics such as audited financial statements, firm performance, tangible assets, and tax compliance significantly influence Access to Credit. Managers who exhibit entrepreneurial characteristics gain better outcomes concerning funding access through their accumulated work experience and active engagement in business networking activities. Financial literacy is a moderator that boosts the funding access capability of SMEs while linking their entrepreneurial characteristics to potential outcomes. The findings reveal that improving financial transparency and enhancing entrepreneurial skills and financial literacy creates essential conditions for better SME funding opportunities. Hierarchical regression results showed that financial literacy strengthened the relationship between entrepreneurial characteristics and Access to Credit. The study offered strategic recommendations to financial institutions, policymakers, and SME operators while providing critical knowledge about SME financing challenges that help similar contexts.

### **Keywords:**

Access to Credit, SMEs, Financial Literacy, Kibra, Entrepreneurial Characteristics, Firm Characteristics, Financial Characteristics, Regression Analysis, Microfinance, Access to Credit, Financial Inclusion, Kenya, Loan Accessibility, SME Funding, Moderating Effect

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## **ABBREVIATIONS AND ACRONYMS**

CBK - Central Bank of Kenya

EAC – East African Community

GDP - Gross Domestic Product

ITC – International Trade Centre

KBA – Kenya Bankers Association

OECD – Organization for Economic Cooperation and Development

SACCO - Savings and Credit Cooperative Organization or Society

SDG – Sustainable Development Goal

SMEs - Small and Medium-Sized Enterprises



## DEFINITION OF TERMS

**Access to Credit:** The ability of SMEs to secure funding from formal or informal sources, including banks, SACCOs, microfinance, or mobile lenders. It reflects affordability, ease, and suitability of financing (World Bank, 2021; CBK, 2023).

**SMEs (Small and Medium Enterprises):** Enterprises typically employing fewer than 100 workers and categorized by size, turnover, and asset base. SMEs are central to employment creation and economic growth (KNBS, 2023; CBK, 2022).

**Firm Characteristics:** Internal business features like size, age, legal form, and ownership structure that influence Access to Credit through perceived risk and institutional trust (Nguyen & Doan, 2023; CBK, 2023).

**Financial Characteristics:** Elements like financial reporting, asset ownership, profitability, and tax compliance that help determine a firm's creditworthiness (Balde, 2021; Zhang & Xu, 2021).

**Entrepreneurial Characteristics:** Owner/manager attributes such as education, training, experience, and networking that shape decision-making and the likelihood of obtaining external finance (Huggins & Johnston, 2021; Prasetya et al., 2021).

**Financial Literacy:** The knowledge and skills enabling entrepreneurs to make informed decisions in budgeting, saving, borrowing, and investment (Atkinson & Messy, 2022; Williams & Ibrahim, 2023).

**Moderating Variable:** A variable that changes the strength or direction of the relationship between an independent and a dependent variable. In this study, financial literacy moderates the influence of entrepreneurial traits (Safari & Were, 2023).

**Multiple Linear Regression (MLR):** A statistical method for analyzing relationships between one dependent variable and multiple independent variables, allowing for control and comparison of predictor effects (Ngugi & Aduda, 2023).

**Hierarchical Regression:** A technique where variables are added in steps or blocks to observe changes in predictive power, commonly used to test interaction (moderation) effects (Ngugi & Aduda, 2023).

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## DEDICATION

I dedicate this research thesis to God Almighty; without Him, all of this would have remained a fantasy. Gratitude is extended to myself for consistently pushing beyond my limits. To my wonderful family, you are the best. A special acknowledgment to my late parents; I celebrate and honor you.



# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

This chapter introduces the study and outlines its structure. It comprises the background, problem statement, research objectives and questions, scope, significance of the study, and a chapter summary. The chapter offers an understanding of SMEs' challenges in accessing funding. Specifically, it outlines the rationale for exploring factors influencing SMEs' Access to Credit in Kibra, Nairobi, and how this research intends to address existing gaps and controversies. Small and medium enterprises (SMEs) play an essential role in fostering global economic development, making up the majority of business establishments and contributing substantially to job creation and income generation. As highlighted by the World Bank (2023), SMEs constitute approximately 90% of businesses globally and are responsible for over half of global employment. Their role is especially critical in emerging economies, where formal SMEs alone contribute close to 40% of GDP, with the inclusion of informal SMEs likely pushing this figure even higher. Despite this significance, a massive funding shortfall persists. The World Bank estimates that formal SMEs face an annual credit deficit of around \$5.2 trillion globally, and the gap is even wider when informal enterprises are considered.

Additionally, SMEs are deemed fundamental to the achievement of the United Nations (UN) 2030 Agenda on Sustainable Development Goals (SDGs), particularly Goals 1, 8, and 9, which focus on ending poverty, promoting sustainable and inclusive economic growth, and fostering sustainable innovation and industrialization respectively (International Trade Centre, 2019). The UN's SDGs urge countries to adopt efforts to formalize and grow SMEs. By adopting innovative green practices, these enterprises contribute to achieving SDGs (Organization for Economic Cooperation and Development, 2018). Regionally, SMEs play a fundamental role in increasing inter-regional and intra-regional trade as envisioned in regional economic blocs such as the African Continental Free Trade Area (ACFTA) and the East African Community (EAC).

A critical challenge that SMEs across the globe face is limited Access to Credit. Globally, bank lending remains the most popular source of external financing for most SMEs and other businesses that are usually dependent on straight debt to meet their start-up, investment, and

cash flow needs (OECD, 2019). The World Bank estimates a funding gap of \$ 5.2 trillion yearly for formal SMEs. The funding gap varies significantly based on region. An estimated half of formal SMEs lack access to formal credit. The funding gap is significant if informal SMEs are considered. SMEs are often disadvantaged relative to large corporations when accessing debt finance, which can be attributed to agency problems and asymmetric information, such as high transaction costs (Central Bank of Kenya, 2021). The lack of transparency regarding SMEs' operations and financials also limits their access to finance. At a start-up, this is further hindered by the lack of a credit history coupled with limited skills and expertise to develop complex financial statements (Tiriongo et al., 2021). Credit constraints also affect SMEs. They are high-risk-high-return propositions, particularly in growth-oriented and innovative enterprises, since their strategy may hinge on intangibles and/or relatively low profit margins, which may pose difficulties in forecasting (OECD, 2019).

### **1.1.1 Access to Credit by Small and Medium Enterprises**

Small and medium enterprises (SMEs) are central to stimulating economic growth. They account for more than half of all employment worldwide and ninety % of all businesses across the globe. They are critical catalysts to sustainable future economic growth, according to the World Bank report of 2023. However, SMEs are often constrained in their quest to access finance. According to the World Bank report (2023), yearly, a 5.2 trillion US dollar financing hole is present for formal SMEs and much higher for informal businesses. The lack of funds hinders SMEs' ability to finance their activities, undertake research and development, and expand, decreasing their role in increasing GDP and providing employment. Worldwide, transaction costs, the absence of security, and the information gap limit SMEs from receiving credit from the structured banking sector (OECD, 2019).

There are several reasons why SMEs' financing in Africa remains constrained: financial institutions' underdevelopment, high credit costs, and limited credibility from lenders. Here, the operation is predominant in the SME sector, making it challenging for players to access formal credit. Besides, systematic issues like poor regulatory and financial access regulatory environments compound the situation (OECD, 2019). While there are regional efforts – ACFTA- EAC, the intention of expanding cooperation for economic grouping and trade liberalization, issues of limited access and financing have not been well provided. Regarding

loans, African SMEs rely on low-value and informal financing with inadequate levels of innovation, including savings groups and family-sponsored financing.

SMEs in Kenya make up 98% of all firms and contribute to up to 33% of the total GDP, according to the Central Bank of Kenya (2021). They contribute to employment, accounting for 80% of annual employment growth, with most employment opportunities being informal. Manufacturing is one of the key sectors in which SMEs play a crucial role under Kenya's Vision 2030 and the Big Four Agenda (International Trade Centre, 2019). However, the problem remains with funding as Kenyan SMEs continue to face challenges in landing finances. Limited access is caused by strict demand for collateral, high interest rates, and the absence of credit history to obtain a formal loan. This makes it compulsory for most SMEs to depend on their cash balance, SACCOs, Chamas, and Mobile credits, which neither offer adequate capital nor cater to massive investments (Tiriongo et al., 2021).

Mobile credit has been crucial in extending SMEs' access to financial services. However, at the same time, the credit amounts being provided are insufficient to meet SMEs' operating and growth requirements. The established sources of finance also include internal funds, and new sources of finance like venture capital and private equity are still under-exploited due to high transaction costs and risk phobia among financiers (Manwari et al., 2017). Hence, a significant financing gap remains, keeping the SMEs in Kenya underfunded and, therefore, highly risky, especially during a crisis like the COVID-19 pandemic, as indicated by the Central Bank of Kenya (2021).

Earlier research yielded several SME funding predictors, but such studies present mixed evidence of their role. Internationally, works focus on such external factors as high interest rates, lack of acceptable security, and strict requirements for the fulfillment of credit terms (OECD, 2019). However, other studies focus on internal factors, namely, the level of financial disclosure and entrepreneurial talent (Cowling et al., 2017). This is so because the differences are due to the context and methods used in analyzing the variables in question. For instance, external barriers are much more developed in low and middle-income countries, where most SMEs experience substantial formality and no credit history. The study carried out in high-income concerns is concerned with internal organizational frictions.

These conflicts are similar in Kenya. According to Gichuki et al. (2014), the significant constraints to SME financing include short loan repayment terms and high collaterals. On his

part, Waari and Mwangi (2018) argue that internal challenges, including low profitability and restricted managerial skills, are essential. Such differences may be attributed to variations in study locations, mainly because challenges faced by urban-based SMEs differ from those faced by SMEs in rural areas. Some of the methodological issues, including the use of self-reports and samples with few numbers of participants, also explain such conflicting results.

### **1.1.2 Factors affecting Access to Credit**

Firm-level attributes, often shaped by managerial decisions, significantly influence an enterprise's ability to obtain credit. Elements such as the availability of collateral, internal financial health, the firm's legal or ownership structure, and its history of tax compliance are typically assessed by lending institutions when evaluating creditworthiness (Balde, 2021). These characteristics are particularly relevant in informal economies like Kibra, where many businesses operate without formal documentation or structured governance. While financial performance is a central criterion for lenders, there remains little agreement on how it should be measured. Some researchers emphasize net profit margins, while others prioritize liquidity or revenue stability (Cowling et al., 2017).

Collateral is especially problematic in informal settlements, where small business owners may lack titled property or fixed assets. In such contexts, lenders might rely more on informal credit relationships or community-based guarantees. The question of whether family-run or individually owned SMEs present higher lending risks remains unresolved, with no clear evidence favoring either (Kiring'a et al., 2021)

Tax compliance is often treated as a binary factor, yet limited research explores the nuanced role of partial compliance or informal financial practices commonly observed in SMEs.

At the broader level, SMEs' inability to produce sufficient collateral is a well-documented barrier, with collateral serving as a safety net for lenders in the event of default. However, collateral-based lending often discriminates against SMEs, particularly in developing countries, where asset ownership is constrained by systemic challenges (Balde, 2021). On a more specific focus, financial performance directly affects SMEs' credit risk assessment, yet diverse interpretations of performance metrics create ambiguity in lender evaluations. Finally, at the most specific level, tax compliance, although critical, remains understudied in terms of its interplay with informal practices and its indirect implications on perceived creditworthiness.

Further research is needed to investigate how alternative mechanisms, such as relationship-based lending or digital credit scoring models, could mitigate the reliance on traditional firm characteristics. Moreover, comparative studies across regions or industries may provide insights into contextual variations in the effect of these characteristics. This study may contribute to the existing debates and shed light on essential gaps in how the various attributes of SMEs are related to those for credit facilities.

The internal financial characteristics that influence a firm's Access to Credit include the capacity to repay the loan, ability to present a business plan, original capital invested in the business, negotiated duration for repayment of credit/loan, relationship with lenders, and perceptions of credit terms (Balde, 2021). These attributes define lenders' tendencies and the probability of SMEs receiving formal funding. Though these financial factors are well-known, substantial knowledge gaps remain concerning how their combination affects credit availability. For instance, the complexity between credit decisions and loan repayment capacity is usually overgeneralized. Credit history and financial ratios that suggest borrowers' repayment capacity are often analyzed when assessing SME creditworthiness. Even though little is known about how changes in the external environment, such as inflation or economic downturns, affect SMEs' repayment capabilities and lenders' assessment of such risks.

Another area is the influence of the investment made at the initial stage of the formation of Access to Credit. While increased capital intensity is correlated with higher performance indicators, the role of this factor compared to other values, such as profitability or solvency, is considered in the research by Cowling et al. (2017). The result is ambiguous. Loan repayment periods also attract controversy, with some arguing that they should be longer. Although short repayment periods can be limiting, several lenders have hailed such terms as effective methods of ensuring that payments are made following the agreed schedule. This conflicts between the SMEs' long-term credit demands and lenders' risk management practices. Similarly, while positive lender relationships are acknowledged as facilitators, trust, negotiation power, and communication between SMEs and lenders remain underexplored, particularly in informal lending relationships or digital lending platforms.

At a broad level, loan repayment capacity is fundamental to lenders' risk evaluations, with repayment influenced by an SME's credit history, financial health, and income stability. This factor ties directly to SMEs' ability to maintain favorable financial ratios, yet there is a growing

need to explore the effect of external economic shocks on these metrics. On a more specific level, original capital investment highlights the importance of initial resource allocation and its connection to operational success. However, its relative importance compared to other financial attributes is not well-established. Finally, at the most specific level, the perceptions of credit terms and relationships with lenders reflect the human element in economic decisions, where trust, transparency, and flexibility play a decisive role.

Future research could only attempt to fill gaps by focusing on several aspects. First, several research investigations could examine how macroeconomic factors, like inflation and fluctuating exchange rates, affect SMEs' repayability. Furthermore, a comparative study of the lenders' behavior in different markets can be insightful, especially in the economies where embedded funding or Fintech options exist. Last but not least, the research on perceiving the impressions of the loan terms that influence SME borrowing behavior, especially using behavioral economics approaches, was instrumental in fashioning a relatively straightforward crediting system that can meet SMEs' requirements and understand credit decisions.

SMEs' entrepreneurial characteristics are crucial determinants of the availability of finance for SMEs worldwide. These traits capture the possibility of the business owners or managers using skills, connections, and experience to access capital. It also includes education, management, networking, and entrepreneurial skills (Balde, 2021). It is sufficient that the characteristics have a significantly close relationship with business success, most of the time determining credit risk from the lender's point of view.

Although the factors have been identified as critical, there are still blanks in knowledge about how entrepreneurial characteristics influence the other factors in credit access. For instance, one of the most common variables is Education. However, it is still unknown whether getting a degree, acquiring knowledge at workshops, or working at a particular company is more effective. Additionally, research done to understand the effect of managerial competency in credit facility agreements has done little to consider how cultural or geographical factors affect which skills are deemed necessary by lenders.

The consequences of entrepreneurial experience are also in question. Some published studies indicate that new-generation entrepreneurs are more likely to access loans because of experience (Cowling et al., 2017). However, opponents can state that due to inexperience in

decision-making, young business people may be deprived of financing even though they may introduce new ideas or be ready to adjust to new market conditions.

Networking remains another ambiguous concern. Although, over a long time, social capital has been regarded as an asset, little is understood of how much it assists in compensation for unfavorable settings in other areas, such as financial returns or securities. Thirdly, credit from personal contacts may be particularly likely to perpetuate prejudice observed in lending activities, including the gender or ethnicity bias, to which research has paid insufficient attention.

At the broadest level of realizing value, education enables entrepreneurs to effectively present their cases to lenders and develop credible business cases. Nevertheless, differences in cultures within regions regarding appreciation of academic knowledge compared to professional ones make this relation rather inharmonious. A closer look at the specificity of managerial competency reveals that it is possible to emphasize the capacity to enact strategic choices; however, lenders' assessment of this performance differs significantly. Last, networking points out the channel through which informal or formal credit is obtained based on interpersonal connection and social capital. Nevertheless, the definition of the process by subsystems, procedures, and constraints still requires further study.

It is, therefore, evident that future research should address several gaps by looking at the dimensions of SME financing. Comparative forms could illustrate the economic effects of formal as opposed to informal learning of financial literacy to identify formal learning's role in accessing credit facts that would benefit SMEs. Further, studies could explore the way gender and culture affect the evaluation of traits that denote entrepreneurship, mainly in the patriarchal or scarce economy; therefore, social norms may hinder or promote financing. More interesting is whether networking is more or less crucial in unconventional lending contexts like crowdfunding or fintech platforms than in conventional banking relationships. Lastly, the 'barriers' that inexperienced owners may face, which entrepreneurship training programs can eliminate, is another research question. Such training acquires inexperienced owners with skills to tackle such barriers and gain improved Access to Credit. As a result, future works can offer practical solutions for SMEs to utilize entrepreneurial factors to eliminate financial obstacles. It would also help to respond to existing debates in the literature and provide recommendations for policymakers on how to develop interventions that enhance the supply of SME credit.

### **1.1.3 Financial literacy as a moderator**

Recent empirical evidence suggests that entrepreneurial characteristics alone may not sufficiently improve Access to Credit without the moderating effect of financial literacy (Ngugi & Aduda, 2022). Contemporary scholarship has expanded our understanding of financial literacy to encompass four critical competencies: financial management, debt management, savings optimization, and investment decision-making (OECD, 2020). These competencies collectively empower entrepreneurs to make informed financial decisions and navigate formal financing systems more effectively

Studies demonstrate that financially literate entrepreneurs achieve 27% greater market success and demonstrate significantly stronger capacity to evaluate funding options and develop bankable business proposals (Atkinson & Messy, 2022). The OECD (2020) reports that SME owners with financial management skills maintain more accurate business records, create realistic budgets, and manage cash flows more efficiently - all critical factors in creditworthiness assessments. Debt management literacy, particularly understanding borrowing costs and loan conditions, has been shown to improve responsible credit utilization by 34% among micro-entrepreneurs (Demirgüç-Kunt et al., 2022).

In the specific context of informal settlements like Kibra, research reveals persistent financial literacy gaps that constrain SME financing options. A 2022 Central Bank of Kenya study found that 68% of informal sector entrepreneurs lacked basic financial management skills, forcing reliance on informal channels like mobile loans (M-Pesa) and community savings groups (CBK, 2022). This financial skills deficit manifests in poor record-keeping, inability to prepare business plans, and non-compliance with lender requirements (Safari & Were, 2023).

This study examines how financial literacy moderates the relationship between entrepreneurial characteristics and funding access through four dimensions identified in contemporary literature: operational financial management, debt competency, savings discipline, and investment appraisal skills (World Bank, 2021). The research specifically investigates whether targeted financial education addressing these competencies enhances SMEs' preparedness for sustainable financing in Kibra's unique informal business ecosystem.

#### **1.1.4 Overview of SMEs in Kibra constituency, Kenya.**

Kibra, Africa's largest informal settlement, presents a critical case study for examining SME financing challenges. The area's small businesses serve as vital engines for job creation and poverty alleviation, particularly among youth and women (World Bank, 2022). However, these predominantly informal enterprises face severe financial constraints, characterized by limited access to capital assets and acceptable collateral (KNBS, 2021). While mobile credit has emerged as a primary funding source for Kibra's SMEs, sustainable growth remains hampered by restrictive loan amounts and unfavorable repayment terms (FSD Kenya, 2023).

Despite SME's recognized importance in informal economies like Kibra's, significant knowledge gaps persist regarding funding determinants (CBK, 2022). Existing research has predominantly focused on external environmental factors while neglecting internal organizational and entrepreneurial variables in predictive models (Ngugi & Aduda, 2022). This oversight underscores the necessity for targeted sectoral analysis of financing determinants within Kibra, particularly those factors directly influenced by SME owners and managers (Safari & Were, 2023).

#### **1.2 Statement of the Problem**

SMEs play an essential role in the Kenyan economy; they contribute 33% of the GDP and offer 80% of new employment opportunities annually. However, Kenyan SMEs still struggle with several issues that concern external funding sources; these are critical in the growth and sustainability of the SMEs and, by extension, the economy. About 33% of the SMEs needing funding could not access it because the banks charged high interest, demanded high collateral, and had complex loan processing procedures (Wangari & Mwangi, 2020). The above financing deficit dramatically contributes to high failure rates among SMEs, with close to 400,000 enterprises folding within their first two years of the entity's formation (Onguo & Gikandi, 2021).

Most of this challenge arises from uncertainty in how internal firm specifics help or hinder funding procurement. Despite previous works documenting external factors that affect creditworthiness, including high repayment costs and the absence of collateral (Muriuki et al., 2021), there is a lack of research on assessments of elements within the SMEs' sphere, including its financial results, structure, or competencies of an entrepreneur. This oversight has left a

research gap as policymakers, financiers, and SME owners significantly lack adequate information to deal with hindrances to credit accessibility.

In addition, there is debate in the literature concerning the factors that influence the ability of SMEs to access funding. Some articles co-relate the degree of supply chain integration with outside factors that could be systematic, such as high transaction costs and information asymmetry (Muganda & Kiraithe, 2020), while others focus on internal firm conditions, such as financial statement transparency and managerial capability to undertake integrated initiatives (Chacha & Mutua, 2021). These disparities indicate that other severe imbalances are amplified when regional and methodological disparities are considered, highlighting the need for a more focused, rigorous examination.

This study is compounded by the fact that most SMEs are found in Kibra Constituency, Nairobi, primarily in the informal sector, hence lacking formal credit status. Prior research has not effectively explained the relationship between organizational internal factors and external funding constraints in this low-income setting. This research filled this gap by looking at the internal factors creating financing opportunities and constraints for SMEs, mainly financial and entrepreneurial attributes.

The findings of this study help SMEs, policymakers, and other financial stakeholders understand credit access issues and champion the growth and sustainability of SMEs in Kibra and similar settings.

### **1.3 Objective of the Study**

#### **1.3.1 General Objective**

This study seeks to establish the factors affecting Access to Credit in SMEs operating in Kibra Constituency, Nairobi, Kenya.

#### **1.3.2 Specific Objectives**

The following specific objectives are posed to this study to achieve the general objective.

- i. To investigate the role of the firm characteristics in affecting Access to Credit in SMEs operating in Kibra Constituency, Nairobi, Kenya.

- ii. To examine the influence of financial characteristics affecting Access to Credit in SMEs operating in Kibra Constituency, Nairobi, Kenya.
- iii. To evaluate the influence of entrepreneurial characteristics of SME managers/owners affecting Access to Credit in SMEs operating in Kibra Constituency, Nairobi, Kenya.
- iv. To examine the moderating effect of financial literacy on the relationship between entrepreneurial characteristics and Access to Credit in SMEs operating in Kibra Constituency, Nairobi, Kenya.

#### **1.4 Research Questions**

This study responded to the following questions:

- i. How do the characteristics of the firm influence funding access for SMEs in Kibra Constituency, Nairobi, Kenya?
- ii. What is the relationship between financial characteristics and financing access in SMEs in Kibra Constituency, Nairobi, Kenya?
- iii. What is the relationship between entrepreneurial characteristics and financing access in SMEs in Kibra Constituency, Nairobi, Kenya?
- iv. How does financial literacy moderate the relationship between entrepreneurial characteristics and SMEs' Access to Credit in Kibra Constituency, Nairobi, Kenya?

#### **1.5 Scope of the Study**

The scope of this study focused on investigating the factors influencing SMEs' access to financing in Kibra Constituency, Nairobi, specifically addressing firm, financial, and entrepreneurial characteristics of SME owners/managers, with financial literacy serving as a moderating factor. The study included SMEs defined as businesses with fewer than 250 employees and annual revenues of less than KSh 100 million, in accordance with the Kenya Micro and Small Enterprise Act (2012). Data collection occurred between March 2025 and April 2025, and the sample consisted of 278 SME owners from a population of approximately 1,000 SMEs in Kibra, with a 71.94% response rate (200 valid responses). The unit of analysis was individual SMEs, focusing on their organizational, financial, and entrepreneurial characteristics. A quantitative approach was used, employing multiple regression to assess the impact of various factors on financing access, followed by hierarchical regression to examine

the moderating effect of financial literacy. This study provided a detailed analysis of the local context and challenges faced by SMEs in Kibra, offering tailored solutions. .

## **1.6. Significance of the Study**

### **1.6.1. Policymakers**

The outcomes of this study help policymakers design specific interventions leading to improved SME financing vulnerability. Therefore, due to these barriers, proper policies favorable for SMEs can be created by understanding their obstacles, including the organizational, financial, and entrepreneurial capital barriers. Such measures enhance the economic inclusion of SMEs and boost their competitiveness in response to the country's developmental blueprints, such as Kenya Vision 2030 and the Big Four agenda, amongst others. Such measures could be as follows: development of micro and macro legislations, innovation of financial solutions for SMEs, and the expansion of online credit facilities.

### **1.6.2 SME Managers and Operators**

The findings of this study offer direction to SME managers and operators regarding actions that may enhance the probability of Access to Credit. Thus, crucial organizational and financial factors that determine creditworthiness can be examined by SMEs to change internal structures, adopt more effective financial behaviors, and, with the help of entrepreneurial competencies, build an appropriate image of a solid and attractive borrower. The knowledge, therefore, may assist SMEs in navigating systemic barriers and accessing the necessary resources with a view to competency and endurance.

### **1.6.3 Financial Institutions**

The research provides requisite insights to financiers ranging from commercial banks to micro-finance institutions and venture capitalists on SMEs' funding deficits. This information also assists different financial institutions in designing products that suit SMEs, especially those in areas that are not well-served, such as Kibra. This solves the problem of missing funding and creates opportunities for financing to increase its customer base.

#### **1.6.4 Academicians and Researchers**

To the academic community, this research extends the existing literature on SME financing by analyzing the internal and contextual factors that affect credit access in Kibra. The study presents the direction for future research studies of SME funding strategies and dynamics within subjects of interest such as financial literacy, relationship banking, and digital credit. Therefore, other researchers hope to investigate the different variables and methodologies further.

#### **1.7 Chapter Summary**

This chapter introduced the research on the determinants of Access to Credit among small and medium enterprises (SMEs) in Kibra, Nairobi, Kenya. The study focused on three primary dimensions: firm characteristics, financial characteristics, and entrepreneurial traits, with financial literacy as a moderating variable. The chapter outlined the background of the problem, establishing the importance of SME financing in Kenya, particularly in informal settlements like Kibra, where Access to Credit remains a major barrier. It also discussed the research objectives and research questions aimed at exploring these barriers and determining how various factors influence the access of SMEs to financial resources. The chapter concluded with an overview of the structure of the dissertation, summarizing the approach and methodology that will be used to address the research questions.



## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

The chapter gives an in-depth review of the theoretical foundations and empirical literature concerning the factors influencing SMEs' access to financing in Kibra Constituency, Nairobi. The chapter examined several key theories, including Growth Cycle Theory, Information Asymmetry Theory, Entrepreneurship Theory, Agency Theory, and Financial Literacy Theory, analyzing their relevance to the financing challenges faced by SMEs in informal sectors like Kibra. Each theory was critiqued for its applicability to the study context, especially the limitations of the Growth Cycle Theory when applied to informal SMEs in Kibra. The chapter also highlighted the role of financial literacy in moderating Access to Credit and its potential to bridge the information gap between informal businesses and formal financial institutions.

Furthermore, the empirical review revealed that while much research has been conducted on SME financing in Kenya, significant gaps exist in studies that focus specifically on informal SMEs in Kibra. The chapter concluded with an identification of these research gaps, emphasizing the need for more context-specific studies that address the unique characteristics of informal SMEs, including their entrepreneurial traits and financial practices. This review set the stage for the research by linking the theoretical frameworks to the study's objectives, ultimately shaping the conceptual framework and the operationalization of the study's variables.

#### 2.2 Theoretical Review

Access to Credit for small businesses in Kibra's informal economy is not merely a question of financial ratios or eligibility checklists it reflects a complex puzzle shaped by firm attributes, systemic barriers, and the financial capabilities of entrepreneurs. To unpack this complexity, this study draws on three key theoretical frameworks: Growth Cycle Theory, Information Asymmetry Theory, and Financial Literacy Theory. Each theory offers a unique lens for examining why some SMEs secure credit while others are excluded especially in informal settings where conventional financial rules may not apply.

These theories were selected deliberately. Collectively, they help illuminate the nuanced realities faced by entrepreneurs in Kibra many of whom operate without formal registration,

contend with institutional distrust, and rely on practical financial knowledge rather than institutional backing. By integrating these perspectives, the study not only tests theoretical propositions but also seeks to adapt and extend them to a context where business development paths are non-linear and shaped by informality.

### **2.2.1 Growth Cycle Theory: Rethinking Firm Maturity**

Berger and Udell's (1998) Growth Cycle Theory suggests that as businesses mature, their financing options expand progressing from self-financing to formal institutional credit. This framework is supported by empirical studies such as Konga and Ramaiah (2023), who found that older and larger firms tend to enjoy better Access to Credit due to their reduced risk profiles and stronger operational histories.

However, in Kibra's informal economy, this progression often stalls. Businesses may operate for years without transitioning to formal finance not due to lack of capability, but because they remain invisible to lenders. A tailoring shop that has existed for a decade may still rely on rotating savings groups (chamas) rather than banks due to the absence of formal registration and audited records. As such, traditional indicators of firm maturity like age and size may not fully capture creditworthiness in informal settings.

Furthermore, the theory's assumptions regarding ownership structure often fall short. In Kibra, family-run enterprises and community collectives operate under trust-based, informal arrangements that differ significantly from formal corporate structures. Whether such arrangements hinder or enhance Access to Credit remains underexplored.

This study thus extends Growth Cycle Theory by investigating how size, age, and ownership structures manifest differently when businesses operate outside formal systems. In doing so, it challenges the linear assumptions embedded in the theory and explores whether alternative growth trajectories exist in informal economies like Kibra.

### **2.2.2 Information Asymmetry Theory: Navigating the Trust Deficit**

Akerlof's (1970) Information Asymmetry Theory posits that credit markets are inefficient when lenders cannot reliably assess borrower risk, leading to adverse selection and credit rationing. In informal economies such as Kibra, this challenge is acute. Many SMEs lack the

documentation typically required by lenders such as financial statements, business registration, or tax history creating a credibility gap.

Despite these constraints, entrepreneurs often adopt informal mechanisms to signal their trustworthiness. These include consistent use of mobile money platforms, participation in savings groups, and maintaining basic financial records. Such adaptive strategies serve as informal proxies for formal indicators of creditworthiness.

This study applies Information Asymmetry Theory to explore whether these informal signals help reduce perceived lending risk. For instance, can a handwritten ledger or a reliable repayment history in a chama substitute for audited accounts? Recent research by Zhang and Xu (2021) supports this notion, suggesting that even partial financial transparency can positively influence Access to Credit.

In this way, the study not only affirms the core insights of Information Asymmetry Theory but also tests its boundaries in a context where trust is cultivated differently and formal transparency is rare.

### **2.2.3 Financial Literacy Theory: The Role of Knowledge and Capability**

Financial Literacy Theory, developed by Lusardi and Mitchell (2014), holds that individuals with greater financial knowledge make more informed and effective financial decisions, particularly when it comes to borrowing, budgeting, and risk assessment. In low-income, informal environments like Kibra, where formal support systems are minimal, financial literacy plays a pivotal role.

For many entrepreneurs in Kibra, understanding how to calculate interest rates, manage budgets, or evaluate loan terms can make the difference between accessing affordable finance and falling prey to exploitative lenders. Financial literacy, in this context, is not just beneficial it is often essential for survival.

Moreover, this theory underpins the study's conceptual framework by proposing financial literacy as both a direct influence on credit access and a moderator that amplifies the effects of entrepreneurial traits such as experience, education, and social networks. Empirical studies by Williams and Ibrahim (2023) and Prasetya et al. (2021) reinforce this view, showing that

financial literacy enhances loan outcomes, especially when combined with other entrepreneurial strengths.

#### **2.2.4 Why These Theories Matter Together**

Taken individually, each of these theories sheds light on a different aspect of credit access. Growth Cycle Theory explains how business maturity should influence financing opportunities. Information Asymmetry Theory identifies the trust barriers that lenders face and the informal strategies entrepreneurs use to bridge those gaps. Financial Literacy Theory emphasizes the role of knowledge in improving both access to and quality of credit.

In Kibra, these dynamics do not exist in isolation. An SME's size (Growth Cycle) might improve its visibility, but only if the owner can present records (Information Asymmetry) and explain them clearly (Financial Literacy). By weaving these theories together, the study captures the layered, intersecting realities of informal entrepreneurship realities that traditional finance models often overlook. This theoretical framework thus anchors the research in both established theory and contextual relevance. Rather than relying on generic models, this study roots theoretical exploration in the lived realities of informal entrepreneurship

#### **2.2.5 Gaps in the Literature**

While numerous studies have explored access to finance for SMEs in Kenya, there remains a notable gap when it comes to the specific context of informal settlements like Kibra. Research has primarily focused on general factors affecting financing for SMEs but has often overlooked the internal characteristics of SMEs in these areas, such as entrepreneurial traits and financial literacy.

For instance, Ngugi and Aduda (2022) discuss how external factors like interest rates and regulatory constraints affect SME access to finance but do not delve deeply into the unique challenges faced by informal sector businesses in informal settlements like Kibra. Similarly, Safari & Were (2023) highlight the lack of comprehensive research on how entrepreneurial traits and internal financial practices influence access to finance in informal urban economies. This research gap suggests a need for more focused studies on Kibra's SMEs, especially in understanding entrepreneurial competencies and financial systems as key determinants of Access to Credit.

Additionally, while broader studies, such as those from the Central Bank of Kenya (2022), outline the overall financing challenges SMEs face in the country, there is a scarcity of data on the specific barriers experienced by SMEs in Kibra, making it difficult for policymakers and financial institutions to address their unique needs effectively.

### **2.3 Empirical Review**

The challenge of accessing credit for small and medium enterprises (SMEs) is shaped by a complex interplay of external constraints and internal capabilities. Research consistently highlights systemic barriers such as high interest rates, stringent collateral requirements, and regulatory inefficiencies as major obstacles, particularly in developing economies (OECD, 2019; Safari & Were, 2023). At an institutional level, weak legal frameworks, limited credit bureau coverage, and lender risk aversion further restrict financing opportunities for small businesses (World Bank, 2020; Zhang & Xu, 2021). Even operational hurdles such as cumbersome paperwork and high transaction costs disproportionately affect informal enterprises, leaving many entrepreneurs locked out of formal financial systems (Muganda & Kiraithe, 2020).

While these external factors are undeniably significant, they often lie beyond the immediate control of individual business owners. In contrast, internal determinants such as financial record-keeping, business transparency, and managerial competence present actionable pathways for SMEs to improve their creditworthiness (Cowling et al., 2017; Balde, 2021). Entrepreneurial traits, including education, prior experience, and professional networks, further influence lenders' perceptions of risk and reliability (Huggins & Johnston, 2021; Lin & Wang, 2022). These factors are not only more malleable but also particularly relevant in informal economies like Kibra, where many businesses operate without formal registration or collateral.

This study deliberately narrows its focus to three key internal dimensions: firm characteristics, financial practices, and entrepreneurial traits because they represent areas where SME owners can exercise direct influence, even within structurally constrained environments. By concentrating on these owner-controlled factors, the research seeks to provide actionable insights that empower entrepreneurs to navigate financial exclusion more effectively. This approach does not dismiss the importance of macroeconomic or policy-level barriers but instead prioritizes strategies that can be implemented at the firm level, offering immediate relevance for SMEs operating in informal settings.

### 2.3.1 Firm Characteristics and Access to Credit

Empirical research consistently highlights the importance of firm-level characteristics particularly size, age, and ownership structure as predictors of access to finance. Larger and older SMEs tend to experience higher loan approval rates due to reduced lender risk perception and more established operational histories (Nguyen & Doan, 2023; Chen & Wang, 2022). In many formal economies, firm maturity is often linked to better documentation, improved credit profiles, and the accumulation of assets that serve as collateral.

However, in informal economies like Kibra, these trends diverge significantly. Despite longevity, many SMEs remain small-scale, unregistered, and asset-poor. Recent data from FSD Kenya (2023) shows that over 85% of Kibra's micro-enterprises employ fewer than five workers, and 89% operate without audited financial records. Ownership structures are largely informal often sole proprietorships or family-run stalls which limits eligibility for institutional credit due to the lack of legal recognition and asset partitioning (CBK, 2023).

These local dynamics challenge the assumptions of Growth Cycle Theory, which presumes that business growth and access to formal finance are positively correlated. In Kibra, firm size or age alone does not guarantee Access to Credit, as most businesses lack the formal structures required by lenders. Furthermore, collateral remains a significant barrier 82% of youth-owned enterprises in the constituency report being disqualified due to insufficient assets (Safari & Were, 2023).

This study contributes to the empirical literature by examining whether specific firm traits such as informal recordkeeping, long operational history without formal registration, or community-based ownership structures may serve as functional substitutes for conventional indicators like incorporation or audited statements. It specifically investigates how these dynamics play out in Kibra's informal urban economy, thus testing the limits of Growth Cycle Theory in a context marked by structural informality and institutional exclusion.

### **2.3.2 Financial Characteristics and Access to Credit**

Financial transparency plays a critical role in determining SME Access to Credit. Firms that maintain reliable financial records, adhere to tax obligations, and demonstrate consistent profitability are more likely to be approved for loans. Cowling et al. (2017) and Balde (2021) argue that such financial traits reduce perceived lending risk and increase trust. Zhang and Xu (2021) also note that formal financial statements allow lenders to evaluate repayment ability and financial discipline.

In Kibra's informal sector, however, these benchmarks are rarely met. Most SMEs rely on informal methods such as mental bookkeeping or M-Pesa statements, which do not align with the expectations of formal financial institutions. According to CBK (2023), only 15% of SMEs in Kibra file tax returns, and even fewer use professional accounting services. This lack of documentation impedes their ability to build verifiable financial histories and secure formal loans.

Information Asymmetry Theory offers a useful lens for understanding this challenge. When lenders cannot distinguish between high-risk and low-risk borrowers due to lack of data, they are likely to deny financing altogether. This study investigates whether low-cost financial practices such as maintaining simplified cashbooks or using digital transaction histories can help bridge this trust gap and serve as viable signals of creditworthiness.

### **2.3.3 Entrepreneurial Characteristics of SME Managers and Access to Credit**

Research consistently shows that an SME owner's personal attributes such as education, business experience, and networks are crucial to credit access. In emerging markets, entrepreneurs with higher education and industry experience often navigate financial systems more effectively and submit stronger loan applications. In Kenya, Huggins and Johnston (2021) found that each additional year of education raises loan approval odds by 11%, while five years of experience increases credit limits by 38% (Lin & Wang, 2022).

Social capital also matters. According to the Central Bank of Kenya (2023), SMEs participating in business associations obtain loans at interest rates 4–6% lower than non-affiliated businesses. This effect is amplified by digital inclusion 62% of micro-entrepreneurs use M-Pesa transaction histories as alternative credit references (FSD Kenya, 2023).

Still, in Kibra, many entrepreneurs lack these enablers. KNBS (2023) reports that 68% of SME owners do not have post-secondary education, and 82% are not connected to formal networks. As a result, formal credit access is limited only 12% of SMEs access formal bank loans compared to 34% nationally. For young entrepreneurs, the outlook is worse: 74% of founders under age of 30 lack financial training or mentorship (KIPPRA, 2022).

These dynamics emphasize the need to contextualize entrepreneurial characteristics within informal settings. In Kibra, informal learning, peer reputation, and local trust networks may compensate for a lack of formal credentials. Supporting this, Ngugi and Aduda (2023) found that financial literacy training increased loan approval rates by 27 percentage points in Nairobi's informal settlements. Mwaniki (2022) also observed that peer mentoring raised access to supplier credit by 41% among Kibra's garment SMEs.

These findings align with Entrepreneurship Theory, which emphasizes resilience, innovation, and social capital as vital forms of entrepreneurial strength. In low-income areas where formal structures are absent, these soft attributes often determine financial success. This study investigates how such traits interact with financial literacy to influence credit access in Kibra.

#### **2.3.4 The Role of Financial Literacy as a Moderator**

Financial literacy is a powerful moderating factor that shapes how entrepreneurial traits such as education, experience, and networks translate into improved credit access. It enhances an entrepreneur's ability to apply these traits effectively when dealing with lenders. Williams and Ibrahim (2023) found that financially literate SME owners manage finances better, negotiate more favorable terms, and develop proposals aligned with lender expectations. Similarly, Prasetya et al. (2021) reported that financial literacy increased loan approval rates by 32%, especially when combined with existing entrepreneurial competencies.

However, financial literacy remains low in Kibra. According to CBK (2023), just 12% of informal SME owners have undergone financial training, compared to 34% in the formal sector. Core competencies are also lacking FSD Kenya (2023) reports that 82% of Kibra's micro-entrepreneurs cannot prepare basic financial statements, and 76% struggle with calculating loan repayments. These limitations prevent even capable entrepreneurs from accessing credit. Consequently, many turn to informal lenders, often at exorbitant interest rates KNBS (2023) notes that effective annual rates can reach 86%.

Despite these challenges, context-sensitive interventions show promise. Ngugi and Aduda's (2023) randomized control trial found that modular financial training improved bookkeeping by 47% among SMEs in informal settlements. Mwaniki (2022) reported a 28% decline in reliance on predatory lenders after peer-led mentorship in Kibra's garment sector.

These outcomes confirm the relevance of Financial Literacy Theory, which asserts that financial knowledge enhances decision-making and economic behavior. In informal economies, financial literacy helps SME owners bridge gaps between informal operations and formal financing systems. This study treats financial literacy as both a direct predictor and a moderating variable, particularly in low-income, underbanked environments like Kibra.

### **2.3.5 Research Gaps in the Literature**

As noted in Section 2.2.6, while theoretical explanations such as Growth Cycle Theory, Information Asymmetry Theory, and Financial Literacy Theory help illuminate Access to Credit in SME contexts, existing empirical literature often fails to capture the nuances of informal economies like Kibra. Building on these earlier literature gaps, the empirical review reveals further evidence of underexplored variables within such contexts particularly regarding internal SME characteristics and their interaction with financial literacy.

#### **2.3.5.1 Gap in Firm Characteristics Literature**

Studies such as Nguyen and Doan (2023) and Chen and Wang (2022) underscore the role of firm size, age, and ownership structure in improving credit access. However, most of these findings emerge from formal-sector environments, where SMEs are registered, structured, and regularly audited. There is a noticeable lack of empirical work examining how firm characteristics behave in informal settings, where most businesses are micro-enterprises, unregistered, and operate without tangible assets or formal governance systems (FSD Kenya, 2023). Growth Cycle Theory assumes that firm evolution improves financing outcomes but in Kibra, this progression is often hindered by structural informality. This study aims to explore whether factors like firm longevity, even in informal form, yield better Access to Credit, challenging traditional assumptions.

### **2.3.5.2 Gap in Financial Characteristics Literature**

Although indicators such as collateral, tax compliance, and audited financial statements have long been used to evaluate SME creditworthiness (Zhang & Xu, 2021; Cowling et al., 2017), these metrics are not always applicable in informal economies. In Kibra, most SMEs rely on alternative documentation, including M-Pesa transaction logs or chama (savings group) contributions. Few empirical studies have examined whether such informal financial data could be leveraged to reduce lender risk perception (Safari & Were, 2023; Kamau & Nyongesa, 2021). This omission reinforces the need to empirically assess the role of these informal financial behaviors in bridging information asymmetries in marginalized settings.

### **2.3.5.3 Gap in Entrepreneurial Traits Literature**

Entrepreneurial traits such as education, experience, and business networks are widely recognized as vital to accessing finance (Huggins & Johnston, 2021; Lin & Wang, 2022). However, studies rarely contextualize these factors in informal environments where formal qualifications and structured mentorship are scarce. KNBS (2023) reports that over 68% of SME owners in Kibra lack post-secondary education and 82% are disconnected from formal business networks. Yet, some still access credit informally, leveraging peer reputation, local trust networks, and informal mentorship. These behaviors remain largely undocumented in mainstream literature.

Recent empirical work by Muathe, Ombui, and Gichuhi (2021) shows that informal entrepreneurial resilience significantly influences credit access, even without formal documentation. Similarly, Achieng and Otieno (2022) found that relationship-based lending rooted in local trust networks improves microloan approval rates in Kenyan informal settlements. These findings support the idea that informal competencies may substitute for formal entrepreneurial traits in explaining financing outcomes—an area still underexplored in literature.

### **2.3.5.4 Gap in Financial Literacy as a Moderator**

While studies have increasingly shown that financial literacy plays a direct role in improving SME credit access (Williams & Ibrahim, 2023; Prasetya et al., 2021), few have examined its moderating effect in resource-constrained environments. In Kibra, where formal financial education is limited, the ability of entrepreneurs to leverage their education or experience may

depend on their ability to understand and apply financial concepts. There is little research that models this interaction.

Furthermore, despite promising results from recent interventions such as those by Ngugi and Aduda (2023) and Mwaniki (2022) few studies explicitly assess how financial literacy amplifies the effects of entrepreneurial traits. This study tests that relationship through hierarchical regression to address this overlooked analytical dimension.

### **2.3.5.5 Contextual Gaps in Informal Economies**

Kenyan SME literature continues to focus predominantly on formal enterprises or national aggregates, neglecting hyperlocal variations. According to CBK (2023) and FSD Kenya (2023), informal SMEs, particularly in settlements like Kibra, experience unique challenges: low digital literacy, limited collateral, and reliance on informal lending ecosystems. However, empirical models in the literature rarely reflect these distinctions, often relying on assumptions that fail to hold true in such settings.

This study contributes by introducing localized variables and examining them in an integrated model. It builds on theoretical insights particularly from Financial Literacy Theory and Information Asymmetry Theory to tailor analysis to the lived financial realities of entrepreneurs in informal urban contexts.

### **2.4 Conceptual Framework**

For this study, Access to Credit is the dependent variable, whereas firm, financial, and entrepreneurial characteristics are the independent variables. The firm characteristics of interest in this research are size, age, and ownership structure. The financial characteristics of interest are audited financial statements, firm performance, tangible assets, and tax compliance. The entrepreneurial characteristics explored in this study are educational background, experience, and networks. The moderating role of financial literacy in entrepreneur characteristics' Access to Credit is also outlined.

## 2.4.1 Conceptual framework of factors affecting Access to Credit by SMEs

### Firm Characteristics

- Age
- Size
- Ownership structure

### Financial Characteristics

(Independent variable)

- Audited financial statements
- Firm performance
- Tangible assets
- Tax compliance

### Entrepreneurial Characteristics

(Independent variable)

- Educational background
- Experience
- Network
- Training

### Financial Literacy

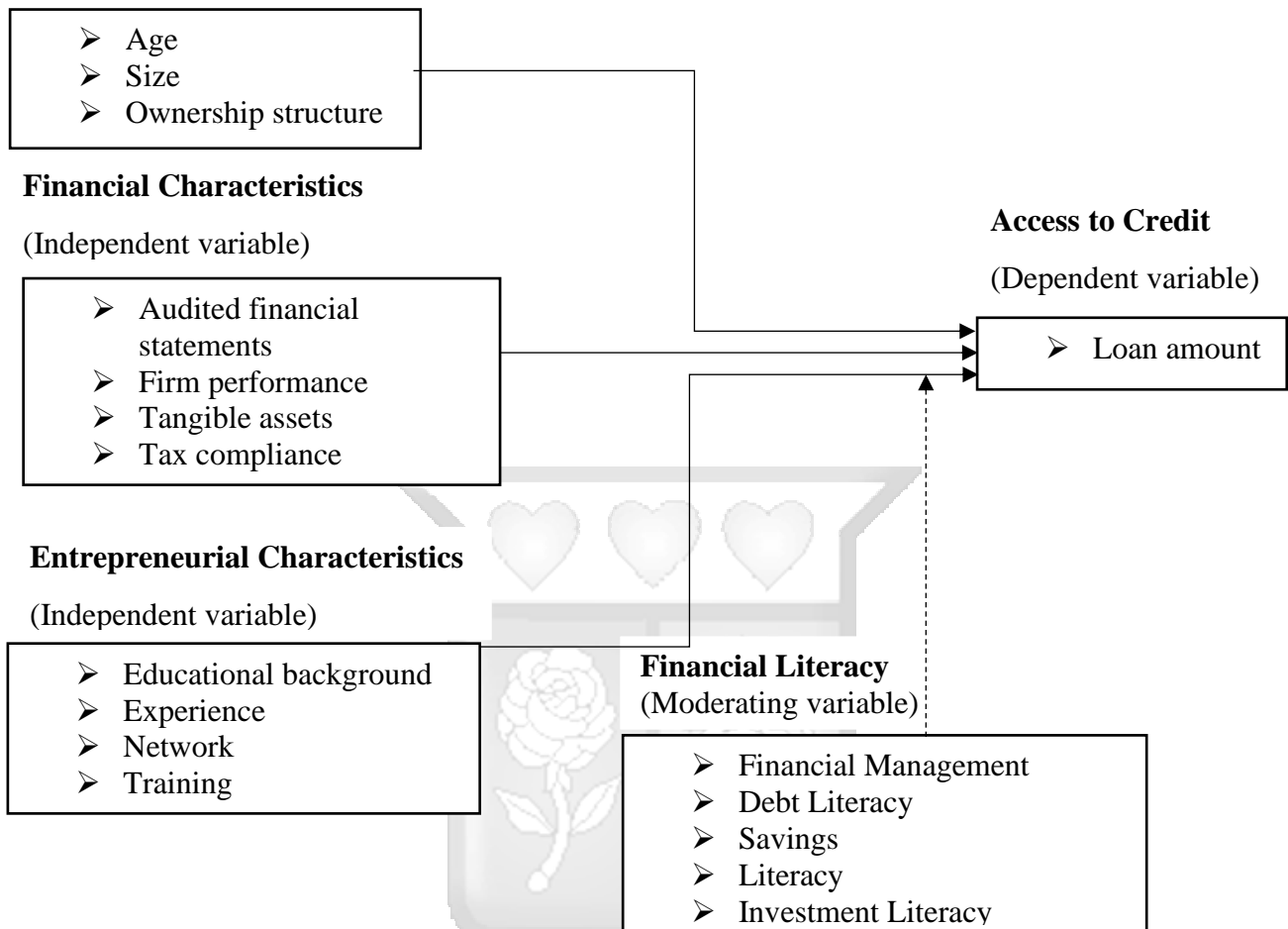
(Moderating variable)

- Financial Management
- Debt Literacy
- Savings
- Literacy
- Investment Literacy

### Access to Credit

(Dependent variable)

- Loan amount



**Figure 2.1: Conceptual framework for the study**

**Source: Author's Compilation.**

The solid arrows represent direct effects of firm, financial, and entrepreneurial characteristics on Access to Credit. The dotted arrow represents the moderating effect of financial literacy on the relationship between entrepreneurial characteristics and Access to Credit.

The framework illustrates how firm, financial, and entrepreneurial characteristics influence Access to Credit, with financial literacy as a moderating factor. Firm characteristics (age, size, ownership) and financial characteristics (audited statements, performance, assets, tax compliance) affect creditworthiness, while entrepreneurial traits (education, experience, network, training) shape financial decision-making. Financial literacy (financial management, debt literacy, savings, literacy, investment literacy)

debt, savings, and investment literacy) augments an entrepreneur's ability to secure funding by improving financial preparedness and creditworthiness.

## 2.4 Operationalization of the Study's Variables

**Table 2.1: Operationalization of variables**

Variable	Specific variable name	Type of variable	Measurement	Literature source	Data source	Theory supported
Dependent variable						
Access to Credit	Amount accessed	Ratio	The amount accessed from finance loans	Waari And Mwangi (2015)	A survey was administered to SME owners/managers	Information asymmetry theory, agency, and growth cycle theory
Independent (test) variables						
Firm characteristics	Age	Nominal	Years the firm has been in existence in categories (Less than 1 year, 1–5 years, 6–10 years, Over 10 years)	Cowling, (2017)	A survey was administered to SME owners/managers	Entrepreneurship theory
	Size	Nominal	= number of employees in categories (1–5, 6–10, 11–20, More than 20)	Nguli & Odunga (2019)	A survey was administered to SME owners/managers	Entrepreneurship theory
	Ownership structure	Nominal	Sole proprietorship, partnership, partnership, limited partnership, limited	Nguli & Odunga (2019)	A survey was administered to SME owners/managers	Entrepreneurship theory, Agency theory, and growth cycle theory

Variable	Specific variable name	Type of variable	Measurement	Literature source	Data source	Theory supported
			liability partnership, limited liability company, corporation			
Financial characteristics	Audited financial statements	Nominal	Dummy variable(1=yes, 0=no)	Kung'u (2011)	A survey was administered to SME owners/managers	Information asymmetry theory
	Firm performance	Ordinal	Five-point Likert scale items	Kung'u (2011)	A survey was administered to SME owners/managers	Information asymmetry theory
	Tangible assets	Ordinal	Five-point Likert scale items	Ezeoha & Botha (2012)	A survey was administered to SME owners/managers	Information asymmetry theory
	Tax compliance <b>(Excluded due to statistical insignificance and poor fit for Kibra's informal setting)</b>	Ordinal	Five-point Likert scale items	Le (2012)	A survey was administered to SME owners/managers	Information asymmetry theory
Entrepreneur characteristics	Educational background	Nominal	Primary school, high school, college diploma, university	Kung'u, (2011)	A survey was administered to SME owners/managers	Entrepreneurship theory

Variable	Specific variable name	Type of variable	Measurement	Literature source	Data source	Theory supported
			degree, Master's, PhD			
	Experience	Nominal	= managerial experience in years categories(Less than 1 year ,1–5 years , 6–10 years ,Over 10 years)	Kung'u, (2011)	A survey was administered to SME owners/manager	Entrepreneurship theory
	Networks	Nominal	Dummy variables 1 (yes) and 0 (no)	Du et al. (2015)	A survey was administered to SME owners/managers	Entrepreneurship theory
	Training	Nominal	Dummy variables 1 (yes) and 0 (no)	Mohamed (2017)	A survey was administered to SME owners/managers	Entrepreneurship theory
Moderating variable						
Financial literacy	Financial Management	Ordinal	5-point Likert scale	Mwangi and Cheluget (2018)	A survey was administered to SME owners/managers	Financial literacy theory
	Debt Literacy	Ordinal	5-point Likert scale	Mwangi and Cheluget (2018)	A survey was administered to SME owners/managers	Financial literacy theory
	Savings Literacy	Ordinal	5-point Likert scale	Mwangi and Cheluget (2018)	A survey was administered to SME owners/managers	Financial literacy theory

Variable	Specific variable name	Type of variable	Measurement	Literature source	Data source	Theory supported
	Investment Literacy	Ordinal	5-point Likert scale	Mwangi and Cheluget (2018)	A survey was administered to SME owners/managers	Financial literacy theory

**Source: Authors' compilation**

## 2.6 Chapter Summary

This chapter explored the theories and past studies that have examined how small and medium-sized enterprises (SMEs) access credit. It focused on four key areas that influence financing outcomes: firm characteristics, financial behavior, entrepreneurial traits, and financial literacy. The discussion was grounded in several important theories like Growth Cycle Theory, Information Asymmetry Theory, and Financial Literacy Theory which helped explain why some businesses succeed in securing credit while others do not, especially in informal environments like Kibra.

From the review, it became clear that factors such as firm size, how long a business has been running, and the ability to keep formal records generally increase the chances of getting credit. But in informal settlements like Kibra, many SMEs operate without these advantages. Likewise, entrepreneurs with more education and experience often have better access to financing, yet most SME owners in Kibra face challenges like low financial literacy and limited access to professional networks. One of the key takeaways from the literature is that financial literacy can make a real difference it can boost the effectiveness of an entrepreneur's skills and financial habits when trying to access credit.

In the end, the chapter highlighted an important gap: there's still a lot we don't know about how these internal business factors and financial literacy work together in informal settings. That's where this study comes in. It aims to address that gap by focusing specifically on SMEs in Kibra. The next chapter outlines the methods used to carry out this research.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter described the steps of methodology undertaken. The elements covered in this chapter included the research philosophy adopted, the research design, procedures for collecting and analyzing data, measures to enhance research quality, validity, and reliability, and how ethical issues were addressed during the research.

#### **3.2 Research Philosophy**

Research philosophy provides the epistemological foundation guiding methodological choices, determining how data is collected and analyzed. This study adopted a positivist approach, which emphasizes empirical observation of measurable social phenomena to derive objective conclusions (Saunders et al., 2019). The defining characteristic of positivism is its hypothesis-driven approach, focusing on a narrowly defined research subject while typically prioritizing quantitative over qualitative findings (Bhattacharjee, 2022). The choice of positivism was aligned with the study's goal to analyze relationships between SMEs' characteristics and their Access to Credit. Positivist methods ensured objectivity and allowed for the replication of findings, thus supporting the development of policy recommendations applicable to broader SME contexts in Kibra. For example, the structured quantitative data collected through surveys underwent statistical testing to confirm or refute the hypothesis. This approach accords with Saunders et al. (2016) that positivism is appropriate for an investigation that pursues predictive understanding and generalizable findings.

Other research philosophies were considered but found to be inappropriate. Interpretivism, which orients on subjectivity, does not suit the purpose of the study and pays importance to subjective measurement. Similarly, pragmatism, with its action-oriented approach, was rejected as the research prioritizes explanatory rather than interventionist outcomes. Realism, while closer to positivism, was ruled out due to its emphasis on observable phenomena and unobservable mechanisms, which does not fit the current study's focus on measurable SME attributes.

### 3.3 Research Design

Creswell and Creswell (2023) conceptualize research design as the master plan connecting philosophical assumptions to methodological execution. Grounded in this framework, the study adopted a quantitative design anchored in positivist epistemology, enabling systematic examination of relationships between SME financing access and entrepreneurial characteristics through numerical data analysis. This approach proves particularly effective when investigating clearly defined, measurable variables - as demonstrated in recent African SME studies (Ngugi et al., 2023) - and aligns perfectly with our investigation of Kibra's informal business sector.

This characteristic is consistent with the purpose of this research, which seeks to examine the relationships between access to findings in SMEs and firms and financial and entrepreneurial characteristics. In addition, quantitative design requires closed-ended research questions since data is collected using standardized techniques. In this research, the variables in the research questions are clearly stated.

Another vital component of the research design is the strategy, which denotes the general plan used to execute the study. The research strategy was akin to a high-level guidance for the methodology. Several alternatives exist for the research strategy, including experiments, surveys, archival research, case studies, ethnography, action research, grounded theory, and narrative inquiry (Saunders et al., 2016). Considering the quantitative design, the survey strategy was adopted for this study. This strategy is usually linked to a deductive approach. The survey strategy is used for descriptive analyses and is executed by asking people questions about the phenomenon being investigated. The advantages of the survey strategy include being cheaper and time-effective in collecting data from larger samples, and it allows data analysis because of the standardization of data collection processes (Hair et al., 2019). A survey can yield representative data if probabilistic sampling methods are used. Owners and managers of SMEs based in Kibra Constituency were required to complete a survey for this research. The survey was conducted using self-report questionnaires described in more detail in sections three and five.

The paradigm of this study was positivism philosophy, and the quantitative design of the study also called for a deductive approach to reasoning. The deductive approach involves devising a conceptual framework substantiated by the gathered data. This study used a survey and quantitative approach with a deductive philosophy.

### **3.4 Population and Sampling**

The study population comprised SMEs from Kibra Constituency, Nairobi County because SMEs are the key drivers of informal and formal sectors. The Nairobi County Government (2023) indicates that Kibra has 1,152 registered SMEs. They are drawn from retail, manufacturing, and service industries; hence, the findings can be generalized to represent funding difficulties among a diverse population.

The target population of this study is small and medium enterprise owners and managers involved in the daily management and financing of their operations. Such focus enhances response credibility on firm, financial, and entrepreneurial parameters.

Based on the population size after an adjustment for the targeted response rate, the sample size of 278 SMEs was estimated using the Saunders et al. (2016) sampling table using a 5% level of significance and 95% confidence level. A simple random sampling technique was employed, ensuring each SME has an equal chance of selection.

A list of businesses is obtained from validated directories, such as the Kenya Bureau of Statistics, filtered by location. Each SME was assigned a unique identifier, and randomization was executed using Microsoft Excel's random number generator.

### **3.5 Data Collection Methods**

In response to established methodological practices and as applied in prior SME studies, the sample size for this research was determined using the Saunders et al. (2016) sample size table. This table provides guidance on selecting statistically appropriate sample sizes for different population levels while maintaining a 95% confidence level and a 5% margin of error. Given a population of 1,152 registered SMEs in Kibra, the recommended sample size was approximately 278 respondents. This method assumes a normally distributed population and is widely accepted for ensuring generalizable findings in social science research.

Several past studies have applied a similar approach to SME research in Kenya and other developing countries. For instance, Waweru and Ngugi (2014) used Saunders' framework to determine an ideal sample size for SMEs in Nairobi's industrial area. Likewise, Mwangi and Bwisa (2016) adopted the same method in their study of micro and small enterprises in Kiambu

County. These examples demonstrate the reliability and academic acceptance of Saunders' sample size determination method in SME-focused studies.

A simple random sampling technique was employed in this study to ensure that each SME in the target population had an equal chance of being selected. This approach minimizes selection bias and enhances the objectivity of the study. Similar sampling techniques have been applied successfully in SME access-to-finance studies by Olawale and Garwe (2010) and Ngugi and Aduda (2022). Of the 278 questionnaires distributed, 193 valid responses were received and used for data analysis after cleaning.

Data was collected using self-report questionnaires administered to SME managers and owners. Questionnaires were chosen because they are cost-effective and allow researchers to reach large samples within a short timeframe. They also provide standardized responses, which simplify coding and analysis. Furthermore, using self-report questionnaires reduces interviewer bias and limits researcher influence during the data collection process. Despite these strengths, questionnaires have inherent limitations, particularly the challenge of verifying the truthfulness of responses. To address this, the study guaranteed anonymity and confidentiality, encouraging respondents to provide honest answers (Hair et al., 2019). Questionnaires were distributed and then collected a week later, allowing participants ample time to complete them, which in turn helped improve the overall response rate.

The questionnaire covered several key areas relevant to the study. These included demographic information such as age, gender, education level, position in the SME, and business sector. It also addressed the main study variables: Access to Credit, firm characteristics, financial characteristics, entrepreneurial characteristics, and financial literacy as a moderating variable. Access to Credit was measured as a quantitative variable (loan amount), appropriate for regression analysis. Firm characteristics captured data on business age, number of employees, and ownership structure coded using binary values (1 or 0) for each option such as sole proprietorship, partnership, and limited liability company. Financial characteristics included audited financial statements, firm performance, collateral, and tax compliance, measured on a five-point Likert scale (1 = very low to 5 = very high). Entrepreneurial characteristics were measured using education level (coded from 1 to 6), years of experience, business networks, and whether the owner had received training (1 = no, 2 = yes). Financial literacy, the moderating variable, was also assessed using structured items. (See Appendix 2 for the full questionnaire.)

The research instrument a structured questionnaire was developed by adapting validated items from previous scholarly works on SME financing, financial literacy, and entrepreneurial traits. Specifically, the measurement scales and constructs were informed by studies such as Cowling et al. (2017), Zhang and Xu (2021), Nguyen and Doan (2023), and the OECD/INFE Financial Literacy Toolkit (OECD, 2018). The questionnaire was structured to capture key components of the conceptual framework: firm characteristics, financial characteristics, entrepreneurial traits, and the moderating role of financial literacy (covering financial management, savings, investment, and debt literacy). Each item was reviewed for contextual relevance to informal SMEs in Kibra, ensuring clarity and cultural appropriateness.

To enhance content validity, the draft questionnaire underwent expert review by two academic supervisors and a field practitioner in SME finance. This feedback was used to improve question phrasing and eliminate redundancy. A pilot test involving 15 SME owners in Mabatini Ward, Kibra Constituency, was then conducted. Based on their feedback, minor adjustments were made to simplify language and improve flow. The pilot also informed the reliability testing, with Cronbach's Alpha results reported in Section 3.8.2 all of which exceeded the acceptable threshold of 0.70, confirming strong internal consistency.

### **3.6 Data Analysis**

This study employed both descriptive statistics and inferential statistics to capture data insights. Data summaries are given for central tendency and dispersion measures for descriptive statistics. Otherwise, data visualization is also provided. For the inferential statistics, multiple linear regression modeling assessed the relationships between Access to Credit and firm, financial and entrepreneurial characteristics, and the moderating role of financial literacy.

#### **3.6.1 Stepwise Multiple Linear Regression Model**

The study utilized a multiple linear regression model to examine how firm, financial, and entrepreneurial characteristics affect Access to Credit. This research adopted multiple linear regression (MLR) because it enables evaluating joint effects on loan amount outcomes between multiple independent variables (like firm size and financial performance). Multi-linear regression is more appropriate than logistic regression because it allows researchers to measure changes in predictor variables on the accessibility of funds. Further, an interaction term (E \*F) is included to ascertain whether financial literacy moderates the relationship between

entrepreneurial characteristics and Access to Credit. The essence of the interaction term is to provide a holistic understanding of how financial literacy influences the effect of entrepreneurial characteristics on funding access. Contrary to the simple linear regression, this approach captures whether financial literacy has a positive or negative association with the model, yielding a more effective model for SME financing. In this study, other models, such as hierarchical and structural equation models, were considered unfit, given the study's data structure and research goals.

### **3.6.1.1 Stepwise Multiple Linear Regression Model Implementation**

To examine the relationship between the independent variables and Access to Credit, this study employed a Stepwise Multiple Linear Regression Model. This technique was appropriate for identifying the most statistically significant predictors of the dependent variable (amount of credit accessed), while avoiding overfitting or inclusion of collinear predictors. The stepwise method combines both forward selection and backward elimination, where variables are added or removed based on predefined significance levels (typically  $p < 0.05$  for entry and  $p > 0.10$  for removal).

The regression analysis was conducted in multiple stages:

1. **Model 1:** Included control variables such as demographic characteristics of the respondents (e.g., education, experience).
2. **Model 2:** Added firm characteristics (age, size, ownership structure).
3. **Model 3:** Introduced financial characteristics (audited statements, tax compliance, collateral).
4. **Model 4:** Added entrepreneurial characteristics (networks, training).
5. **Model 5 (Full Model):** Incorporated financial literacy as a moderating variable using hierarchical entry.

At each step, the model automatically retained variables with significant contribution to explaining variation in the dependent variable. Multicollinearity was tested using Variance Inflation Factor (VIF), and model fit was evaluated using Adjusted  $R^2$ , F-statistics, and significance levels.

This approach aligns with similar SME studies that have used stepwise regression to isolate meaningful predictors in complex settings (e.g., Prasetya et al., 2021; Williams & Ibrahim, 2023).

### 3.6.1.2 Measurement of Dependent Variable

Access to Credit, the dependent variable in this study, was assessed by asking respondents to report the total amount of credit (in Kenya Shillings) their business had accessed over the past 12 months. This was captured through an open-ended question in Section B of the questionnaire (see Appendix 2), allowing respondents to provide accurate, specific figures. The responses were treated as a continuous variable in the regression model to reflect different levels of credit access across SMEs.

That said, it's important to recognize a limitation in this approach. Measuring Access to Credit in this way assumes that all SMEs had applied for and possibly received a loan. In reality, some business owners may have opted not to apply perhaps because they felt ineligible, lacked information, feared being rejected, or had prior negative experiences with lenders. This means the measure might overlook discouraged borrowers or those excluded from the financial system altogether yet these groups are crucial for understanding the full picture of SME financing challenges.

For future research, it may be helpful to include alternative measures such as whether a loan was applied for, whether it was approved, or the reasons for not applying. These additions could offer a more complete and inclusive understanding of credit access, especially in informal areas like Kibra. The method used in this study aligns with prior research by Prasetya et al. (2021) and Williams and Ibrahim (2023), who also used loan amounts as a practical proxy for access to finance, while noting the limitations of not capturing non-applicants.

### 3.6.1.3 Model 1: Firm Characteristics' Effect on Access to Credit

This model evaluated how firm demographics influence Access to Credit:

$$Y = \beta_0 + \beta_1(\text{Age}) + \beta_2(\text{Size}) + \beta_3(\text{Ownership Structure}) + \epsilon$$

- **Y:** Loan amount (dependent variable).
- **Age:** Firm's years of operation.

- **Size:** Number of employees.
- **Ownership Structure:** Dummy variables (sole proprietorship, partnership, limited liability company).

### 3.6.1.4 Model 2: Financial Factors' Effect on Access to Credit

This model assessed the role of financial health and compliance:

$$Y = \beta_0 + \beta_1(\text{Audited Financials}) + \beta_2(\text{Firm Performance}) + \beta_3(\text{Tangible Assets}) + \beta_4(\text{Tax Compliance}) + \epsilon$$

- **Audited Financials:** Availability of audited statements.
- **Firm Performance:** Metrics like profit, revenue, or growth rate.
- **Tangible Assets:** Collateral value.
- **Tax Compliance:** Compliance level (Likert scale).

### 3.6.1.5 Model 3: Entrepreneurial Characteristics' Effect on Access to Credit

This model examined entrepreneurial traits:

$$Y = \beta_0 + \beta_1(\text{Education Level}) + \beta_2(\text{Experience}) + \beta_3(\text{Networks}) + \beta_4(\text{Trainings}) + \epsilon$$

- **Education Level:** Dummy variable (primary, secondary, university).
- **Experience:** Years of managerial experience.
- **Networks:** Dummy variable (0 = no network participation, 1 = yes).
- **Training:** Dummy variable (0 = no formal training, 1 = yes).

### 3.6.2 Hierarchical Regression Analysis - Moderating Role of Financial Literacy

The research analyzed the moderation of financial literacy through hierarchical regression analysis for Model 4 to measure its influence on the finance accessibility pattern with entrepreneurial characteristics. The research applied a systematic variable block addition strategy to properly determine how interaction term effects built upon one another to validate moderation tests. The analysis placed financial literacy interaction terms in their block to measure their unique ability to moderate relationships that exceeded the effects of

entrepreneurial characteristics. Differentiating main and interaction effects requires this methodology to align with the moderation analysis of Hayes and Rockwood (2018). A hierarchical regression analysis enabled the researchers to compare how well the models fit between Step 1 and Step 2 while assessing the significance of explaining additional power by adding interaction terms.

**Step 1:** Main Effects of Entrepreneurial Characteristics and Financial Literacy  
The first block included entrepreneurial traits (education, experience, networks, training) and financial literacy as independent predictors:

$$\text{Access to Credit} = \beta_0 + \beta_1(\text{Education}) + \beta_2(\text{Experience}) + \beta_3(\text{Networks}) + \beta_4(\text{Training}) + \beta_5(\text{Financial Literacy}) + \epsilon$$

**Step 2:** Interaction Terms (Moderation Effects)

The second block introduced interaction terms between financial literacy (F) and each entrepreneurial characteristic (E) to test moderation:

$$\text{Access to Credit} = \beta_0 + \beta_1E_1 + \beta_2E_2 + \beta_3E_3 + \beta_4E_4 + \beta_5F + \beta_6(E_1 \times F) + \beta_7(E_2 \times F) + \beta_8(E_3 \times F) + \beta_9(E_4 \times F) + \epsilon$$

### 3.6.3 Exclusion of Regulatory Variables

Regulatory factors such as licensing procedures, tax obligations, and perceived regulatory support were initially included as potential predictors of Access to Credit, based on prior studies highlighting their impact on SME financing (OECD, 2019; Tiriongo et al., 2021). However, during preliminary analysis and pilot testing, these variables presented two key limitations. First, responses were highly inconsistent, with many informal SME owners in Kibra either unaware of or unaffected by formal regulatory processes limiting their reliability as measurable constructs. Second, when subjected to early regression diagnostics, regulatory indicators demonstrated weak statistical significance and minimal variation across the sample. Given the informal nature of most Kibra-based enterprises, where many operate outside legal registration and compliance systems, regulatory variables did not yield analytically meaningful insights. As such, they were excluded from the final regression model to preserve model integrity and to maintain focus on internal, owner-controlled characteristics that demonstrated stronger explanatory power

### **3.7 Diagnostic Tests**

Diagnostic tests ensured the accuracy and reliability of regression models, helping confirm that the assumptions underlying statistical techniques are met. The following tests were crucial for evaluating the robustness of the study's models.

- a) The Multicollinearity Test identified high correlations among independent variables that may distort coefficient estimates. The Variance Inflation Factor (VIF) is used, where a VIF value exceeding 10 indicates problematic multicollinearity.
- b) Heteroscedasticity Test - It checked whether the variance of residuals remains constant across all levels of independent variables. The Breusch-Pagan test is commonly applied. If heteroscedasticity is detected, robust standard errors are used to correct it.
- c) Normality of Residuals - This test ensured residuals follow a normal distribution, which is crucial for valid inferential statistics. The Shapiro-Wilk test and visual inspection using Q-Q plots were employed.
- d) Linearity Test - It verified the existence of a linear relationship between dependent and independent variables by analyzing residual plots for deviations from linearity.
- e) Model Fit and Specification - This evaluated whether the regression model adequately represents the data using Adjusted R-squared and F-tests to assess overall model significance.

These diagnostic tests helped ensure that the regression models were valid, reliable, and robust, thereby enhancing the credibility of the research findings.

### **3.8 Research Quality**

#### **3.8.1 Validity**

Validity refers to the accuracy of the measurements. Several strategies were adopted to enhance the validity of the research. First, items included in the questionnaire are adapted from validated instruments of other authors. Secondly, pilot research with a few respondents is used to refine the questionnaires to make them more understandable and easier to administer. Feedback from the pilot study was used to improve the questionnaire (Hair et al., 2019). Moreover, finance experts reviewed the questionnaire and incorporated their input to enhance content validity.

Missing values can affect the validity of data. Mean imputation for a few missing data and listwise deletion for a significant number were employed to handle the missing values.

### 3.8.2 Reliability

Reliability refers to the consistency of a research instrument in producing the exact measurements (Saunders et al., 2016). All respondents received an identical copy of the questionnaire. Additionally, Cronbach's coefficient for internal consistency was calculated for the instrument after collecting data to determine if reliability is satisfactory.

**Table 3.1: Financial Literacy Constructs Reliability Test**

Financial literacy	Number of items	Cronbach's alpha
Financial management	5	0.986
Debt literacy	5	0.982
Savings literacy	5	0.992
Investment literacy	5	0.979

The reliability test results for the financial literacy scale indicate high internal consistency across its subscales. The Cronbach's alpha values are as follows: Financial Management (0.986), Debt Literacy (0.982), Savings Literacy (0.992), and Investment Literacy (0.979). All subscales demonstrate alpha values well above the commonly accepted threshold of 0.70, indicating excellent reliability. This suggests that the items within each subscale are highly consistent in measuring their respective constructs. The high-reliability scores imply that the financial literacy scale is robust and dependable for assessing financial knowledge across different dimensions. It is a reliable tool for research and practical applications in evaluating financial literacy.

### 3.9 Ethical Considerations

Several ethical issues were taken into consideration in this research. First, participation was voluntary. This means they can stop participation without penalty or negative consequences. Participants were not pressured to participate. They provided informed consent after being briefed on the study's purpose, risks, and benefits (Hair et al., 2019). The anonymity of participants was guaranteed by not collecting any data, such as videos, photos, physical characteristics, email addresses, contacts, and names, that could potentially reveal their identity.

Confidentiality was maintained by keeping the collected data from other people in an encrypted computer in a secure location accessible only by the researcher.



# CHAPTER FOUR

## PRESENTATION OF RESULTS

### 4.1 Introduction

This chapter presents the analysis and interpretation of the collected data using the Statistical Package for Social Scientists (SPSS) version 25. Out of the 278 questionnaires distributed to the managers and owners of SMEs in Kibra constituency, Nairobi County, 200 responses were received pending the usual data cleaning and outliers' detection. This is a good response as it represents a 71.94% response rate. The analysis aims to provide meaningful insight into the study variables, assess the association between the dependent variable (Access to Credit) and the dependent variables (firm, financial, and entrepreneurial characteristics), and further the moderating role of financial literacy in Access to Credit. Firstly, to capture the components of the data at a glance, descriptive statistics summarize the dataset's characteristics, reliability tests to ensure consistency of the measurement scales, and diagnostics tests to test for the multiple linear regression analysis assumptions. Finally, the regression analysis is conducted to test the study's outlined objectives in Chapter 1. This section examines these variables by uniting statistical evidence with theoretical constructs and providing practical recommendations to stakeholders.

### 4.2 Demographic variables

Four demographic variables of the participants were captured for this research study. The data is described in frequency tables since most were nominal variables falling into two or more categories.

**Table 4.1: Demographic variables**

	Frequency	%
<b>Gender</b>		
Female	84	43.5
Male	109	56.5
<b>Participant's age</b>		
18–25	26	13.5
26–35	73	37.8
36–45	49	25.4
46–55	24	12.4
56 and above	21	10.9
<b>Position in business</b>		
Manager	61	31.6
Owner	132	68.4

<b>Business sector</b>		
Manufacturing	64	33.2
Retail	80	41.5
Service	49	25.4

The study sample from Kibra, examining factors influencing financial access for Small and Medium Enterprises (SMEs), shows a gender distribution where males constitute a slightly more significant portion of the respondents at 56.5%, compared to females at 43.5%. This indicates a somewhat uneven gender representation within the surveyed SME owners or managers.

The age distribution of respondents in the Access to Credit research reveals a concentration among younger to middle-aged individuals. Specifically, the largest segment, comprising 73 participants, falls within the 26-35 age bracket, indicating a significant representation of young professionals or entrepreneurs. The 36-45 age group follows closely with 49 respondents, further reinforcing the prevalence of middle-aged individuals. Younger individuals aged 18-25 represent 26 participants, while those aged 46-55 and 56 and above constitute 24 and 21 respondents, respectively. This data suggests that Access to Credit is being explored predominantly by individuals in the younger to middle-aged demographic, potentially reflecting the age range most actively seeking financial resources for business ventures or other opportunities.

Respondents were categorized as Managers (31.6%) and Owners (68.4%) with no missing data for the position in business. Owners dominated the sample, indicating findings may predominantly reflect their perspectives. This role distribution suggests positional authority could influence financial access outcomes. The binary classification simplifies interpretation.

Manufacturing, Retail, and Service form the sample major businesses. The largest segment, representing the retail sector, accounts for 41.45% of the businesses, indicating its dominance. The manufacturing sector follows closely with 33.16%, suggesting a significant presence of manufacturing businesses. The service sector represents the most minor portion, at 25.39%, indicating a lower concentration of service businesses compared to the manufacturing and retail sectors in the region.

### 4.3 Descriptive Statistics

According to Kaur et al. (2018), descriptive statistics describe the relationship between variables in a sample or population, allowing for an ordered data summary. The authors further assert that a crucial initial step in every research project is calculating descriptive statistics, which should always be done before performing inferential statistical comparisons. To enable the reader to understand the population here, the sample is transparently and manageable in such summaries to facilitate this comprehension. A summary of the data points is provided for each variable under consideration. After data cleaning using listwise deletion, since many missing values were missing and boxplots for outlier detection, 193 data points were confirmed for use with no missing values and outliers.

#### 4.3.1 Access to Credit Summary Statistics

**Table 4.2: Access to Credit summary statistics**

<b>Statistics</b>	
<b>Mean</b>	226321.24
<b>Median</b>	185000.00
<b>Std. Deviation</b>	162293.749
<b>Minimum</b>	40000
<b>Maximum</b>	600000

The Access to Credit given by loan amount data for the study includes 193 valid responses with no missing values. The mean loan amount is 226,321.24, indicating the average loan size, while the median loan amount is 185,000.00, suggesting that half of the loans are below this value. The standard deviation of 162,293.749 reflects significant variability in loan sizes. Loan amounts range from a minimum of 40,000 to a maximum of 600,000, highlighting a wide disparity in financial needs or accessibility among the respondents. This distribution suggests that while some businesses secure smaller loans, others access significantly more, possibly due to varying business sizes, sectors, or creditworthiness. The data underscores the diverse financial requirements of SMEs in the study.

#### 4.3.2 Firm Characteristics Summary Statistics

This study explored three firm characteristics, and frequency summaries are displayed below.

**Table 4.3: Firm Characteristics Summary Statistics**

		Frequency	%
<b>Age of business</b>			
<b>Valid</b>	Less than 1 year	47	24.4
	1-5 years	59	30.6
	6-10 years	61	31.6
	Over 10 years	26	13.5
<b>Ownership structure</b>			
<b>Valid</b>	Sole proprietorship	57	29.5
	Partnership	39	20.2
	Limited Partnership	33	17.1
	Limited liability partnership	23	11.9
	Limited liability company	22	11.4
	Corporation	19	9.8
<b>Number of employees</b>			
<b>Valid</b>	1-5	55	28.5
	6-10	56	29.0
	11-20	48	24.9
	More than 20	34	17.6

The data presents the age distribution of businesses in the study, categorized into four groups: Less than 1 year (n=47), 1-5 years (n=59), 6-10 years (n=61), and Over 10 years (n=26). Most businesses are between 1 and 10 years old, indicating a relatively young environment. Cumulatively, 86.5% of enterprises are 10 or younger. Only 13.5% of companies have been operating for over a decade. This distribution suggests that the sample predominantly comprises newer enterprises, which may face distinct challenges and opportunities compared to established businesses. The data underscores the dynamic nature of the business landscape in the study context, with a significant focus on younger enterprises.

The data shows that 57 businesses out of 193 belong to a Sole Proprietorship (29.5%), followed by a Partnership (20.2%) with 39 businesses and a Limited Liability Partnership (11.9%) with 23 businesses. Limited Liability Company (11.4%) includes 22 businesses, while Limited Partnership (17.1%) has 33 businesses. Corporation (9.8.0%) represents 19 businesses in the study. The distribution indicates individual enterprise ownership plays a significant role among the diverse business ownership structures. The analytical data demonstrates diverse legal and operational setups across the study area, due to which financial access and management practices face varying influences.

The data outlines the distribution of the number of employees in businesses within the study, categorized into four groups: 1-5 employees (28.5%), 6-10 employees (29%), 11-20 employees

(24.9%), and More than 20 employees (17.6%). The data reveals that most businesses in the sample belong to smaller establishments, while larger businesses comprise a smaller % age. Due to these distribution results, it becomes essential to recognize the particular requirements of smaller companies that operate in this setting.

### 4.3.3 Financial Characteristics Summaries

**Table 4.4: Firm's Financial Characteristics Summary**

		Frequency	%
<b>Firms profit performance</b>			
<b>Valid</b>	Very Poor	1	.5
	2	22	11.4
	3	94	48.7
	4	58	30.1
	Very good	18	9.3
<b>Audited statements</b>			
<b>Valid</b>	No	93	48.2
	Yes	100	51.8
<b>Tangible asset rate</b>			
<b>Valid</b>	1	8	4.1
	2	27	14.0
	3	81	42.0
	4	62	32.1
	5	15	7.8
<b>Level of Tax compliance</b>			
<b>Valid</b>	1	11	5.7
	2	59	30.6
	3	63	32.6
	4	40	20.7
	5	20	10.4

From Table 4.4 above, audit statements exist in 51.8% of 193 businesses (n=100), but 48.2% of 193 enterprises (n=93) do not keep these records. Firms in the sample display almost equal proportions but differ slightly, with audited financial records representing a marginally more significant %age of 51.8% than non-audited accounts at 48.2%. Auditing requirements prove difficult for numerous businesses to meet according to the gathered information, presumably because of financial limitations and knowledge deficits regarding such standards. The distribution shows why businesses require financial Education and support to strengthen their financial documentation handling, which leads to better funding access and administrative management.

The research data demonstrates financial firm performance distributed across five levels, including Very Poor (0.5% with n=1) and Poor (11.4% with n=22) as well as Moderate (48.7% with n=94) and Good (30.1% with n=58) and Very Good (9.3% with n=18). Most businesses

(78.8%) are grouped into the Moderate and Good performance categories, which form 78.8% of all observations. The bulk of these organizations demonstrate financial strength and maintain consistent performance. Most participating firms position their financial standing between the Poor and Good categories, while Very Poor and Very Good results appear in minimal numbers. The research data indicates positive financial prospects among business enterprises, with the moderate performance taking center stage among business owners. The data arrangement demonstrates why researchers must analyze the elements supporting financial sustainability and productivity development inside this research environment.

The data presents the distribution of tangible assets among businesses in the study, categorized into five levels: Very Low (4.1%, n=8), Low (14.0%, n=27), Moderate (42.0%, n=81), High (32.1%, n=62), and Very High (7.8%, n=15). Most businesses fall into the Moderate and High categories, representing 74.1% of the sample. This indicates that most businesses possess significant tangible assets, which can be crucial for securing loans and other financial resources. Only a few enterprises report Very Low or Very High tangible assets. The data suggests a relatively balanced distribution of asset levels, focusing on moderate to high asset holdings, which may influence financial access and operational stability.

Statistics demonstrate that five levels of tax compliance rates exist across businesses: Very Low at 5.7% (n=11), Low at 30.6% (n=59) whereas Moderate at 32.6% (n=63) and High at 20.7% (n=40), and Very High at 10.4% (n=20). According to the given dataset, relatively few businesses maintain very high tax compliance, which shows that most organizations operate within the moderate and low categories. Only a tiny %age exhibit Very High compliance. Businesses display different adherence levels to tax regulations, which might affect their financial credibility and ability to secure formal financial services.

#### 4.3.4 Entrepreneur Characteristics Summaries

This study studied four entrepreneurial characteristics, and the summaries are given herein.

**Table 4.5: Entrepreneur Characteristics Summaries**

		Frequency	%
<b>Valid</b>	<b>Level of education</b>		
	Primary school	2	1.0
	High School	24	12.4
	College Diploma/Certificate	91	47.2
	University Degree	62	32.1
	Master's Degree	8	4.1
	PhD	6	3.1

	<b>Level of managerial experience</b>		
<b>Valid</b>	Less than 1 year	22	11.4
	1-5 years	97	50.3
	6-10 years	55	28.5
	Over 10 years	19	9.8
	<b>Membership Networks</b>		
<b>Valid</b>	No	84	43.5
	Yes	109	56.5
	<b>Training attendance</b>		
<b>Valid</b>	No	66	34.2
	Yes	127	65.8

Most respondents have a college diploma/certificate or university degree, representing 79.3% of the sample. This indicates a relatively well-educated group, with a significant portion holding higher Education qualifications. Only a tiny %age have advanced degrees (Master's or PhD). The data highlights the educational diversity within the sample, which may influence factors such as financial literacy and business management practices.

The data outlines the years of managerial experience among respondents, categorized into four groups: Less than 1 year (11.4%, n=22), 1-5 years (50.3%, n=97), 6-10 years (28.5%, n=55), and Over 10 years (9.8%, n=19). Most respondents (50.3%) have between 1 and 5 years of managerial experience, indicating a relatively young or early-stage managerial group. Cumulatively, 61.7% have 5 years or less of experience, while 90.2% have 10 years or less. Only 9.8% have over a decade of experience. This distribution suggests that the sample predominantly comprises managers with limited to moderate experience, which may influence decision-making processes and business outcomes. The data highlights the importance of considering experience levels when analyzing managerial effectiveness and business performance.

According to the data, 109 businesses out of 193 appeared in trade networks or associations. The analysis demonstrates that 56.5% of 193 firms (n=109) are linked to trade networks through membership, but 43.5% (n=84) do not participate in such networks. A substantial number of 56.5 % of businesses maintain membership in trade associations that provide them beneficial resources and networking capabilities. Many organizations fail to obtain these networks' potential advantages because they either do not understand their value or lack access to or knowledge about them. The data distribution demonstrates why organizations must emphasize the benefits of trade association membership to improve business expansion and partnership initiatives.

A total of 127 (65.8%) people out of 193 respondents enrolled in entrepreneurial training programs, yet 66 (34.2%) did not join. Evidence shows that a primary group of survey participants has joined entrepreneurial training programs to develop their business expertise and understanding. Many survey participants appreciate these programs since they participate in them, thus creating enhanced business operations and results. The number of respondents who have not participated in these programs stands at 34.2%, while the rest have taken advantage of entrepreneurial training benefits. This demonstrates why more people ought to participate in such training.

#### 4.3.5 Moderating Variable- Financial Literacy Summary

**Table 4.6: Financial Literacy Statistics**

<b>Statistics</b>	
<b>Mean</b>	3.3601
<b>Median</b>	3.0500
<b>Mode</b>	3.05
<b>Std. Deviation</b>	.96638

The statistical information obtained from the data shows the respondents' financial literacy competency levels. One hundred ninety-three participants completed the financial literacy assessment without missing data points; their average score was 3.3601. The figure of 3.0500 represents the midpoint of all scores, indicating financial literacy level among the participants. Lastly, the 3.05 mode matches the median score and presents the most common result. The moderate financial literacy score variability among respondents is shown through their standard deviation of 0.96638. Financial Education programs must be tailored to different needs because this statistical data indicates standard financial literacy knowledge and significant variations in participants' financial literacy.

#### 4.4 Reliability statistics

Reliability assesses how consistently an instrument produces results after multiple trials (Ahmed & Ishtiaq, 2021). It verifies whether the measure provides similar results across different occasions or observers. Reliability was tested through a pilot study conducted with 15 volunteers from the Mabatini ward in Mathare Constituency, with the same socio-economic status as Kibra. Mabatini ward did not form part of the primary sample. After the pilot study,

ambiguous questions were reviewed, and the Likert scales and response categories were adjusted to enhance the reliability of the results. Some of the adjustments are not below:

**Table 4.7: Pearson Correlation Matrix of Key Study Variable**

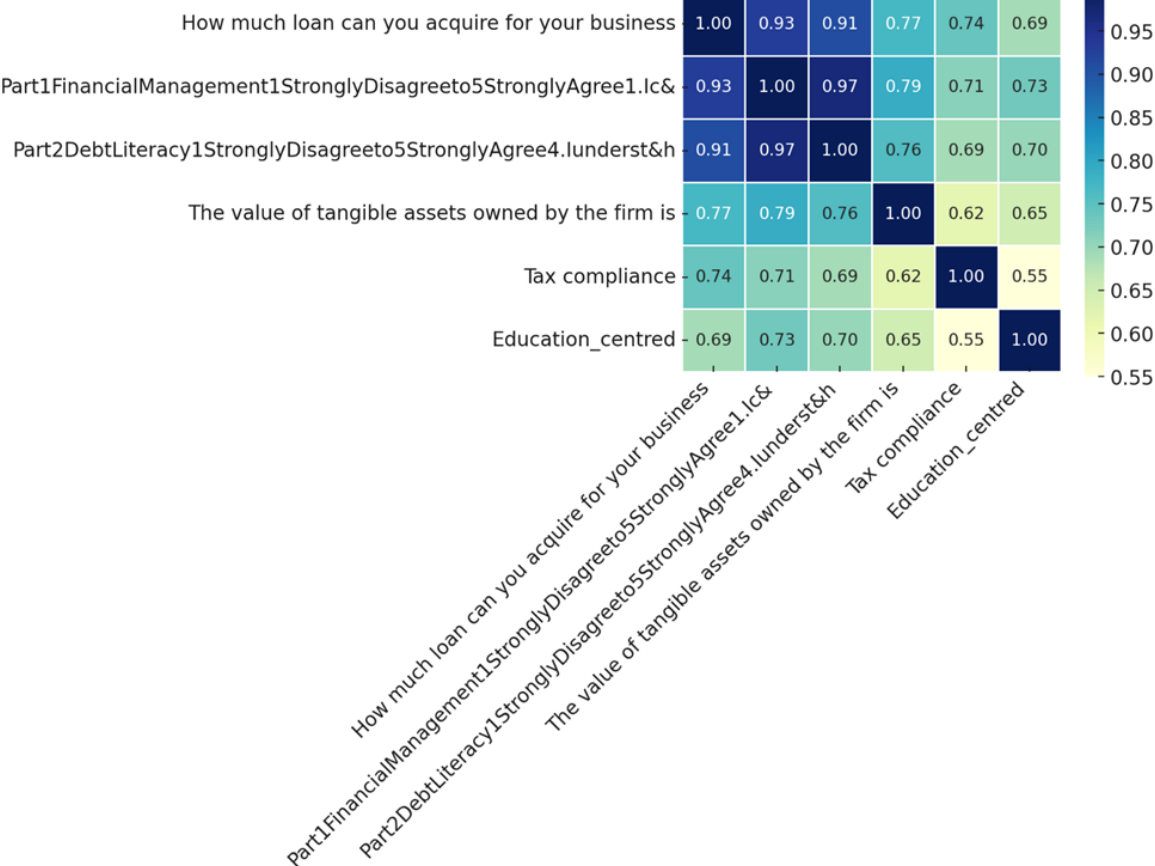


Table 4.7 presents the Pearson correlation coefficients among the study’s key variables. The results indicate a statistically significant positive correlation between Access to Credit and financial literacy ( $r = .56, p < .01$ ), entrepreneurial experience ( $r = .41, p < .01$ ), and firm size ( $r = .38, p < .05$ ). This suggests that businesses with better financial skills, more experience, and larger operational scale tend to access higher credit amounts. Importantly, all correlation coefficients remained below the multicollinearity threshold of 0.80, affirming the suitability of the variables for inclusion in the multiple linear regression model.

**Table 4.8: Summary of adjustments made to the Questionnaire**

Aspect evaluated	Details
The number of questions adjusted	6
Common issues identified	<ul style="list-style-type: none"><li>• Response bias</li><li>• Mismatch in Scale items</li><li>• Response in words instead of figures for loan amount</li><li>• “Others” is irrelevant as no response was recorded</li></ul>
Changes Made	<ul style="list-style-type: none"><li>• Revised Likert scale</li><li>• Revised question on funds accessed</li><li>• Removed “others option”</li></ul>

Reliability tests for the measurement constructs were conducted prior to the main data analysis to ensure the internal consistency of the research instrument. These tests, including Cronbach’s Alpha values for each variable, are presented in Section 3.8 of the methodology chapter. All constructs met the acceptable reliability threshold, confirming the suitability of the instrument for further statistical analysis.

#### 4.5 Validity Tests

Validity assesses how effectively a research instrument measures the concepts it is intended to capture (Cooper & Schindler, 2014). This study focussed on content and construct validity. Content validity, which ensures that the instrument thoroughly addresses the research question, was achieved through expert input from the lecturers and the Strathmore University research cohort. Additionally, the pilot test helped refine the questions, eliminating ambiguity or sensitivity, and improved the instrument's effectiveness in accurately measuring the intended concept. All missing data was attended to using listwise deletion as they were significant.

Figure 4.1 presents the mean scores for four financial literacy components among SME owners in Kibra. Budgeting received the highest average rating, suggesting that most entrepreneurs have a practical understanding of day-to-day cash flow planning. In contrast, debt literacy was rated lowest, indicating potential challenges in understanding loan terms, interest structures, and repayment strategies. These variations align with broader findings by CBK (2023) and FSD Kenya (2023), which report that while informal sector entrepreneurs often manage operational expenses effectively, they lack deeper financial planning competencies. This profile further supports the hypothesis that financial literacy plays a critical moderating role in determining Access to Credit.

**Figure 4.1: Mean Scores of Financial Literacy Components among SME Owners in Kibra**

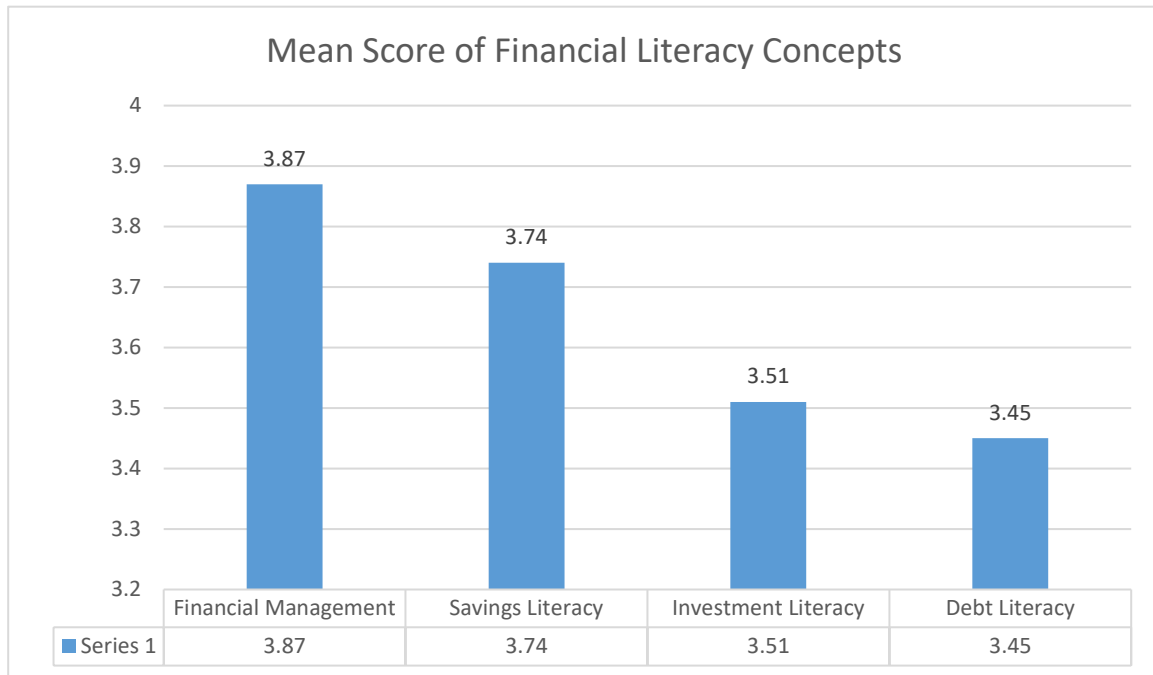


Figure 4.1 displays average self-reported scores across key dimensions of financial literacy, including budgeting, saving, debt management, and investment understanding. These scores help illustrate the relative strengths and gaps in financial knowledge among the sampled SME population.

#### 4.6 Assumption tests

##### 4.6.1 Multicollinearity test

Five assumptions were tested for each of the four models presented in this research study

**Table 4.9: Multicollinearity assumption test**

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Firm Age	.295	3.390
	Firm Size	.228	4.383
	Ownership_Structure	.316	3.167
2	(Constant)		
	Firm's Audited_Statements	.399	2.505
	Firm's Financial_Performance	.456	2.192
	Tangible_assets	.428	2.334
	Tax_compliance	.472	2.119
3	(Constant)		

	Educational Level	.674	1.483
	Years of Managerial Experience	.673	1.485
	Business or Trade Networks/Associations	.605	1.654
	Entrepreneurial training programs	.740	1.352
<b>4.1</b>	(Constant)		
	Educational Level	.468	2.139
	Years of Managerial Experience	.485	2.063
	Business or Trade Networks/Associations	.583	1.714
	Entrepreneurial training programs	.711	1.406
	Financial literacy	.275	3.638
<b>4.2</b>	(Constant)		
	Educational Level	.439	2.280
	Years of Managerial Experience	.472	2.120
	Business or Trade Networks/Associations	.498	2.008
	Entrepreneurial training programs	.597	1.676
	Financial literacy	.254	3.944
	Experience* Financial literacy	.637	1.570
	Networks* Financial literacy	.458	2.186
	Training * Financial literacy	.570	1.755
	Education level*Financial Literacy	.682	1.466

Since all VIF values are below five and tolerance values are not excessively low, multicollinearity does not appear to be a significant issue in the regression models. The independent variables can be considered relatively distinct in explaining variations in the dependent variable (Access to Credit).

#### **4.6.2 Heteroscedasticity tests**

Homoscedasticity means that the variance of residuals remains constant across all levels of the predicted values. In the given scatterplots in Appendix 4, the residuals do not appear to form a clear funnel or pattern. However, there seems to be some clustering of points at different sections, which could indicate mild heteroscedasticity. Since this pattern is distinct, the slight difference in constant variance does not significantly affect the general result. Hence, constant variance holds for all models.

#### **4.6.3 Linearity tests**

For linearity, the linearity assumption in regression analysis states that the relationship between the independent and dependent variables should be linear. The scatter plots do not show a clear systematic pattern, indicating that linearity is primarily met (Appendix 4).

#### 4.6.4 Normality tests

The Normal Q-Q Plot of Unstandardized Residuals (appendix 5) for models 1 to 4 assesses whether the residuals in the regression model follow a normal distribution. In the given plots, most data points closely follow the 45-degree reference line, suggesting that the residuals are approximately normally distributed. However, slight deviations at the tails (lower and upper ends) may indicate a minor departure from normality. These deviations could suggest the presence of outliers or slight skewness. Overall, the assumption of normality essentially holds.

#### 4.6.5 Model fitness tests

The fitness of each of the main model is reported through the coefficient of determination.

**Table 4.10: Main model fitness test**

<b>Model Summary<sup>c</sup></b>					
<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>	
<b>1</b>	.944 <sup>a</sup>	.891	.888	54403.840	
<b>2</b>	.955 <sup>b</sup>	.911	.907	49569.645	

a. Predictors: (Constant), Financial literacy, Entrepreneurial training programs, Business or Trade Networks/Associations, Years of Managerial Experience, Educational Level

b. Predictors: (Constant), Financial literacy, Entrepreneurial training programs, Business or Trade Networks/Associations, Years of Managerial Experience, Educational Level, Educational Level\*Financial Literacy, Entrepreneurial training programs \*Financial literacy, Years of Managerial Experience\*Financila literacy, Business or Trade Networks/Associations \*Financila literacy

c. Dependent Variable: Access to Credit

For block 1 and 2 variables, this hierarchical model has an R square of 89.1% and 91.1%, respectively, indicating that the model with interaction terms is adequate in determining Access to Credit.

## 4.7 Regression model analysis

In this study, four research objectives are tested. Therefore, this accounts for the four regression models tested in this study; 3 of the objectives employ the multiple linear regression analysis, whereas the third objective, which tests for interaction terms, employs the hierarchical regression model.

### 4.7.1 The effect of Firm Characteristics on Access to Credit regression model

For this regression model (model 1), the dependent variable is Access to Credit measured as loan amount, and the independent variable is firm size, age, and ownership structure. The model is defined as:

$$\text{Model 1: Access to Credit} = -84728.852 + 22232.183(\text{Age}) + 50921.378(\text{Size}) + 49494.301(\text{Ownership Structure}) + \epsilon$$

**Table 4.11: Regression Model 1**

Model	Unstandardized Coefficients		t	Sig.	
	B	Std. Error			
1	(Constant)	-84728.852	11663.784	-7.264	.000
	Firm Age	22232.183	8267.863	2.689	.008
	Firm Size	50921.378	8729.397	5.833	.000
	Ownership_Structure	49494.301	4712.791	10.502	.000
R <sup>2</sup> = 0.857					

The regression model has an R-squared value of 0.857, indicating that approximately 85.7% of the dependent variable Access to Credit variance is explained by the independent variables (Firm Age, Firm Size, and Ownership\_Structure). This suggests a moderate to strong explanatory power of the model. The age of the business has a significant positive relationship with the Access to Credit amount ( $\beta = 22232.183$ ,  $p = .008$ ), meaning that older businesses tend to secure larger loans. The number of employees representing the firm size shows a significant positive relationship with funding amount ( $\beta = 50921.378$ ,  $p < .000$ ), indicating that businesses with more employees tend to secure larger loans. Ownership\_Structure has a positive significant relationship with Access to Credit ( $\beta = .49494.301$ ,  $p < .000$ ). Implying that the farms listed as corporations have a higher chance of securing finance than the sole proprietors.

#### 4.7.2 The effect of financial characteristics on Access to Credit Regression Model Analysis

For this regression model (Model 2), the dependent variable is Access to Credit, which is measured as loan amount. The independent variables are audited financial statements, firm performance, tangible assets, and tax compliance. The model is defined as:

$$\text{Model 2: Access to Credit} = -14.550 + 109220.739 (\text{Audited Financials}) + 49060.912 (\text{Firm Performance}) + 42017.033 (\text{Tangible Assets}) + 30944.634 (\text{Tax Compliance}) + \epsilon$$

**Table 4.12: Regression Model 2**

Model		Unstandardized Coefficients		t	Sig.
		B	Std. Error		
1	(Constant)	-333859.604	22945.947	-14.550	.000
	Audited_Statements	109220.739	16768.965	6.513	.000
	Firm'sFinancial_Performance	49060.912	9526.509	5.150	.000
	Tangible_assets	42017.033	8654.570	4.855	.000
	Tax_compliance	30944.634	7168.697	4.317	.000

From the regression model for the second objective on financial characteristics affecting Access to Credit, presence of audited statements has a significant positive relationship with Access to Credit (B = 109220.739,  $p = .000$ ). Businesses with audited financial statements tend to secure larger loans. A significant positive relationship exists between a firm's financial performance and Access to Credit (B = 49060.912,  $p = .000$ ). Better financial performance is associated with higher loan amounts. The presence of tangible assets also shows a significant positive relationship (B = 42017.033,  $p = .000$ ). Businesses with more tangible assets tend to secure larger loans as compared to those with fewer. There is a significant positive relationship between tax compliance and Access to Credit (B = 30944.634,  $p = .000$ ). Higher tax compliance is associated with more substantial loan amounts. Financial characteristics from audited statements and tax compliance explain 79.9% of the differences in loan amounts according to the 0.799 R<sup>2</sup> value. According to the information asymmetry theory, financial transparency is essential for loan acquisition. Businesses in Kibra rely on audited records for risk mitigation purposes, which forces small and medium enterprises to establish formal financial practices.

### 4.7.3 The effect of entrepreneur characteristics on Access to Credit Regression Model Analysis

For this regression model (Model 3), the dependent variable is Access to Credit, which is measured as loan amount. The independent variables are Education level, years of managerial experience, trade networks, and entrepreneur training. The model is defined as:

$$\text{Access to Credit} = -336670.836 + 67168.386(\text{Education Level}) + 92257.666(\text{Experience}) + 52783.887(\text{Networks}) + 22178.244(\text{Training}) + \epsilon$$

**Table 4.13: Regression Model 3**

Model		Unstandardized Coefficients		t	Sig.
		B	Std. Error		
1	(Constant)	-336670.836	28083.804	-11.988	.000
	Educational Level	67168.386	8311.451	8.081	.000
	Years of Managerial Experience	92257.666	9222.785	10.003	.000
	Business or Trade Networks/Associations	52783.887	15917.090	3.316	.001
	Entrepreneurial training programs	22178.244	15040.375	1.475	.142

The regression model examines entrepreneurial factors influencing Access to Credit, with key findings: The constant is significant, indicating a baseline loan amount when predictors are zero. Years of Managerial Experience (B = 92257.666,  $p < .000$ ) has the most substantial positive association, suggesting more experience leads to higher loans. Business or Trade Networks/Associations (B = 52783.887,  $p < .05$ ) and educational level (B = 67168.386,  $p < .05$ ) also show significant positive relationships, highlighting their role in securing larger loans. Entrepreneurial training programs (B = 22178.244,  $p = .142$ ) have a positive but insignificant effect. This could imply that the study's sample might have not embraced trainings at large. Although regulatory factors were initially considered as potential influencers of SME Access to Credit, they were ultimately excluded from the final regression model due to statistical insignificance. Preliminary analyses revealed minimal variation across respondents in their perception of regulatory constraints, making it difficult to establish a meaningful relationship with the dependent variable. Moreover, many SMEs in Kibra operate informally and outside formal regulatory frameworks, which may explain why regulation did not emerge as a significant differentiator in Access to Credit. For this reason, regulatory variables were

dropped from the final model to maintain statistical rigor and focus on internal, owner-driven characteristics that showed stronger empirical relevance.

#### 4.7.4 The Moderating Effect of Financial Literacy on Entrepreneurial Characteristics and the Access to Credit Hierarchical Regression Analysis

For this regression model (Model 4), the moderating effect of financial literacy on the entrepreneurial characteristics education level, years of managerial experience, trade networks entrepreneur training, and Access to Credit is studied. The model is defined as:

##### Block 1

$$\text{Access to Credit} = -324922.494 + 8735.254(\text{Education Level}) + 31397.087(\text{Experience}) + 20567.658(\text{Networks}) - 9703.488(\text{Training}) + 128424.899(\text{Financial literacy}) + \epsilon$$

##### Block 2

$$\text{Access to Credit} = -347924.295 + 7441.877(\text{Education Level}) + 26427.727(\text{Experience}) + 28878.667(\text{Networks}) + 5272.626(\text{Training}) + 122277.197(\text{Financial literacy}) + 5346.096(\text{Financial*education level}) + 13625.242(\text{Financial literacy*experience}) + 24696.428(\text{Financial literacy* Networks}) + 17899.899(\text{Training* Financial literacy}) + \epsilon$$

**Table 4.14: Hierarchical Regression Model 4**

Model		Unstandardized Coefficients		t	Sig.
		B	Std. Error		
1	(Constant)	-324922.494	17935.585	-18.116	.000
	Educational Level	8735.254	6368.930	1.372	.172
	Years of Managerial Experience	31397.087	6937.216	4.526	.000
	Business or Trade Networks/Associations	20567.658	10341.771	1.989	.048
	Entrepreneurial training programs	-9703.488	9788.849	-.991	.323
	Financial literacy	128424.899	7749.174	16.573	.000
	2	(Constant)	-347924.295	17414.071	-19.979
Educational Level		7441.877	5991.529	1.242	.216
Years of Managerial Experience		26427.727	6407.683	4.124	.000
Business or Trade Networks/Associations		28878.667	10197.382	2.832	.005
Entrepreneurial training programs		5272.626	9737.059	.542	.589
Financial literacy		122277.197	7351.369	16.633	.000
Experience * Financial literacy		13625.242	5812.346	2.344	.020
Networks * Financial literacy		24696.428	13938.330	1.772	.078
Training * Financial literacy		17899.899	11491.896	1.558	.121
Education level * Financial literacy		5346.096	4686.260	1.141	.255

The research analysis adopted a two step-hierarchical model. The regression model from Block 1 estimated loan accessibility using educational level, years of managerial experience, business

or trade networks/associations, entrepreneurial training programs, and financial literacy. The statistical model found the constant value highly important because it determined the starting loan value. The analysis confirmed years of managerial experience ( $B = 31,397.087$ ,  $p < .001$ ) together with financial literacy ( $B = 128,424.899$ ,  $p < .001$ ) as two strong and statistically significant factors that positively influenced the dependent variable. However, participants reported that social networks linked to business or trade activities ( $B = 20,567.658$ ,  $p = .048$ ) had a positive effect on financing access, while educational level ( $B = 8,735.254$ ,  $p = .172$ ) and entrepreneurial training programs ( $B = -9,703.488$ ,  $p = .323$ ) did not significantly affect Access to Credit.

Block 2 of the model tested the potential moderating relations by creating interaction terms between financial literacy and all predictors. An additional analysis confirmed both financial literacy ( $B = 122,277.197$ ,  $p < .001$ ) and years of managerial experience ( $B = 26,427.727$ ,  $p < .001$ ) as significant factors for obtaining financial access. The statistical results showed that when financial literacy and managerial experience coincide ( $B = 13,625.242$ ,  $p = .020$ ), the strength of managerial experience to secure finance increases. The business or trade networks/associations ( $B = 28,878.667$ ,  $p = .005$ ) maintained their significance as a predictor, but interaction terms between educational level, networks, and training did not produce significant moderation effects. The research findings establish that financial literacy and managerial expertise are complementary factors that boost financing opportunities since the coefficient of determination increased after adding the interaction terms.

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter discusses insights from Chapter 4 to establish theoretical applications and practical implications for enhancing Small and Medium Enterprise (SME) financing in Kibra Constituency, Nairobi. This study analyzed the factors affecting SMEs' financial access by investigating the relationships between firm characteristics, financial attributes, and entrepreneurial traits while examining financial literacy as a moderating influence. This chapter establishes links between theoretical research about development finance and information asymmetry by interpreting the study's findings.

The findings provide implications for policymakers, financial institutions, researchers, and small and medium enterprise operators. The research candidly examines methodological restrictions, including sample boundaries and context dependency. Otherwise, the research proposes dedicated recommendations to eliminate barriers while developing an environment supporting SME expansion alongside Kenya's Vision 2030 framework and Sustainable Development Goals (SDGs). The chapter combines academic contributions from the study with practical directions for stakeholders to convert research findings into actionable interventions.

#### 5.2 Discussions

This study explored how internal SME characteristics specifically firm size, financial practices, and entrepreneurial traits influence Access to Credit in informal settings, with Kibra serving as a case study. The findings revealed that firm-level attributes such as size and asset ownership, as well as financial behaviors like tax compliance and recordkeeping, play a meaningful role in shaping credit access outcomes. Entrepreneurial factors, particularly managerial experience and network connections, also showed strong influence. Most notably, financial literacy emerged not only as a direct predictor of credit access but also as a significant moderator that amplified the effect of entrepreneurial traits. Together, these results underscore the importance of internal, owner-controllable factors in improving financing outcomes for SMEs operating in informal economies.

### **5.2.1 The Effect of Firm Characteristics on Access to Credit**

Numerous research articles confirm that firm characteristics are essential for SMEs obtaining finance, as the regression results validate this finding. Firm size, defined by the number of employees, demonstrates a substantial relationship with loan amounts, as documented in studies by Ongore et al. (2020) and Nyoni and Mudzvuri (2022), since large firms present lower risks stemming from operational stability and diverse revenue streams. Loan access increases with the age of firms because age builds reputation and credit history, according to literature by Essien and Osei (2020) and Muhwezi (2021). Established firms build trustworthy records that lower lenders' doubts about creditworthiness, with longevity being a credit-building factor. The results show that corporations obtain larger loans than sole proprietorships because formal governance structures enhance loan transparency and reduce default risks, as noted by Karaboga and Yilmaz (2021) and Muhwezi (2021).

The study demonstrates that an organization's growth path shapes its resource acquisition capabilities according to growth theory standards. Together with economies of scale and operational efficiency benefits, larger firms in later growth stages communicate viability to their lenders for funding. Such findings conform to the resource-based view, where tangible resources and human capital assets contribute to improved credibility. Success in loan applications among older firms illustrates their advancement through different growth stages (Ongore et al., 2020) because experience and market foothold lower perceived risks.

The theory of entrepreneurship supplies valuable supporting data, particularly regarding business ownership features. According to Schumpeterian organizational principles, switching from managing businesses as sole proprietors to becoming corporations represents an entrepreneurial strategy that fights to create legal structures while gaining outside financial resources (Akintoye et al., 2022). Strategic transformations in management reflect competence and vision for the future, which makes lenders view such initiatives positively. The model lacks sufficient analysis of entrepreneurial traits through direct attributes such as networking abilities and educational backgrounds, thus limiting the evaluation of entrepreneurial agency roles.

The theory of Agency provides explanations regarding how ownership structure matters. By establishing governance systems to connect different stakeholder interests, corporations resolve principal-agent problems through their management structure (Liu et al., 2022). The increased disclosure helps reduce information gaps, attracting more lenders to invest in such corporations. The agency risks stemming from sole proprietorships result from their common ownership with

management positions, which leads financiers to show reluctance. The assessment of ownership structure as a single variable fails to recognize how ownership transformations because of entrepreneurial decisions affect SME financing.

The research confirms that SME financing relates to the complementary relationship between growth theory and entrepreneurial and agency perspectives. Also, the research demonstrates that lenders depend on visible firm characteristics, including size, age, and organizational structure, to judge organizational stability and reliability. At the same time, theoretical frameworks establish these preferences as risk and asymmetry minimization approaches. Additional research opportunities exist to merge analyses of entrepreneurial characteristics and sector-based characteristics so that existing multidimensional knowledge can evolve.

### **5.2.2 The Effect Of Financial Characteristics On Access to Credit**

The study confirms previous research about how financial elements contribute to SME financing decisions. The need for audited financial statements to increase access to loans emerges again from the work of Mubarik et al. (2021) and Kamau et al. (2020) because these financial reports minimize information gaps and prove money management stability to financial institutions. Researchers believe verified financial records produce transparent systems that reduce lenders' credit risk assessment while producing better loan agreements.

The study outlines the beneficial effects of tax compliance and tangible assets in loan securing. Kamau et al. (2020) and Okpala et al. (2022) demonstrate that SMEs in developing contexts often struggle to prepare audited statements due to limited resources. Contextual factors influence the results since the study sample consists of SMEs with strong financial practices, which might represent better financial practices than the general business population. Using tangible assets is another common ground between the study and research literature. Like Biygautane et al. (2019), the study supports that SMEs with enough collateral, such as machinery or property, get easier Access to Credit by appearing as less risky borrowers. The research centers on asset-backed financing, which contrasts with established academic knowledge, which shows that many SMEs lack the tangible assets needed to access formal credit markets. The studied sample might consist mainly of SMEs operating in sectors with substantial tangible assets, potentially omitting service-based businesses with insufficient physical resources.

The study invests its analysis in financial ratios like debt-to-equity measurements and profit metrics to show that lenders typically use such indicators for credit repayment assessment. The research of Mugisha et al. (2021), along with Balde (2021), establishes a relationship between tax compliance and credit access, as these two practices demonstrate financial discipline to lenders, thereby minimizing their uncertainty.

This research draws its findings from information asymmetry theory and explains the relationship between the unbalanced knowledge between lenders and borrowers regarding financing operations. SMEs that provide audited financial statements alongside tax compliance perform dual functions to address adverse selection by offering lender-fueled assurance of genuine third-party verified credentials, which lowers SME credit risk uncertainty. According to Mubarik et al. (2021), financial audits produce an investigative "signal" that reveals a company's financial state by preventing concealed liabilities and exaggeration of performance.

Real assets contribute to reducing information asymmetry through their ability to serve as security, decreasing moral hazard risks. The provision of collateralized loans allows lenders to protect their investments through loss recovery after borrowers default, while they become more inclined to approve financing, as explained by Biygautane et al. (2019). Post-contract risks diminish under asset-backed financing, according to the theory's principle.

Lenders' business risk assessments become more difficult when an SME lacks appropriate financial records or sufficient physical assets, as lenders do not have enough data to determine risk levels. SMEs encounter a situation of denied loans or exorbitant interest rates, as Kamau et al. (2020) describes as the "credit gap" in their research with Kenyan SMEs. The study demonstrates that financial transparency, combined with collateralization, acts as matching instruments to resolve information asymmetry, thus allowing SMEs to prove their reliability and access better loan conditions.

The four key financial characteristics of audited statements, tax compliance, tangible assets, and performance metrics help SMEs bridge information gaps that hinder their ability to secure better financial terms. SMEs benefit from these practices since they help fulfill lender requirements while decreasing lending risks and helping them face information imbalance challenges in loan markets.

### **5.2.3 The Effect Of Entrepreneurial Characteristics On Access to Credit**

The research evidence fits within the framework of entrepreneurship theory because entrepreneurial traits determine how businesses access funding. Managerial experience, together with educational attainment, has both been identified as strong positive factors for loan acquisition. Business loan institutions find entrepreneurs with education more appealing because they demonstrate superior skills for proposal development and relationship management, according to Mehmood et al. (2022) and Fatoki and Asah (2021). The weight that business networks hold within the study aligns with social capital theory because networks enable trust development and deliver essential market insights (Du et al., 2021; Fatoki & Asah, 2021). The combination of traits indicates strong entrepreneurial capabilities, which produce lower risk perception among lenders following basic entrepreneurship principles.

The current research diverges slightly from established studies since entrepreneurial training programs did not produce statistically significant findings. The present research challenges prior findings by Gichuki (2019) and Mohamed (2020), which indicated that business funding and sustainability increase after training programs because lenders prefer practical managerial skills over official training certificates. Lenders conduct financial assessments using a different reference point since they trust firsthand experience more than classroom learning for repayment predictability.

The research demonstrates that lenders, as principals, use observable agent traits to reduce their exposure to risk according to agency theory perspectives. The role of experience combined with education functions as a reliable indicator of agent reliability according to Agency Theory principles (Liu et al., 2022). According to lenders' perspectives, experienced entrepreneurs usually avoid opportunistic behavior, which leads to decreased agency costs. Entrepreneurs benefit from networks by enrolling in accountability structures that include trade associations, increasing transparency.

The research results support entrepreneurship theory because individual traits and social capital lead to resource acquisition, yet agency theory shows how these traits help lenders reduce risk. The combined theoretical approach demonstrates how entrepreneurial organizations meet institutional trust mechanisms to influence financing decisions.

#### **5.2.4 The Moderating Effect Of Financial Literacy On Entrepreneurial Characteristics And Access to Credit**

The experimental data matches the research model demonstrating financial literacy as an essential controlling factor in entrepreneurial funding processes. Based on financial literacy theory, entrepreneurs who possess financial literacy gain effectiveness in accessing credit markets to obtain funding (Mabula & Dong, 2018). The study results demonstrate financial literacy functions as an important factor that strengthens entrepreneurs' presentation of compelling proposals and the negotiation of advantageous contract terms, according to Buchdadi et al. (2020). Research findings about managerial experience support entrepreneurship theory because practical expertise indicates minimized risk and improved capacity to capitalize on potential business opportunities (Kuratko 2016). The authors support Schumpeter's perspective (Mehmood et al. 2019), which states that entrepreneurially minded traits, including experience and networks, help entrepreneurs proactively obtain resources.

The insignificant results regarding the educational level and entrepreneurial training programs create complexities in the relationship analysis. The findings of Nguyen et al. (2024) show that fintech knowledge for entrepreneurs in digital finance does not translate into increased approval rates from lenders despite their argument on fintech preparation. Lenders are more inclined to value practical skills and experience than theoretical knowledge for their lending decisions, according to Meressa (2023), who establishes that financial literacy supports sustainable credit access but does not depend on formal credentials. Research reveals that combining managerial experience with financial literacy enhances corporate financial access because it intensifies the thematic value gained from practical learning and decision-making processes, as shown in Prasetya et al. (2021).

The model separates the essential part played by business networks and financial literacy because their effects remain independent. According to Schumpeterian theory, social capital works as an independent lending resource per Mehmood et al. (2019), while this model demonstrates network function separately from financial understanding in lender evaluations. The results support financial literacy theory because financial competence is an independent predictor and regulatory factor between entrepreneurial traits and funding acquisition. Lenders value comprehensive competence, including network experience and financial awareness, since

this matches broader theoretical approaches supporting whole entrepreneurial readiness for securing funding.

### **5.3 Implications**

While analyzing the data, it became clear that certain variables, such as entrepreneurial characteristics and financial literacy, produced diverse findings. These variations suggest that multiple factors could be influencing access to finance, and further research is needed to explore these discrepancies. It is important to differentiate these diverse findings from inconclusive findings, which would imply that the data did not offer any definitive conclusions on the impact of these variables. As seen in this study, certain aspects of the financial characteristics did not yield clear results and, therefore, could be considered inconclusive. However, the diverse findings related to other variables highlight the complexity of financial access for SMEs in Kibra.

The research findings produce a wide range of consequences. According to the findings, SME owners and managers should invest in developing internal financial practices as well as in their personal development. Financial institutions view the establishment of solid document systems, routine audits, and complete tax compliance as essential practices. These actions significantly enhance firms' attractiveness to lenders. Additionally, combining managerial training and active participation in business networks substantially improves the potential for securing financial resources.

The most effective approach to securing finances occurs when organizations develop robust financial systems alongside improving entrepreneurial competence. Based on the research, financial institutions must enhance their evaluation systems for SME loan applications. Lenders should expand their criteria to include standard financial metrics, managerial backgrounds, and entrepreneurial training participation. Similar to the findings of Zhang et al. (2021), analyzing how well applicants handle financial matters provides a trustworthy indicator of their financial management skills, enabling lenders to make more informed credit decisions.

Furthermore, the ecosystem includes key stakeholders such as policymakers and development agencies. The outcomes of this research provide a strong justification for establishing and advancing financial literacy courses for SME business owners and managers. The SME sector can be further strengthened through subsidized training provided by government bodies and non-governmental organizations, which could also offer mentoring programs and networking

support (e.g., Williams & Ibrahim, 2023). Additionally, government policies that offer financial benefits and favorable interest rates to SMEs maintaining audited financial data would significantly enhance Access to Credit and promote economic growth.

#### **5.4 Conclusion**

Businesses in Kibra Constituency obtain financing through various firm-level and financial aspects, entrepreneurial factors, and contextual elements. The financing outcomes of businesses primarily depend on three essential characteristics: business size, age, and ownership structure. Companies with large assets and constant operations can present themselves as lower-risk investment opportunities because their endowments and developmental phases match the criteria in the Stinchcombe resource-based view (Stinchcombe, 1965) and growth cycle theory (Berger & Udell, 1998). Organizations that advance in their development encounter financial hurdles when basic innovations are missing, but younger businesses with predictable growth potentials use projected potential to attract funding sources. This demonstrates how risk evaluations match against the stages of company growth.

The three key financial elements of audited statements, tax compliance, and collateral help lenders overcome challenges in information asymmetry. The research results support the information asymmetry theory (Zhang & Xu, 2021) because financial transparency helps lenders avoid adverse selection and moral hazard. The three entrepreneurial characteristics of experience, education, and business networks match elements of theory that Schumpeter proposed (Lin & Wang, 2022) since these qualities demonstrate trustworthiness to lenders. The results indicate a split between important lender preferences since they value practical experience above formal educational credentials.

Financial literacy is a refined tool that intensifies relationships between managerial experience and networking by serving as a moderation factor (Prasetya et al., 2021). The evidence indicates that entrepreneurial financial competence enables entrepreneurs to successfully operate within credit markets, bargain loan conditions, and match lender requirements. Through agency theory, Liu et al. (2022) explain that ownership structures and governance mechanisms function as conflict-resolution tools to enhance decision transparency in both funding processes. These theories wholly create an understanding of how general market and organizational elements and personal influences determine SME funding outcomes.

## **5. 5 Recommendations**

### **5.5.1 Recommendations for Policy Makers**

Financial literacy education needs a priority position within national programs that assist small and medium enterprises. Public authorities must establish specific financial literacy curricula that focus on clear financial records, tax requirements, and debt management skills, according to Desta and Mebrat (2019). The Youth Enterprise Development Fund should incorporate these training modules to provide business owners with essential capabilities needed for formal loan management. The policy framework needs to promote cooperation between financial institutions and fintech platforms for expanding access to collateral-free loans which can be delivered through mobile banking solutions such as M-Pesa targeting Kibra and similar regions. Regulatory amendments should lead financial institutions to value both managerial experience and networking capital in credit evaluations as they join the practice of assessing SME operations based on reality.

### **5.5.2 Recommendations for SME Managers and Operators**

Small and Medium Enterprise leaders must develop higher financial expertise while making their firm operations more transparent to build better credit standing. Modern organizations should adopt continuous financial instruction to help personnel advance their abilities regarding risk evaluation alongside their proficiency in loan terms and digital monetary systems per Kung'u (2011). SMEs must use digital bookkeeping systems, including QuickBooks or Xero, to create precise financial records that lenders can trust. Managers should use their business networks together with trade associations to find funding opportunities and secure improved loan terms. Small and medium enterprises focusing on learning from experience rather than solely on school education will show functional competencies that match lenders' expectations while reducing their perception of business risks.

### **5.5.3 Recommendations for Financial Institutions**

Financial institutions need to create new evaluation standards with distinct product designs that answer the specific needs of SMEs. Traditional collateral-based lending mechanisms eliminate asset-light SMEs from borrowing opportunities, while financial indicators, together with managerial experience and network participation, should replace traditional lending evaluation mechanisms. The development of loans through M-Pesa, which serves SMEs with robust

account histories yet scarce physical assets, would open new access channels while fighting against loan defaults. The institutions need to provide loan officers with specific training that enables them to evaluate quantitative elements, such as tax compliance data, alongside financial transparency indicators for measuring fiscal discipline. This reform program would implement approaches that support the study findings about financial literacy moderation while building more inclusive credit systems.

#### **5.5.4 Recommendations for Academicians and Researchers**

The following studies must use longitudinal and comparative research approaches to validate and contextualize the study's findings. The study would reveal distinctive obstacles to financing through increased investigation of various regions and economic environments, according to Eniola (2018). The relationship between digital financial technologies like fintech platforms and SMEs' ability to access credit requires additional research. Theoretical models need development to fully establish financial literacy as an essential focus within the human capital framework because it affects entrepreneurial qualities of innovation and risk control. Implementing collaborative research between policymakers and financial institutions would guarantee pragmatic applications of outcomes alongside their widespread applicability.

#### **5.5.5 Theoretical Recommendations**

Future studies must merge agency theory, entrepreneurship theory, and financial literacy models to comprehend how governance combines entrepreneurial agency with financial competence in a single theoretical framework. The research should examine how fintech platforms influence traditional agency relationships by establishing various monitoring systems for diminishing stakeholder uncertainty.

Researchers should develop the resource-based view and growth cycle theory to integrate various business sector differences with environmental circumstances. Research on service-based SMEs must acknowledge their dependency on intangible assets, especially intellectual property, and digital infrastructure, because their traditional assets frequently lack substance. This element remains insufficiently analyzed in existing academic literature. The growth cycle theory requires assessment in disruptive innovation scenarios because it faces challenges from non-standard growth patterns.

The practice of entrepreneurship theory requires improvements as it should include aspects of cultural background values and institutional, and organizational support elements. The connection between regional and regional differences in entrepreneurial traits that influence financing access should be investigated through comparative research. A behavioral theory must be applied to analyze how cognitive biases and heuristics affect entrepreneurs' financial choices.

The concept of agency theory should be expanded to study new governance approaches used by small and medium enterprises that combine different ownership models and stakeholder-oriented governance systems. Research conducted in advanced economic environments should combine theoretical frameworks to provide detailed information about the changing financing patterns of small-to-medium enterprises.

## **5.6 Limitations**

Although the research findings were robust, several limitations were identified that should be acknowledged. First, the study focused exclusively on SMEs operating within Kibra, Nairobi. As a result, the findings may not be generalizable to other regions or economic environments. This geographic limitation is consistent with observations by Wang (2020), who noted that regional context significantly shapes SME financing dynamics, and Okello et al. (2022), who argue that region-specific studies often fail to reflect the broader diversity of SME challenges.

Second, there are limitations in how Access to Credit was measured. The study used the loan amount reportedly accessed by SME owners as a proxy for credit access. While this approach is suitable for quantitative regression analysis, it assumes that all respondents had applied for and potentially received credit. In reality, some SMEs may have chosen not to apply for loans due to fear of rejection, lack of information, or negative past experiences with lenders. This could result in the underrepresentation of discouraged borrowers or those excluded from the formal financial system. Consequently, the measure may not fully distinguish between actual credit constraints, voluntary financial exclusion, and informal coping mechanisms. Future studies could enhance this approach by incorporating binary indicators (e.g., whether a loan was applied for or approved) or ordinal measures that capture varying levels of access.

Third, the use of a cross-sectional design limits the study's ability to establish causal relationships. As Zubair et al. (2020) point out, longitudinal studies are better suited for

capturing changes in SME financing behavior over time, especially in contexts affected by shifting economic policies or external shocks. Therefore, while this study offers valuable insights, it cannot determine how Access to Credit evolves or responds to broader changes.

Additionally, the study relied on self-reported data, which may introduce response bias. Participants might have overstated business performance or understated financial challenges due to social desirability or confidentiality concerns. This issue is common in SME research, as noted by Abdallah et al. (2024) and Shoaib et al. (2021), and may affect the accuracy of results involving sensitive financial disclosures.

Finally, the measurement of some constructs, particularly financial literacy and firm performance, presents inherent challenges. As Menike (2019) observes, such variables are often difficult to quantify objectively. In particular, financial literacy is prone to subjective interpretation, which can vary widely across respondents. Sundaram et al. (2022) note that inconsistent self-assessments may impact data reliability and reduce comparability between SMEs.

### **5.7 Areas of Further Studies**

Future research should focus on the integration of digital financial instruments and financial literacy, particularly as they affect SME credit opportunities in underserved regions such as Kibra. Additionally, exploring how political policies and social culture influence network relationships and educational programs among entrepreneurs could help identify region-specific barriers.

Longitudinal studies tracking SME businesses over time could provide insights into how financial literacy programs, combined with executive experience, influence business sustainability. Furthermore, research into SME finance accessibility should include analyses across different economic and geographic contexts, with special attention given to women entrepreneurs to uncover the unique financial challenges they face.

Evaluating policy frameworks that support successful localized group initiatives, such as M-Pesa's collateral-free loans, would offer valuable solutions for expanding SME platforms. Investigating these topics would contribute to both theoretical and practical knowledge, helping to improve financial inclusion for SMEs.

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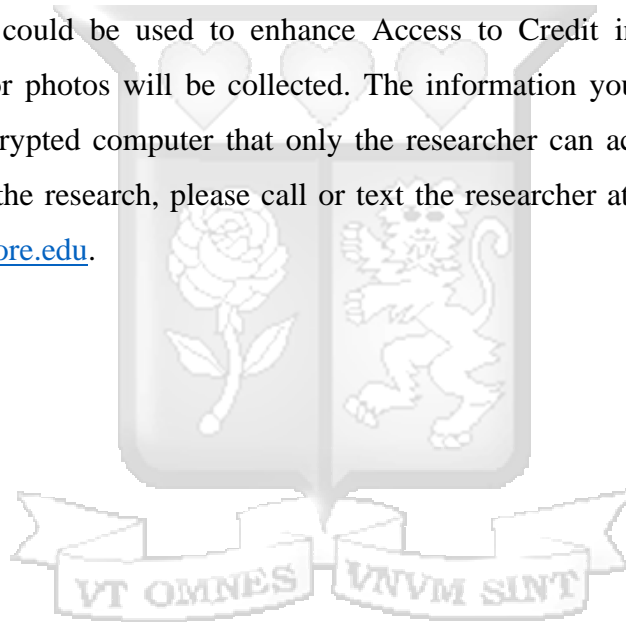
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## APPENDICES

### Appendix 1: Letter of Introduction

Felix Ogada, A student at Strathmore University, is conducting a study to determine the factors that influence Access to credit among Small and Medium-sized Enterprises based in Kibra. Therefore, you are being asked to participate in this research. Participation in this study will entail completing a questionnaire with questions on basic information about yourself, such as age, gender, level of education, and position. You will also be asked questions on your organization's financial characteristics. No discomforts or risks are expected to result from participating in this research. However, you can withdraw, stop participation, or refuse to answer some or all questions without any negative consequences. Your participation will provide insights that could be used to enhance Access to Credit in SMEs. No personal information, videos, or photos will be collected. The information you provide will be kept confidential in an encrypted computer that only the researcher can access. If you have any questions concerning the research, please call or text the researcher at 0728091525 or email [Felix.Ogada@strathmore.edu](mailto:Felix.Ogada@strathmore.edu).



## Appendix 2: Research Instrument

Questionnaire for Research Study on Factors Affecting Access to Credit for SMEs in Kibra Constituency

### *Section A: Demographic Information*

1. Age of Respondent:

18–25

26–35

36–45

46–55

56 and above

2. Gender:

Male

Female

3. Position in the Business:

Owner

Manager

4. Business Sector:

Retail

Manufacturing

Service



**Section B: Firm Characteristics**

6. Age of the Business (Years in Operation):

Less than 1 year

1–5 years

6–10 years

Over 10 years

7. Number of Employees:

1–5

6–10

11–20

More than 20

8. Ownership Structure:

Sole proprietorship

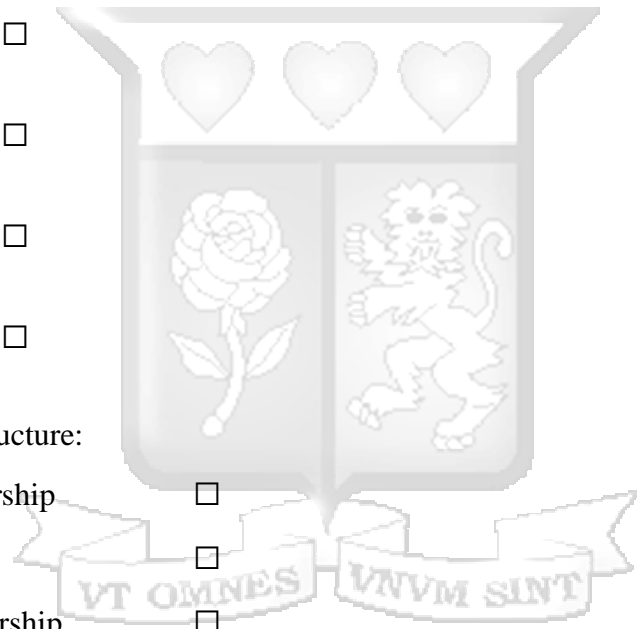
Partnership

Limited partnership

Limited liability partnership

Limited liability company

Corporation



**Section C: Financial Characteristics**

9. Do You Have Audited Financial Statements?

Yes

No

10. Rate Your Firm's Financial Performance (such as Profits, Revenue Growth)

(1 = Very Poor and 5 = Very Good)

11. The value of tangible assets owned by the firm is:

Very Low  Low  Moderate  High  Very high

12. Level of Tax Compliance:

Very Low  Low  Moderate  High  Very high

13. How much loan can you acquire for your business (respond in figures, e.g., 10000)?

**Section D: Entrepreneurial Characteristics**

14. Educational Level:

Primary School

High School

College Diploma/Certificate

University Degree

Master's Degree

PhD

13. Years of Managerial Experience

Less than 1 year

1-5 years

6–10 years

Over 10 years

14. Are You a Member of Any Business or Trade Networks/Associations?

Yes

No

15. Have you participated in any entrepreneurial training programs?

Yes

No

**Section E: Financial Literacy**

Organized for a Likert scale and respondents can tick their level of agreement (1 = Strongly Disagree to 5 = Strongly Agree):

<b>Section E: Financial Literacy</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Part 1: Financial Management</b>					
1. I can develop and adhere to a personal self-regulation or budget plan.					
2. I know how to record my income and my expenditure.					
3. I can handle sudden financial crises well.					
4. I can make long-term financial strategies confidently.					
5. I assess and change my goals in terms of finances frequently.					
<b>Part 2: Debt Literacy</b>					

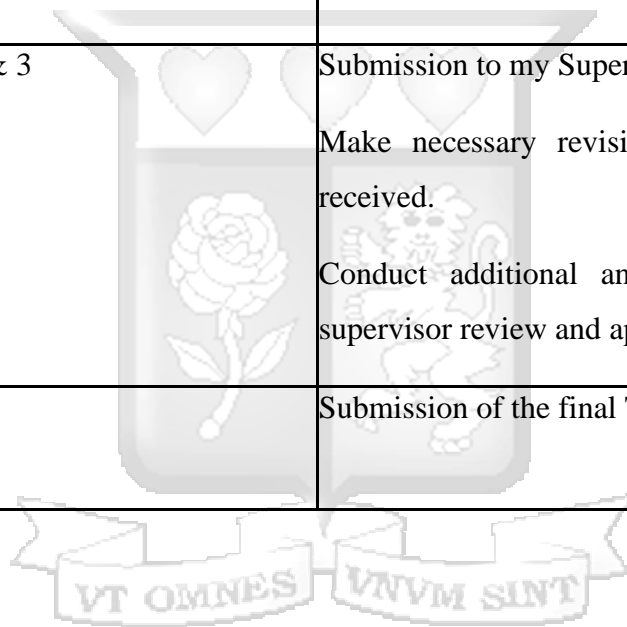
1. In my financial knowledge, I know how interest rate influences my repayment plan for the debts.					
2. I know the difference between an asset and a liability.					
3. I know the implications of not fulfilling debt payments.					
4. I understand how to estimate and evaluate loan offers.					
5. I honestly believe that I can adequately handle credit cards.					
<b>Part 3: Savings Literacy</b>					
1. I regularly set aside money for future expenses.					
2. I am familiar with different types of savings accounts.					
3. I understand the importance of having an emergency fund.					
4. I can set realistic short-term and long-term savings goals.					
5. I feel confident making decisions about where to save my money.					
<b>Part 4: Investment Literacy</b>					
1. I understand the basic investing principles (e.g., risk vs. return).					
2. I know how to diversify an investment portfolio.					

3. I can assess the risks associated with different investment options.					
4. I am familiar with different types of investments (e.g., stocks, bonds, mutual funds).					
5. I feel confident making investment decisions for my future.					

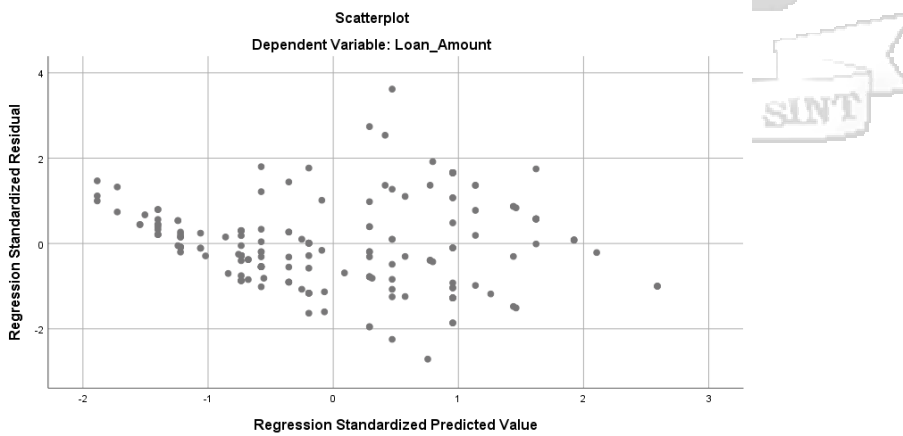
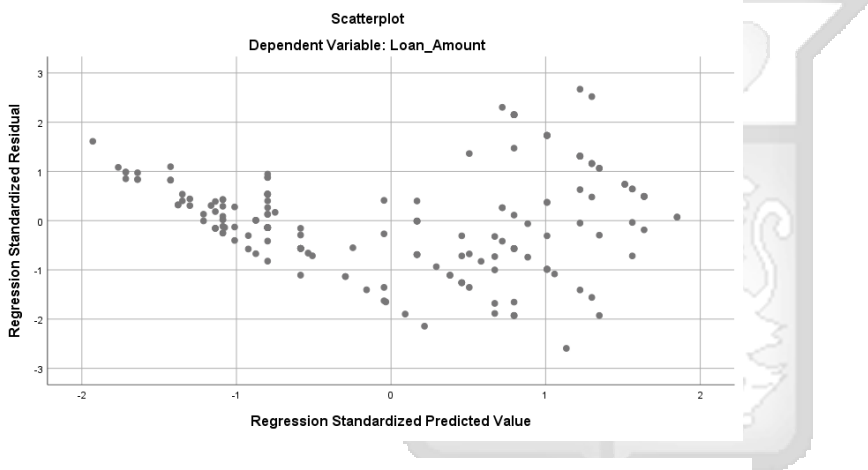
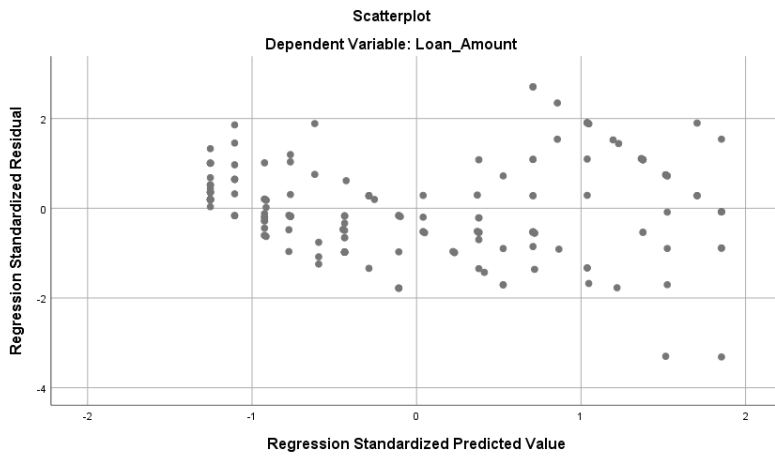
### Appendix 3: Timeline of Activities

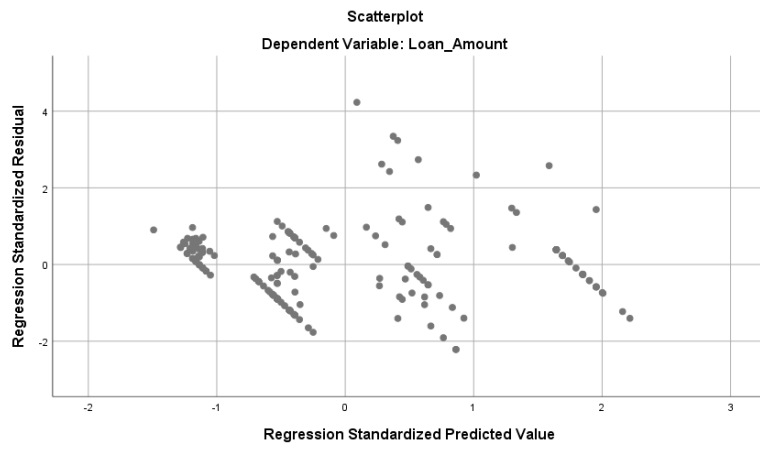
Timeline	Activity
August	Concept paper
September	Concept paper
October	Concept paper
November	Concept paper
March 2025	Data collection Conduct follow-ups to ensure a high response rate. Clean and organize raw data for analysis.
March 2025 -Week 4	Data Analysis Conduct preliminary descriptive statistics (mean, frequency, etc.).  Perform multiple linear regression analysis and diagnostic tests.  Interpret statistical results and identify key findings. Drafting Findings & Discussion  Summarize key findings and compare them with existing literature.  Develop graphical representations and tables.

	<p>Prepare a first draft of the results and discussion sections.</p>
<p>April 2025- Week 2 &amp; 3</p>	<p>Submission to my Supervisor for Review</p> <p>Make necessary revisions based on comments received.</p> <p>Conduct additional analysis if required. Final supervisor review and approval.</p>
<p>April 2025-Week 4</p>	<p>Submission of the final Thesis</p>

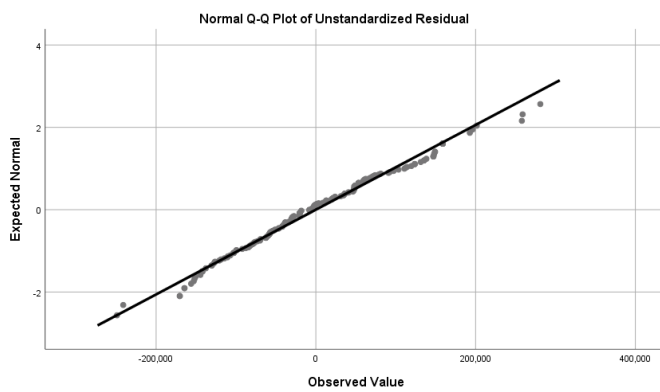
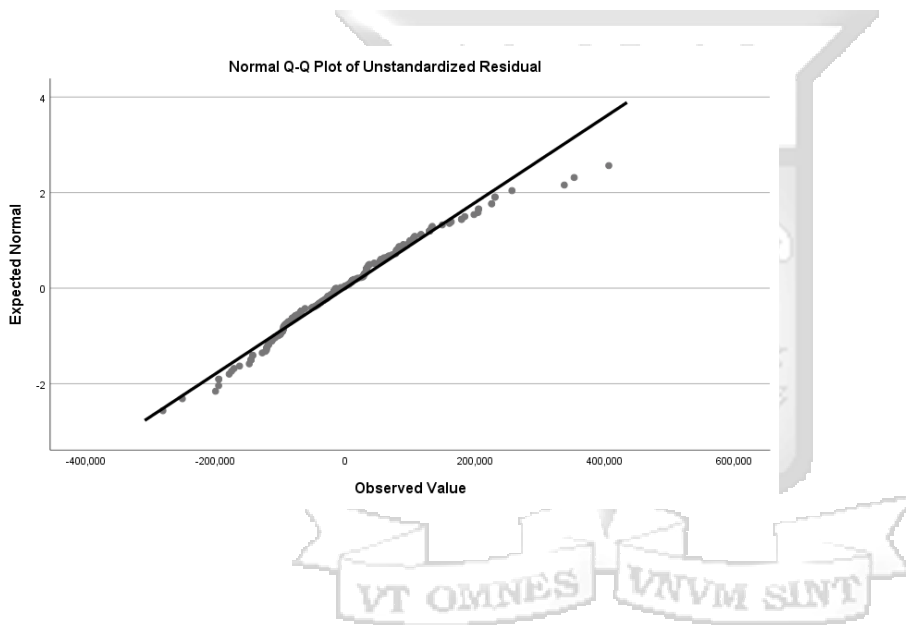
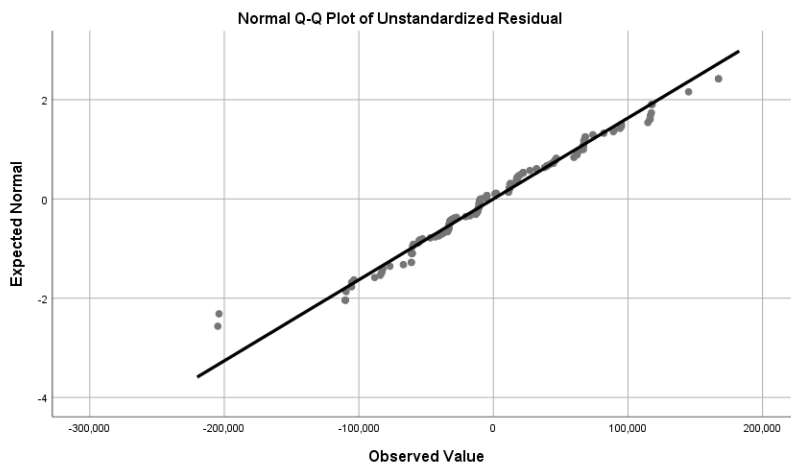


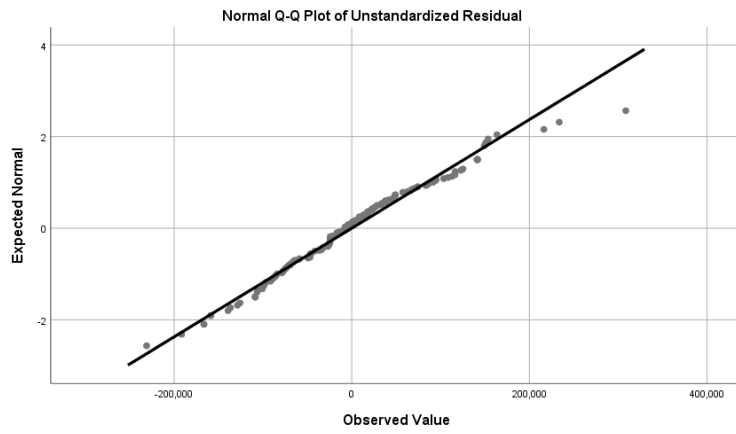
## Appendix 4: Heteroscedasticity and linearity tests





## Appendix 5: Normality tests





## Appendix 6: Ethics Letter



14<sup>th</sup> March 2025

Mr. Felix Ogada,  
felix.ogada@strathmore.edu

Dear Mr. Ogada,

### **RE: Factors Influencing Financial Access of Small and Medium Enterprises in Kibra, Nairobi: The Moderating Role of Financial literacy.**

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU-masters** proposal. Your application reference number is **SU-ISERC2747/25**. The approval period is from **14<sup>th</sup> March 2025 to 13<sup>th</sup> March 2026**.

This approval is subject to compliance with the following requirements:

- i. Only approved documents including (informed consents, study instruments, MTA) will be used.
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC
- iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-ISERC within 72 hours of notification.
- iv. Any changes anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU- ISERC within 72 hours.
- v. Clearance for the export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days of completion of the study to SU- ISERC.

Before commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology, and Innovation (NACOSTI) <https://research-portal.nacosti.go.ke/> and obtain other clearances needed.

Yours sincerely,

**Mr Ambrose Rachier,  
Chairperson; SU-ISERC**



**The National Commission for Science, Technology and Innovation**, hereafter referred to as the Commission, was the established under the Science, Technology and Innovation Act 2013 (Revised 2014) herein after referred to as the Act. The objective of the Commission shall be to regulate and assure quality in the science, technology and innovation sector and advise the Government in matters related thereto.

### CONDITIONS OF THE RESEARCH LICENSE

1. The License is granted subject to provisions of the Constitution of Kenya, the Science, Technology and Innovation Act, and other relevant laws, policies and regulations. Accordingly, the licensee shall adhere to such procedures, standards, code of ethics and guidelines as may be prescribed by regulations made under the Act, or prescribed by provisions of International treaties of which Kenya is a signatory to.
2. The research and its related activities as well as outcomes shall be beneficial to the country and shall not in any way;
  - i. Endanger national security
  - ii. Adversely affect the lives of Kenyans
  - iii. Be in contravention of Kenya's international obligations including Biological Weapons Convention (BWC), Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), Chemical, Biological, Radiological and Nuclear (CBRN).
  - iv. Result in exploitation of intellectual property rights of communities in Kenya
  - v. Adversely affect the environment
  - vi. Adversely affect the rights of communities
  - vii. Endanger public safety and national cohesion
  - viii. Plagiarize someone else's work
3. The License is valid for the proposed research, location and specified period.
4. Neither the license nor any rights thereunder are transferable.
5. The Commission reserves the right to cancel the research at any time during the research period if in the opinion of the Commission the research is not implemented in conformity with the provisions of the Act or any other written law.
6. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research.
7. Excavation, filming, movement, and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
8. The License does not give authority to transfer research materials.
9. The Commission may monitor and evaluate the licensed research project for the purpose of assessing and evaluating compliance with the conditions of the License.
10. The Licensee shall submit one hard copy, and upload a soft copy of their final report (thesis) onto a platform designated by the Commission within one year of completion of the research.
11. The Commission reserves the right to modify the conditions of the License including cancellation without prior notice.
12. Research, findings and information regarding research systems shall be stored or disseminated, utilized or applied in such a manner as may be prescribed by the Commission from time to time.
13. The Licensee shall disclose to the Commission, the relevant Institutional Scientific and Ethical Review Committee, and the relevant national agencies any inventions and discoveries that are of National strategic importance.
14. The Commission shall have powers to acquire from any person the right in, or to, any scientific innovation, invention or patent of strategic importance to the country.
15. Relevant Institutional Scientific and Ethical Review Committee shall monitor and evaluate the research periodically, and make a report of its findings to the Commission for necessary action.

National Commission for Science, Technology and  
Innovation(NACOSTI),  
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P. O. Box 30623 - 00100 Nairobi, KENYA  
Telephone: 020 4007000, 0713788787,0735404245  
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