

**CREDIT AFFORDABILITY AND FINANCIAL PERFORMANCE OF SMALL AND  
MEDIUM ENTERPRISES IN MACHAKOS COUNTY, KENYA**

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## **DECLARATION**

I declare that this research project is my original work and has not been submitted to any college or university for the award of a degree.

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This research project has been submitted for the examination with my approval as the University appointed supervisor.

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## **DEDICATION**

This project is dedicated to my late mum Eunice Bitta for her enduring love; my beautiful wife Kezia and our wonderful children Jude, Jasmine and Jayden. You are the reason that I do this.

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## OPERATIONAL DEFINITION OF TERMS

<b>Branch Penetration</b>	The number of financial institutions per person per square mile.
<b>Credit Administration</b>	A department in a lending institution that is tasked with managing the entire credit process
<b>Credit Affordability</b>	A measurement employed by lenders to assess if a borrower can manage to pay back the amount sought without financial distress.
<b>Credit Cost</b>	The sum of cash that borrower must repay apart from the initial principal borrowed and which includes loan interest, processing fees, legal fees, and insurance fees among others.
<b>Credit History</b>	A record of how a firm has managed its credits in the past.
<b>Credit Score</b>	This is the numerical rating which measures persons' likely hood to repay debts.
<b>Financial Distress</b>	A scenario where a firm is not in a position to adequately achieve income flow to meet expenditures.
<b>Financial Performance</b>	Financial performance is a subjective measure of how well SMEs can use assets from its primary mode of business and generate revenues.
<b><i>Juakali</i> Sector</b>	The informal sector in Kenya where traders and small business owners run shops on the street or in open market spaces.
<b>Loan Collateral</b>	An asset the lender/borrower attaches as a security for the loan to the lending institution.

<b>Loan Repayment</b>	Repaying money borrowed from a lending organization through regular payments, which include both principal and interest, are the most common method of recouping borrowed funds
<b>Net Profit</b>	The percentage of revenue and other income remaining after all business expenditures such as cost of goods sold, operational expenses and interest and taxes have been subtracted
<b>Reliability</b>	The level of consistency with which research methodologies yield similar results when applied in a variety of contexts
<b>Small &amp; Medium Scale Businesses</b>	Business ventures or organizations with fewer than one hundred employees and an annual revenue of less than four million shillings
<b>Validity</b>	The degree to which a test is accurate and authentic.

## **ACRONYMS AND ABBREVIATIONS**

<b>EU</b>	European Union
<b>GDP</b>	Gross Domestic Product
<b>GOK</b>	Government of Kenya
<b>IFC</b>	International Finance Corporation
<b>KNBS</b>	Kenya National Bureau of Statistics
<b>KRA</b>	Kenya Revenue Authority
<b>MDGS</b>	Millennium Development Goals
<b>MFBS</b>	Micro Finance Banks
<b>MFIs</b>	Micro Finance Institutions
<b>NACOSTI</b>	National Commission for Science, Technology and Innovation
<b>SACCO</b>	Savings and Credit Cooperatives
<b>SMEs</b>	Small and Medium Enterprises
<b>US</b>	United States
<b>BOU</b>	Bank of Uganda
<b>SPSS</b>	Statistical Package for Social Sciences

## ABSTRACT

Despite their critical role in the Kenyan economy, small and medium enterprises continue to encounter numerous obstacles and struggle to achieve significant expansion. Small and medium enterprises financial performance has continued to decline in Machakos County over the past few years with more SMEs closing their doors due to poor financial performance. According to a 2016 study conducted by Kenya's National Bureau of Statistics, majority of SMEs in Kenya failed to survive longer than three years. Previous literature reviewed found that inability to obtain financing was a key cause of SMEs financial instability. However, there was no empirical evidence that credit affordability was associated with financial performance of SMEs, particularly in Machakos County, Kenya. The relationship between credit affordability and financial performance of SMEs remained an empirical issue that required further investigation. This formed the research gap. This research project was carried out with the aim of investigating the relationship between credit affordability and financial performance of small and medium enterprises (SMEs) in Machakos County, Kenya. The specific objectives sought to examine the relationship between loan collateral, cost of credit, borrower's credit history, and loan repayment on the financial performance of SME ventures in Machakos County. Financial performance was measured by net profit margin. Four theories anchored the study with the aim of grounding it based on the scholarly work. Loanable funds, credit scorecards, pecking order, and tradeoff theories were all employed in the research. Purposive sampling was used to select one respondent from each of the firms chosen, while random sampling was employed to select a sample of 100 SMEs. Questionnaires were used for data collection and Statistical Packages for Social Sciences (SPSS) version 28 employed to test data. Data was sorted using descriptive analysis including standard deviation, multiple regression analysis, mean and correlation coefficient. The study found a significant relationship between credit affordability and financial performance of SMEs in Machakos County, Kenya. The research found that there was a significant relationship between cost of credit and financial performance; borrowers' credit history had a significant relationship with financial performance and that loan repayment had a significant relationship with financial performance. The research findings however established that there was no significant relationship between loan collateral and financial performance. This was attributed to the availability of online unsecured loans for SMEs as well as the use of loan guarantors instead of collateral. The study further found that there was a strong positive relationship between credit affordability and financial performance variables including loan collateral, borrowers credit history, cost of credit and loan repayment. The research recommended that lending institutions needed to proactively review their credit policies to in line with the credit affordability variables to ensure loans were accessible and tailored to SMEs needs. There was need for sensitization of SMEs owners to better understand credit affordability variables to foster SMEs financial growth and stability.

## CHAPTER ONE

### INTRODUCTION

#### 1.1. Background to the Study

Small and medium enterprises (SMEs) are key enablers of economic growth, as they significantly contribute to job creation, innovation, and poverty reduction. Gakure and Amurle (2013) estimate that SMEs employ 74% of Kenya's workforce and contribute 18% to the country's GDP. According to Wambui (2015), the growth of Kenya's SME sector is critical to the country's Vision 2030 and national development objectives. Profitability, sales volume, asset value, and employee count all indicate the viability of an SME.

Small firms, on the other hand, have an advantage over massive corporations in that they can rapidly adjust to changing market conditions, which makes them a strategic investment for Kenya. They contribute significantly to job creation, income stability, and overall economic growth (Manzoor, Wei, & Sahito, 2021). SMEs are key to global technological advancement and job creation (Njeru, 2013). Because SMEs can thrive in a variety of settings, from large capitals to developing city and countryside zones, they promote widespread economic development, addressing the problem of urban overcrowding caused by rural-urban migration and uneven development (Madanchian *et al.*, 2015). Consequently, they act as a foundation for growing economies and provide an important source of income for a large proportion of the population (Economic survey report, 2017). As the major engines of economic growth, small and medium-sized firms (SMEs) are also vital to global development (Garikai, 2011).

A robust SME sector has greatly benefited developed nations like the USA and Japan. In the US, SMEs are known as foundation enterprises because they form the country's industrial base (Manzoor, Wei, & Sahito, 2021). Over ninety-nine percent of EU employers are small and medium-sized businesses (SMEs), and 99.7 percent of all employers in the United States, respectively (Motilewa, Aka & Ogbari, 2015). Developing countries such as Pakistan, Indonesia, and India attribute their rapid economic growth to SMEs, particularly those in the manufacturing and export sectors (Saleem & Jan, 2016). India's SMEs employ 42 million people and produce 45 percent of the country's manufacturing output and 40 percent of its total exports. Similarly, SMEs employ nearly 79 million people in Indonesia and account for 19.4 percent of the country's export market. SME's account for more than 99.98% of Indonesia's GDP and International Finance Corporation indicates that SMEs are faced with a sequence of difficulties, including a lack of innovative capacity, managerial training and experience, insufficient education and skills, technological change, poor infrastructure, a lack of market knowledge, and a lack of credit. (Madanchian *et al.*, 2015).

Borrower's ability to repay a loan without experiencing financial hardship is referred to as credit affordability (Bijak *et al.*, 2015). Credit financing entails the purchase of interest-bearing securities that are backed by asset-based collateral and structured for long or short terms (Nderitu & Githinji, 2015). Credit is essential for young businesses to access working capital, transform raw materials, and manage fixed capital. It offers critical technical assistance to SMEs, allowing them to increase production and yields (Saleem & Jan, 2016). SMEs must have access to adequate funding in order to help a country's economy grow (Hasnah *et al.*, 2013). To ensure that startups can get the equipment and other resources they need on credit, credit financing must be

managed in a way that allows them to deliver yields in the form of cash or deferred payments in exchange.

For capital expenditures that are typically greater than working capital requirements, SMEs rely on internal finance. In most cases, this entails capital injections from shareholders (World Bank, 2014). Kiplimo *et al.* (2015) claim that credit finance is critical to rural development and food security in households alike. As a result, failure of SMEs is closely linked with the availability of credit. SMEs that borrowed money from lenders with reduced credit charges did much better, according to the authors. According to Edward (2017), however, most SMEs are dissatisfied with lending arrangements due to high interest rates, short repayment periods, and cumbersome procedures.

SMEs make up for at least 90% of private enterprise in Africa and contribute more than 50% of employment and GDP. South Africa and Ghana are two well-known African countries with thriving SMEs sectors. Over 85 percent of manufacturing jobs in Ghana are held by SMEs. SMEs make up about 92 percent of Ghana's overall business, accounting for about 70 percent of the country's GDP (Donkor *et al.*, 2018). More over 91% of South Africa's registered businesses are SMEs employing 61 percent of the workforce, and contributing up to 57 percent of the country's GDP (Fiseha & Oyelana, 2015). SMEs in African countries have made significant progress, but they continue to face significant challenges, including inadequate technology development, weak institutional capacity, restrictive rules and regulations, a lack of training and management competencies, and a lack of financial resources.

SMEs account for the vast majority of private sector jobs in East Africa and for around 2% of Uganda's GDP (Nyanzi, 2015). However, 90% of SMEs flop in their first year of business because of a shortage of credit (Arinaitwe & Mwesigwa, 2015). It is difficult for SMEs around the world to perform and grow because of the chronic lack of assets and weak financial foundations; as a result, SMEs with insufficient equity capital are more dependent on other sources of financial credit, such as bank financing (Harash, Suhail, & Jabbar, 2014). For the most part, small businesses rely on their owners' personal savings and unremitted profits from past years as their primary source of funding (Yeboah, Kwadwo, & Adigbo, 2014). Suppliers, financial aid, credit and owner's savings are examples of external informal sources of financing (Abdulaziz & Worthington, 2013). Banks, financial institutions, and securities are examples of formal external sources. According to Nderitu and Githinji (2015), small and medium enterprises need to pay more attention on trade finance to improve their financial condition.

At 34.3 percent of the economy, Kenya's small businesses are a major contributor to the Jua-Kali informal sector, which has consistently grown between 1993 when it was 13.8 percent to 18 percent in 1999 and to 25 percent in 2012. There are a number of ways to say this: According to a 2007 SME banking sector analysis, Kenya has 2.2 million SMEs, with 88% of them being unregistered. The failure rate for small businesses in Kenya is high, with three out of every five failing during the first few months of operation, according to the country's statistics (Kenya National Bureau of Statistics, 2007). Poor financial management and credit availability are to blame for lenders' predisposition to demand collateral in order to hedge against the risk of the borrower.

Machakos County is an administrative county in Kenya's east. The poverty rate in the county is 59.6 percent, which is higher than the national rate of 47.2 percent. According to the poverty index, Machakos is ranked 33rd out of 47 Kenyan counties (KNBS, 2018). However, it is remarkable that 52 percent of the county's population lives in urban areas, which is higher than the national average of 29.9 percent (Machakos.go.ke, 2018). Unemployment had risen as a result of urban population growth. Joblessness, combined with the county's 51 percent poverty rate, posed a significant threat to the county's security, as more young people became more predisposed to crime. This scenario necessitates the formation of SMEs, which provide employment opportunities for county residents while also stimulating economic growth.

### **1.1.1 Credit Affordability**

The ability of a borrower to repay a credit obligation without experiencing financial hardship is referred to as credit affordability. The lending institution looks to see if the borrower can meet the loan commitment without difficulty in the context of their other obligations and regular spending when determining credit affordability (Bijak et al., 2015). It's important to remember that Experian (2014) defines credit affordability as the ability of a customer to pay back current and future debt. An affordable loan, according to the Financial Services Authority (2010), is one that does not require further debt relief or rescheduling in order to allow the borrower to satisfy current and future payment commitments without falling into arrears. According to Office of Fair Trading (2011), affordability assessment is a borrower-focused test in which a creditor evaluates a borrower's ability to fulfill a specific credit commitment in a sustainable manner without putting the borrower in further financial distress or suffering negative consequences.

Businesses of all sizes, both big and small, need money to run (Mckernan & Chen, 2005). Studies have shown that smaller businesses don't have as much access to outside money, both at

home and around the world. As a result, their ability to run and grow is limited (Galindo & Schiantarelli, 2003). SMEs have much harder time getting into both domestic and international financial markets because they are thought of as more risky, informational barriers, and higher costs of getting money. This makes it hard for SMEs to grow and compete (Kofi et al. 2013, p. 1). (Agbazo & Omane, 2012). This is what they say: The cost of small business loans has been found to be a big problem for small businesses' role as a determinant of economic development, according to research on small business (Onyimba & Muturi, 2016). Research in Kenya found that small businesses' ability to pay back loans was hurt by the growth of their outstanding loans over time. This suggests that there is a problem with how well they work (Gichana & Barasa, 2013). It may not be able to buy more goods or have more assets if it gets a loan. A small business's ability to compete with the global economy and take advantage of new business opportunities caused by economic integration is based on its ability to get loans from banks (Emad *et al.*, 2014).

All Kenyan banks require SMEs to furnish them with collaterals including land title deeds, vehicle log books, guarantees, listed shares, and cash deposits. However, SMEs can easily access loans from lending institutions that accept other forms of collateral, such as household products (FSD Kenya & Growth Cap, 2016). Due to this, commercial banks find it difficult to lend money to SMEs in Kenya because they are seen as high-risk customers (Muriithi, 2014). SMEs play a critical function in Kenya's economy and thus the government has established financing programs to support them, including Uwezo fund, Women fund as well as the Youth fund programs (Njagi *et al.*, 2017).

Banks, micro-finance institutions and deposit-taking microfinance banks have a challenge financing SMEs (FSD Kenya & Growth Cap, 2016). Small businesses in Kenya have numerous

challenges when it comes to obtaining adequate funding. SMEs make up a significant share of Kenya's potential lending market for banks and other financial institutions. Businesses in Kenya rely on a wide range of financial institutions, including nonbank financial institutions (NBFIs), SACCOs and microfinance organizations, according to Mwege (2014).

A loan collateral is a guarantee for a previously taken loan. There is an unfavorable selection problem because of the lack of information asymmetry between the lender and the borrower at the time of the loan decision. Due to information imbalances between both the bank and the borrower, lending institutions are forced to employ collateral as a selection indicator (Hasnah et al., 2013). Collateral can help alleviate moral-hazard concerns even when lenders are aware of a borrower's creditworthiness. Collateral is defined by Aghion and Bolton (1992) as a means of ensuring the good behavior of borrowers due to the presence of a realistic threat. Businesses with fewer employees are more likely to ask for collateral than those with more employees. It could also be utilized to alleviate some of the moral hazard oversight difficulties that affect commercial borrowing (Boot, Thakor & Udell, 1991).

The total amount of money that the borrower must repay in addition to the initial principal borrowed, which includes loan interest, processing costs, legal fees, and insurance fees, among other things, is referred to as the cost of credit. They are included in loan repayments, which are made in installments over the term of the loan (Clow, 2019). Credit costs change over time and vary from lender to lender. Borrowers can typically lower the total interest paid by selecting the best interest rate lender, repaying the loan faster, and repaying the loan principal earlier than expected. According to Hackmann et al. (2015), while the majority of borrowers were aware of their loan's lump sum payment, they were unaware of the interest charged and the procedures used to calculate it. To effectively measure the cost of lending, small businesses required a fixed

and transparent total cost of credit (Barboni et al., 2013). Lending institutions should make all charges visible to borrowers as part of loan agreement signoffs, including interest rates, legal fees, loan processing fees, default penalties, and insurance expenses.

An organization's credit history documents their ability to repay loans and their track record of accountability. The number and type of credit accounts, the length of time each account has been operational, the amounts borrowed, credit used, prompt repayments, and defaults are all factors in a company's credit score. A good credit history attracts low interest rates on loans (Brock, 2019). Credit scoring is used to determine a customer's creditworthiness. This rating is based on a comparison of similar clients who have received loans in the past. However, willingness to repay differs from ability to repay (Curtis, 2013). Based on their credit score, some clients are classified as low risk, while others are classified as medium or high risk based on their past performance history. As a result, determining affordability is critical because it aids in the identification of borrowers who are still financially secure (North, 2012).

Despite the fact that creditworthiness cannot be seen, at least not before a default, retail lenders use rating systems as a substitute (Thomas, 2009). With sufficient historical data on borrowers' repayment behavior, scoring systems, which are typically based on statistical models, assess the likelihood of default given the loan account level and the borrowers' previous behavior (Bijak *et al.*, 2015). Repaying money borrowed from a lending organization is known as loan repayment. Regular payments, which include both principal and interest, are the most common method of recouping borrowed funds. The principal of a loan is the amount borrowed up front, whereas interest is the cost incurred as a result of the loan. Interest must be paid on a loan before the

borrower can use the money. There may be an early repayment cost or penalty in some contracts, but loans can be paid in full at any time. (By the year 2021) (Scott). One sort of loan payment is a standard payment, which is a fixed monthly payment until the loan and interest are paid in full. By making regular payments, you can pay off your debt faster and for less money in interest. The borrower is given more time to pay back the debt under an extended repayment arrangement. A longer repayment period results in higher interest costs, but the monthly payment is cheaper (Twin, 2021).

### **1.1.2 Financial performance**

In order to achieve the goals of the development roadmap, the SME sector has been recognized and prioritized (Economic Survey, 2017). Entrepreneurs in small and medium-sized businesses (SMEs) have been highlighted as a more substantial contributor to Kenya's economy, offering both employment and a platform for the development of new ideas (Kangala, 2016). To help the underprivileged, SMEs in Kenya produce income and contribute to the country's economic advancement (Mukoma & Masini, 2015). SMEs have been highlighted as the driving force behind global economic growth and poverty alleviation, according to Katua (2014).

The percentage of revenue and other income remaining after all business expenditures such as cost of goods sold, operational expenses and interest and taxes have been subtracted is referred to as net profit margin (Margaret, 2021). A company's net profit margin is different from gross profit margin in that it covers not only the cost of items sold, but also all other related costs (Harvard Business School, 2021). It's critical to look at a company's net profit margin when evaluating its financial health. Monitoring rises and declines in net profit margin can help a corporation identify whether or not present methods are effective and estimate earnings based on

revenue. Using a percentage, it is feasible to compare two or more firms of any size's profitability (Velasquez, 2021). In Kenyan commercial banks, Ongore and Kusa (2013) looked at the elements that affect financial performance. In their research, net profit margin was found to be an important financial situation indicator.

Net profit margin can be used to assess the profitability of different-sized companies because it is expressed as a percentage (Velasquez, 2021). Ongore and Kusa (2013) explored the elements that influence commercial bank financial performance in Kenya. In their investigation, they identified net profit margin as a significant financial position indicator. The most difficult task is to determine which financial institution is the most suitable for your needs. Small businesses usually rely on personal loans or self-funding to get their start-up capital (Kamau, 2011). (Kamau, 2011). SMEs' overall performance has been affected since lending institutions are not providing appropriate support for them (Chimaleni *et al.*, 2015).

### **1.1.3 Status of Financial Performance of Small and Medium Scale Businesses in Machakos County, Kenya**

In Machakos County, there are eight constituencies: Machakos Town, Masinga, Yatta, Kangundo, Kathiani, Matungulu, and Mwala. Machakos Town is the county seat (Machakos.go.ke, 2018). (Machakos, 2018) Embu, Kitui, Makueni, Kajiado, Murang'a, and Kirinyaga counties border it on the north, south, and west. Machakos County contains many hills, making it ideal for hiking. Tourists in the area enjoy camping, hiking safaris, eco-tourism, cultural tourism, and music and dance festivals. Drought-tolerant grains like sorghum and millet are grown.

The Kenya National Bureau of Statistics (2019) estimates Machakos County's population at 1,098,584. The county headquarters are located in Machakos. In this regard, analyzing access to financial facilities and small-scale companies in Machakos County is crucial in determining food sustainability. Key difficulties affecting SMEs in Machakos County is inadequate access to inexpensive finance to allow them invest and diversify their resources without becoming bankrupt during the course of servicing the loans. Small-scale firms, according to Njuguna and Nyairo (2015), have insufficient access to inexpensive loans from banks since they do not match the prescribed borrowing conditions. Apart from a lack of collateral to acquire loans due to the county's high poverty rate, Machakos Town has a small number of banks and microfinance institutions, raising competition for affordable credit. The lack of precise data and accurate accounting makes it difficult for financial organizations to assess their customers' creditworthiness.

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

Machakos County's small business owners, have experienced a number of financial success and failures. Getting financial inputs has been a huge challenge for startups because of the lack of financial capital, according to Karfakis *et al.*, (2017). This has made it difficult for SMEs to optimize their operations. Financial resources are vital for efficient business practices since they ensure that small firms can finance their activities in order to achieve long-term growth. Studies have demonstrated the benefits of monetary adaptability (Meyers *et al.*, 2012). The debate over the impact of loan affordability on small business financial health is still raging in Machakos County.

The SME sector in Kenya has grown to the point where it currently accounts for 20 percent of GDP and 80 percent of jobs. This is why Kenya's industrialization cannot be possible without SMEs (Phyllis, 2016). Kenyan SMEs, according to Mwangi (2015), are vital to long-term economic growth due to their main contribution to economic development. According to Janet and Ngugi (2014), few Kenyan small and medium-sized businesses (SMEs) celebrate their third year in business. In spite of SMEs significance to our economy, over two million SMEs have closed their doors, according to the KNBS research (2016). (2016). According to the survey, wholesale and retail trade companies accounted for the majority of the shuttered businesses, accounting for 73 percent of the total closures. 46.3 percent of SMEs shut down before their first anniversary (Economic survey report, 2017).

Despite the fact that SMEs contribute to the country's economic development, according to Githire and Muturi (2015), their financial condition remains a big challenge, since 3 out of 5 continue to flop within a short length of time after starting operations. Despite the fact that credit was widely available, there was no promise that it was inexpensive to borrowers, and hence credit availability may not necessarily correlate to SMEs' growth (Chaniwa *et al.*, 2020). All businesses, but notably small and medium-sized ones, stand to benefit greatly from credit financing's lower costs (Kangala, 2016). However, the relationship between loan affordability and small-business financial success remains a matter for more empirical inquiry, which is why this study was done.

SME's in Machakos county were hindered from accessing credit facilities by the lack of collateral, high loan prices and information disparity between lenders and borrowers, as well as

their own views of business risk, according to Mutinda (2019). SMEs in Machakos County with poor financial performance due to a lack of financial support were a case study by Muema and Wamugo (2020). They noted that the fiscal performance of SMEs in Machakos was significantly impacted by loan collateral, loan and income ratio and geographic branch penetration. They further concluded that SMEs should boost their core capital, enhance financial management practices, encourage innovation in the financial sector, and improve employee financial literacy (Muema & Wamugo 2020). In Meru County town of Maua, Kenya, Rithaa *et al.* (2019) evaluated the effect of collateral limitations on the performance of SMEs. They found that SMEs financial health was related to their requirement for collateral. A study by Mwanyika (2013) found that collateral requirements for SMEs in Taita Taveta County, Kenya, had an inverse relationship with loan availability.

The above-mentioned empirical evidence exposed a number of research gaps that formed the basis of the study. The preponderance of research on SMEs financial performance tied their failure to lack of appropriate capital. Many academics have delved deeply into the issue of ease of access to credit. Credit administration variables that influence credit affordability, nevertheless, had not been examined. We proposed to research on how credit affordability variables affected Kenya's small and medium-sized businesses. The study sought to find out how small businesses in Machakos County fared financially because of the impact of loan affordability.

### **1.3 The study objectives**

This research sought to address the following objectives;

### **1.3.1 The general objective**

To investigate the relationship between credit affordability and financial performance of SMEs in Machakos County, Kenya.

### **1.3.2 The specific objectives**

The study sought to achieve the following specific objectives:

- i. To determine the relationship between loan collateral and financial performance of SMEs in Kenya's Machakos County.
- ii. To determine the relationship between credit cost and financial performance of SMEs in Kenya's Machakos County.
- iii. To assess the relationship between the borrowers' credit history and financial performance of SMEs in Kenya's Machakos County.
- iv. To establish the relationship between loan repayment and financial performance of SMEs in Kenya's Machakos County.

### **1.4. Research hypotheses**

The null hypothesis investigated included;

H<sub>01</sub>: There is no significant relationship between loan collateral and financial performance of SMEs in Kenya's Machakos County

H<sub>02</sub>: There is no significant relationship between credit cost and financial performance of SMEs in Kenya's Machakos County

H<sub>03</sub>: There is no significant relationship between borrowers' credit history and financial performance of SMEs in Kenya's Machakos County

H<sub>04</sub>: There is no significant relationship between loan repayment and financial performance of SMEs in Kenya's Machakos County

### **1.5. Significance of the Study**

From this research, small business owners would have a much better understanding of credit administration variables such as loan collateral, cost of credit, borrower history, and loan payback. In addition, SME owners would acquire knowledge that they would use when approaching lending institutions for financial assistance. The outcomes of this study were to provide financial institutions with more information on their clients' impressions of their credit services, which would help them build more enticing product offerings for business people in various financial categories. Lending institutions were to also lower significantly the loan repayment default risks since they would be able to correctly package their loan products.

The national and county governments would adopt laws and regulations that safeguards small and medium-sized firms (SMEs) from financial institution exploitation and ensuring that they have access to inexpensive finance. For the sake of the Big Four Agenda, Vision 2030, and the Millennium Development Goals (MDGs) of eradicating poverty and unemployment in Kenya, the findings of this study on the financial performance of SMEs in Machakos County would provide additional impetus to the national government in streamlining the cost of credit across all counties. In order to better understand the impact of low-cost borrowing on small firms' bottom lines, the findings from this study would be utilized. Researchers hoped that findings focusing on Machakos County, Kenya's SME businesses, would add to the growing body of knowledge on credit scoring.

### **1.6. Scope of Study**

The research utilized data between 2015 and 2020 for purposes of the investigation. The era from 2015 to 2020 was distinguished by substantial borrowing by Machakos County citizens and the

recovery of the Kenyan economy following a government transition. Increasing economic development in newly constituted counties was a primary goal of Kenya's new constitution, which was adopted in 2010. Machakos County was founded as one of the devolved units as part of efforts to transfer resources to the local people from the central government. SMEs in Machakos County, Kenya, was studied to establish how credit affordability affected their financial performance. The study's credit affordability constructs included loan collateral, credit cost, loan payback, and borrowers' credit history. The monthly net profit margin of SMEs in Machakos County was used to assess their performance. An initial sample of 100 small businesses representing 10% of the overall target population was taken from a pool of 1,000 SMEs operating in the Machakos County area, which was obtained from the National Chamber of Industry, Machakos County (2018).

### **1.8. Organization of the Study**

This research was grouped into five chapters with the chapter one providing background information and highlighting the research problem, objectives, hypotheses, and significance of the study. The second chapter was devoted to a literature review, with an emphasis on both theoretical and empirical literature. The research methodology was presented under in chapter three detailing the methodologies, procedures, and guidelines that were followed in carrying out the study. Data analysis, presentation, and interpretation of results was covered under chapter four followed by a summary of the research findings including conclusions and recommendations under chapter five.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter examined the previous work done on the effect of credit affordability on the financial performance of small and medium-sized enterprises (SMEs). It entailed a review of a variety of conventional theoretical issues and their relationship to the performance of SMEs and empirical investigations related to the topic, as well as research gaps. The discussions were intended to shed light on the research constructs by the use of empirical evidence from peer-reviewed publications, textbooks, and the work of other subject experts and researchers. Finally, the chapter developed a conceptual framework that illustrated the relationship between the variables in the study.

#### **2.2. Theoretical Literature Review**

The theories which guided this study included the loanable funds theory, credit score cards theory, pecking order theory and the trade off theory.

##### **2.2.1. Loanable Funds Theory**

Robertson is credited with establishing the loanable money theory (1934). On the basis of this theory, the interest rate is controlled by the demand and supply of money in the economy at the point where the two are equal. As a result, the interest rate serves as the amount at each unit time of loanable funds in accordance with the conventional demand-supply theory. The loanable funds idea is a development of the standard savings and investment theory. It encompasses both monetary and non-monetary aspects like as savings and investment (Ohlin, 1937). (Ohlin, 1937). Several simplifying assumptions underlie the theory: all of these assumptions assume that the

loanable funds business is a single non-segmented market, with perfect fund mobility; that the market is competitive, with each borrower and lender acting as a price taker; and that there is only one pure interest rate in effect at any given time (Wicksell, 1898). The single interest rate was supposed to be the clearing rate of interest because of the competitive forces. Assumes that the interest rate did not interact with any other macro structures, it adopted the part symmetry method, which assumed that all other factors affecting the demand or supply of loanable money were constant (Patinkin, 1958). The following year (Patinkin, 1958).

When the loanable funds theory is accepted, Bertocco (2013) argues, modern monetary theory moves away from Keynes' view of interest rates as monetary phenomena and ignores arguments Keynes used to counter loanable funds theory critics such as Ohlin (1937) and Robertson (1998), who both criticized the theory (1938). (1934). Although the loanable funds theory is widely accepted, he believes that explicitly examining the financial incentive and the role banks play in funding investment does not preclude the development of an alternative theory.

Fabian (2013) confirms the underlying view of the saving finances investment doctrine, implying that the amount of loans that can be lent in a period is limited by the amount of saving in the same period, and that, as a result, a reduction in consumption was required for more credit to be available for investors. The loanable funds theory, which many modern economists subscribe to, is based on this point of view. According to Cathy (2019), the influence of government borrowing crowds out other borrowers and thus limiting their access to the loanable funds market. Because fewer borrowers are investing in their firms, the impact of this crowding out phenomena is a sluggish economy. Less company investment equals less production, fewer sales, and a reduction in the creation of new capital assets. As a result, the loanable money idea is significant in the total economy. Hsing (2015) used a loanable funds model to investigate the

factors that influence the yield on Spanish government bonds. A reduced form regression was utilized to calculate the equilibrium government bond yield by simultaneously solving for the demand and supply of loanable funds. A lower GDP growth rate and a higher debt-to-GDP ratio were both predicted to lead to higher inflation.

Gupta (1974), on the other hand, rejected this hypothesis on various issues. According to the theory's classic formulation, loanable money are supplied and demanded from a variety of different sources. Investing directly in physical assets by businesses and people is a well-known alternative to using the loan market to channel savings. Disharding, on the other hand, is not always given out; part of it is actually spent by the hoarders. Furthermore, not all investment or stockpiling is financed by borrowed cash; a portion of it is financed by owned funds. Many investment and hoarding are not the only uses for borrowed money; it is also used to fuel personal expenditure and the purchase of both financial and non-financial goods (Jakab & Kumhof, 2015).

The theory supports this study since it addresses the cost of credit, which has a significant impact on the affordability of loans to small business owners. Credit costs are affected by factors such as interest rates in the lending market, which are examined in this study. The availability and demand for loanable funds is a critical driver of a company's ability to get credit.

### **2.2.2. Credit Scorecards Theory**

Credit scorecard theory has been widely embraced as a result of Altman's work (1968). The theory provides a quantitative assessment of the likelihood that a client would participate in a defined activity, such as loan default, in connection to their current or prospective credit position with a lending organization. Credit scorecard theory has been widely embraced as a result of

Altman's work (1968). Probability estimates for observations are derived from historical data using statistical approaches like logistic regression and probit model of analysis. New customers' default risk can be predicted using a credit scoring model using the same types of data, such as age and income (Warue *et al.*, 2018). Statistical analysis is the most often used method for constructing credit scorecards. One of the reasons for this is that credit scoring can benefit from an understanding of sample estimators and their properties, as well as confidence intervals and hypothesis testing (Peussa, 2016). This knowledge could be employed to assessing the relative relevance of distinct qualities, both to ensure the significance of relevant constructs and to eliminate unimportant ones. The aim behind credit scorecards was to apply a statistical method to a sample of former customers in order to identify existing or new applicants who were likely to be satisfied (Desai, 1997).

The use of credit scorecards allows lenders to make educated guesses about the credit-seeking behavior of potential borrowers (U.S. Comptroller of the Currency, 1998). Predicting the future performance of existing accounts using scorecards is also an option. Data from actual loans and applications is used to build statistical scorecards, which offer the additional benefit of quantifying the likelihood of default (Microfinance Risk Management, L.L.C 2008). This is a good example of a microfinance risk management firm's work from the year 2008. There is a growing interest among SME lenders in the benefits of credit scoring, which can help small businesses gain greater access to financing. This instrument can assist SMEs reduce their credit risk by providing them with access to formal financing that is commensurate to their risk and performance. Lenders' willingness to lend can be boosted by appropriate frameworks and property rights (Malhotra *et al.*, 2006). Please see for additional information (Malhotra *et al* 2006). As a result, a credit score has an effect on the likelihood of default. This score does not

provide a clear indicator of how likely clients are to default. The Z-score is one of the most extensively utilized credit scoring algorithms. According to Altman (2000), academics appeared to be abandoning ratio analysis as a method for analyzing commercial firm performance.

As a result of this idea, all potential borrowers were given a credit score that indicated whether they were a high, medium, or low risk borrowers. The lender then utilized this information to determine the type and value of collateral to be used to secure the loan. A borrower's risk assessment rating informed the financier on whether or not to lend money to that borrower, as well as the interest rate to be paid on loan. The theory took into account three distinct constructs: borrowers' credit history, collateral requirements, and loan repayment.

### **2.2.3. Pecking Order Theory**

First proposed by Myers and Mailuf (1984), this theory asserts that companies choose internal finance over external funding, and debt over equity as a means of funding. There is a fundamental problem of knowledge asymmetry that has a direct impact on the cost of financing. A study by Brounen et al. (2004) looked at the capital structure of companies in Europe and the United States. The use of a ranking order model was implied by the importance of financial flexibility in determining capital structure. When a company's profits aren't high enough or the company's stock isn't valued enough, the pecking order theory may cause problems. It is claimed by Bancel and Mittoo (2004) that companies trade off the benefits and costs of leverage associated with tax consequences, bankruptcy, and agency expenses in order to develop a target capital structure for the firm. The pecking order theory Static tradeoff theory firms have managers who are motivated to issue stock in order to keep the dilution of earnings per share to a minimum. According to Norton (1991), 75% of small businesses tend to use a hierarchical or pecking order framework to make financial structuring decisions. According to Holmes et al.

(1991), small businesses should employ the pecking order framework since they are typically run by their owners, who are wary of losing control of their companies.

The Bolton report on small enterprises (1971) outlined difficulties underpinning the idea of financial gap, which asserts that a small company suffers a number of challenges. In average, small firms are taxed more heavily, have higher loan inquiry fees, and are less able to meet lending terms than larger businesses. Chronic undercapitalization is a common problem for small businesses since they have restricted access to cash and the money markets. The upshot is that their economic progress is hampered because they are more likely to rely on high-cost funding (Warue, Charles & Mwanja, 2018). SMEs' financial management should be analyzed in light of Mole and Namusonge (2016)'s notion of pecking order. Retaining earnings, debt, hybrid forms of financing like convertible loans, and eventually externally issued equity are preferred sources of financing by management, according to the theory, with the costs of bankruptcy and information asymmetry having no impact on capital structure policy.

The theory backs up this study since it identifies debt financing as a crucial source of funding for small firms. When debt financing is based on this approach, all four components of credit administration are brought into play, including the need for collateral, credit cost, borrower credit history, and loan repayment in order to qualify for a lending facility, a borrower must meet the lender's assessment standards.

#### **2.2.4. Trade-Off Theory**

According to Kraus and Litzenberger (1973), a firm selects how much debt financing as well as how much equity financing to use by weighing the benefits and costs. The previous iteration of the theory compared the tax advantages of debt to the burdensome costs of declaring bankruptcy.

Debt and equity are widely used to finance businesses, according to a review of the literature by Frank and Goyal (2011). A benefit of borrowing money is noted, such as lower taxes; yet, a disadvantage of borrowing money is noted, such as the costs of financial difficulties, such as the costs of bankruptcies and the costs of not filing for bankruptcy. When deciding how much debt and equity to use for financing, a company that wanted to maximize its overall value would weigh the trade-off between increasing marginal benefits and increasing marginal costs.

A large sample of 2,370 French SMEs was studied for nine years by Philippe et al. (2015) to determine the factors of debt ratio. The Trade-off and Pecking-order theories, which the researchers investigated, describe the financial structure of SMEs. To a limited extent, they found that both models were able to describe the debt-related behavior of SMEs. The static trade-off theory, according to Haddad and Lotfaliei (2019), states that the period of loan issue is critical in creating zero leverage across firms. Tradeoff theory doesn't quite contradict zero leverage, or the "zero leverage paradox," as a result. According to this group's reasoning, previous fixed trade-off models failed to generate zero leverage because they failed to recognize the optimal time to take on debt. Besides default costs, they introduced a new mechanism in the static trade-off model that appeared to be as effective.

According to Hovakimian *et al.*, the capital structure's impact on default likelihood can be quantified using static trade-off theory (2012). They directly tested the notion by regressing default likelihood on proxies for debt costs and benefits. Smaller enterprises and those with a lesser level of tangible assets don't follow the idea and instead opt for riskier capital structures. In addition, smaller companies with less tangible assets had less access to capital markets and were more vulnerable to negative profitability and stock value shocks, putting them at greater risk for insolvency. The idea, despite Miller's (1977) criticism that, if the trade-off theory were right,

corporations would have significantly larger debt levels than we observe in reality, was still widely accepted.

Dynamic trade-off models were extremely difficult to disprove empirically, in contrast to Miller's claim that they are impossible to disprove verbally. Debt financing was critical to the success of a firm, as well as the need for an appropriate balance between debt and equity capital in small businesses. Loan affordability criteria such as the cost of credit, collateral requirements, the borrower's credit history and loan repayment all come into play when this balance was assessed. This was because lending firms examined potential borrowers using rather common credit administration metrics.

### **2.3. Empirical Literature Review**

SMEs' success is influenced by factors like as loan collateral, interest rates, borrowers' prior credit history, and loan payback period. The purpose was to identify knowledge gaps, which served as the foundation for this research.

#### **2.3.1. The Loan collateral and financial performance**

Research by Muema and Wamugo (2020) found that SMEs in Machakos County, Kenya, had low profitability that was connected to a lack of access to financial capital. Collateral security and loan-to-income ratio, as well as regional branch penetration, were examined in the study. Due to the small population, the research depended on a census survey. Respondents were issued semi-structured questionnaires to get their thoughts on financial accessibility and the success of SMEs. Loan-to-income ratios and regional branch penetration were shown to have a significant positive impact on the financial health of SMEs in Machakos County (Kenya) by the researchers.

As a result of the findings, SMEs are urged to enhance the amount of core capital they have as well as to improve financial management systems.

Family Bank Limited was used as a case study in Muratha (2015) research into the factors that influence young Kenyan entrepreneurs' access to finance. There were 437 participants in her study, and she used descriptive research and stratified sampling to collect a sample of 251 young entrepreneurs. Analytical methods like linear regression, correlation analysis, and multiple regression were used to analyze the data. Collateral showed a high positive correlation with the availability of loans for young Kenyan enterprises, according to the research.

In Maua, Meru County, Kenya, SMEs suffered from collateral limitations on bank loans (Rithaa Munene & Kariuki, 2019). A total of 250 registered SMEs were included in the study, and a random sample of 153 was drawn from this group using basic and stratified random sampling. Analysis of the data took place using SPSS, and the results were then displayed in frequency tables. A linear regression study has demonstrated that the performance of SMEs is negatively connected. For the purpose of her dissertation, Mwanyika (2013) examined the financial resources available to small farmers in the Kenyan county of Taita Taveta. 111 small-scale farms from four sub-counties were randomly selected to represent the target population. The data was analyzed with descriptive statistics including tables and graphs and a regression model in SPSS. The amount of collateral required and the likelihood of obtaining a loan were found to be negatively correlated.

SMEs in Kenya's Nanyuki Town were investigated by Ndemi and Mungai (2018) in order to better understand their financial health. The event took place in Nanyuki Town, a thriving commercial center home to a wide range of prosperous small and medium-sized businesses (SMEs) (SMEs). The town's small and medium-sized businesses and their owners were the

primary focus of the study. In Nanyuki, it targeted 765 small and medium-sized businesses (SMEs). Selected samples were selected using stratified and basic random sampling methods, respectively, The study had a total of 88 participants. Data was gathered through surveys and analyzed with the use of SPSS's inferential and descriptive statistics. It was necessary to use both multiple linear regression and correlation analysis in order to uncover any patterns in the data. SME liquidity was found to be weak, with the current and quick ratios both at 1.47:1, much below the global standard of 2:1 and 1:1 current ratio and quick ratio respectively according to Ndemi and Mungai (2018). The average return on assets for small and medium-sized businesses was only 6.67 percent. The Pearson correlation investigation found a link between SMEs' financial viability and their use of formal funding options. Government positive funding and other institutional institutions, such as those recommended by the report, should be utilized by all parties, but the report specifically recommended the government funding.

According to Hasnah *et al.*, (2013) loan collateral is the most significant barrier to small businesses acquiring finance. Collateral is a term used to describe the security or guarantee provided in exchange for the loan. Calice *et al.*,(2012) assessed the role of Bank of Uganda (BoU) in loan management among lending institutions in Uganda. They noted the guidelines by BoU that all loans beyond a particular threshold must be adequately secured by guarantees or a bond over property, both of which most small businesses do not possess. Because the collateral requirements were not met by the targeted group of borrowers (SMEs) the borrowers did not submit their applications for the loans even though it was available to them. Due to bank credit constraints, many small and medium-sized firms were forced to hunt for alternative sources of capital. Offering more trade credit to SMEs helped them survive and thrive in the market, according to Abdulaziz and Worthington (2013). They emphasized that SMEs benefit from bank

funding since borrowed money is used more effectively when the lending institution oversees them. The upshot is that more and more SMEs are being started and run with the support of personal and family savings.

### **2.3.2. The credit cost and financial performance**

Small and medium enterprises within Lira Municipality, Uganda, were studied by Marus *et al.* (2017) to assess the impact of debt finance on their performance. A sample size composed of 120 participants with a 100% response rate was chosen. Research showed that lending to small and medium-sized businesses (SMEs) allows them to get essential resources, diversify their operations, and improve their output. Credit financing, interest rates, creditor information, collateral security, and corporate performance were all heavily scrutinized in this study. As a result of the findings, lenders should continue to offer low-interest loans, while also educating their customers on how to properly maintain their personal financial data, which is critical to their creditworthiness. Small and medium-sized businesses (SMEs) should document their transactions, including information on their personal traits, which are critical in determining a borrower's trustworthiness.

According to Yeboah *et al.* (2014), poor countries' banks have historically had a smaller exposure to SMEs. They discovered that banks give a smaller percentage of investment loans and charge higher fees and interest rates. SMEs face an increasing need for credit, and interest rates are used as an indicator of the cost of borrowing money from a lender, according to Agbazo and Omane (2012). A study by Waithaka and Njeru (2015) found that financing to SMEs is perceived by banks to be risky and expensive, which contributes to their high interest rates. It has been observed that when the banking system was liberalized, inefficient enterprises backed by the government and profited from low-interest loans simply failed, as Osoro and Muturi (2013)

found in their study. The advantages of informal sector funding are eroded by the high interest rates charged by the formal and semi-formal sectors.

A study by Barasa (2013) examined the interest rates levied by banking institutions, the goods offered, and the effect of competition on the ability of lending firms to give credit to SMEs. SMEs' most important sources of financing are microfinance institutions (MFIs) and savings and lending co-ops, according to his findings (SACCOs). For small and medium enterprises, credit funding rates remained low.

Zachary (2012) sought to find out in Nairobi County how interest rates influence the demand for small and medium-sized company loans. A correlational approach was used in the study, which included 48 participants. For both inferential statistics, SPSS was utilized in the data analysis process. From the data, he deduced that interest rates account for 86.9 percent of loan demand among Nairobi's SMEs and that credit, owner equity, and yearly profit all have strong correlations with demand for interest rates.

SMEs within Garissa municipality in Kenya, were studied by Maalim (2016) to see how interest rates affected their ability to obtain loans. Garissa County, Kenya, is home to 10 SACCOs, 150 small and medium-sized businesses, and a descriptive survey was conducted. SPSS data analysis tool and multiple regression was used for data analysis. There is a considerable correlation between interest rate policy and credit availability, according to research done through association and regression.

When it comes to microfinance institutions, Ndegwa (2016) looked into the factors that influence credit availability for small-scale youth entrepreneurial agriculture projects in Kiambu County in Kenya. Researchers employed a cross-sectional survey approach to gather data from all of the

county's small, youth-owned businesses. The data were investigated both quantitatively and qualitatively, with the findings revealing that constructs such as literacy level, interest rate, collateral requirement, and lending institution count all affect credit access. A 1% fall in interest rates increased credit availability by 31% when all other factors were held constant.

### **2.3.3. Borrowers Credit History and Financial performance**

In Guangzhou, China, Cheng, Ya, and Zhifei (2014) explored the difficulties experienced by SMEs in obtaining financing because of knowledge asymmetry. As a result of the enormous information gap between financial institutions, which led to selection bias and moral hazard, China's SMEs discovered the core of their financial woes and took action to rectify it (Zhong, 2008). According to the findings, the study examined how small and medium-sized businesses (SMEs) might overcome financial challenges caused by information asymmetry and credit rationing (Wang, 2012). Negative selection and moral hazards were shown to have resulted in the denial of loans to many small businesses with great growth potential due to a lack of information. Management standards must be improved in order to reduce moral hazard in the SMEs. Small and medium-sized businesses (SMEs) were also urged to conduct research into their financial health in order to prevent unfair selection in the funding market (Li & Cheng 2005). Due to the government's encouragement of the SME sector, they have easier access to funding.

Jens and Lars (2011) studied the impact of two factors on SME loans using data from the United States and Germany. According to the study, SMEs are informationally opaque and reliant on banks. As a result of the limited volume and scope of hard data, the study's premise was that banks relied significantly on soft information when making SME loans. They evaluated if and how hard and soft data impacted the borrower's bargaining power against the bank. For a given

credit rating, some borrowers had better loan terms than others, and this was how they came up with the concept of relative bargaining power.

A total of 1,062 loans were provided by each of the banks. The panel structure was used to investigate cross-sectional and time series variation in banks' negotiating power and information accessible to them (Agarwal & Hauswald, 2007). They found that borrowers' negotiating strength increased when they had more favorable soft information, such as managerial abilities and character. They also showed that a borrower's negotiating power is increased when they have more favorable soft information than hard information. The results were not influenced by credit rating manipulation or statistical constraints (Norden & Weber 2010). According to the findings, borrower negotiating power is strongly influenced by the availability of soft information, which in turn affects the terms of the loan contract.

Credit risk management and financial performance at Rwandan commercial banks were examined by Magnifique (2013). Credit risk analysis and evaluation, credit risk identification, credit scoring, and risk monitoring methodologies were examined as part of the study's aims. Descriptive study was used to examine the effect of law on the financial performance of commercial banks. A questionnaire was utilized to collect the primary data, which was then analyzed using SPSS. Research indicated that credit scoring, risk analysis, and risk detection enhanced the financial health of commercial banks in Rwanda significantly (Kisaka, 2016).

Kwambai and Wandera (2013) assessed the impact arising from credit information exchange on bad debts. They underlined that while lending was the principal business of commercial banks in Kenya, banks in the country had a high rate of loan default by borrowers, resulting in huge losses for the institutions. This occurred because commercial banks possessed inconsistent credit information and credit histories on their borrowers, and credit seekers took advantage of this

discrepancy to obtain several loans from these banks, increasing their default rate due to their inability to service all of the loans (Richard, 2011). to find out how credit information sharing affected non-performing loans, specifically to find out the trend of bad loans before and after Credit Reference Bureau was established, as well as to identify the elements that lead to bad loans, and to identify the economic area with the highest percentage of bad loans and initiatives aimed at mitigating risk in that industry (Collins & Wanjau, 2011).

Kenya Commercial Bank's official financial records and other secondary sources were used to compile the data between 2007 and 2012. The descriptive study design was used with random sampling and data analysis done both qualitative and quantitatively (Bofondi & Gobbi, 2003). Investigative findings showed lending to clients with questionable character, repeat defaulters, high interest rates that made repayment impossible for some, and cash diversion by borrowers were the leading causes of bad loans at the bank (Kwambai & Wandera, 2013). As a result of these reasons, a high number of borrowers missed payments or defaulted on their loans. These concerns were related to lending institutions' information asymmetry (Auronen, 2003).

#### **2.3.4. Loan Repayment and Financial performance**

Gichuki, Njeru, and Tirimba (2014) investigated the barriers to funding for SMEs in Kangemi Harambee Market within Nairobi city. The Kangemi Harambee area's target population of 656 small businesses was narrowed down to 241 for the study's descriptive analysis approach. The stratified random selection approach was employed to choose the participants for the study. In order to demonstrate variations in frequency distributions and percentages, means, standards deviations both pie and bar charts and tables, primary data were collected from research participants through questionnaires and processed in a descriptive manner. Version 21.0 SPSS was used analysis of quantitative data. High payback costs, strict collateral requirements, a lack

of willing guarantors, expensive credit line processing fees, and a short repayment term are listed as the main hurdles to funding for micro and small businesses in the survey. Financial institutions that lend money to small firms and micro businesses should create more flexible repayment terms and criteria that are both cost-effective and appealing, according to the report.

The growth of SMEs in Uganda and financial inclusion were researched by Marus *et al.*, (2021), utilizing data out of sampled districts within the Lango area. The study's objectives were to assess the impact and contribution of SMEs, identify the threats they face, investigate how financial inclusion benefits small and medium-sized business growth, and establish a link between SMEs growth and financial inclusion. An approach known as cross-sectional research was used to conduct this investigation; accordingly, inferential statistics were used as part of a descriptive design. A variety of statistical techniques such as correlation and regression helped to uncover the connections. They found that financial inclusion had a significant effect on the growth of SMEs. The research concluded that purchasing and maintaining financial services is costly, as is the time it takes to return them. As a result, the study noted that not all lending institutions handled small and medium-sized firms with dignity and respect. That low-cost digital loan platforms and flexible payback terms be employed, and that small businesses innovate to produce commodities that are competitive in both domestic and international markets were the recommendations of the report's authors.

SMEs in Machakos County were studied by Kasivu, Kilonzo, and Sang (2020) in an effort to better understand the strategic determinants of their growth. Their research sought to assess how expansion of SMEs within Machakos County affects access to capital and entrepreneurial creativity. A stratified random sample of 384 people was drawn from a population of 114,249 small and medium-sized business owners in Machakos County, Kenya. Respondents filled out

questionnaires, which were used to collect primary data. Descriptive analysis was used to calculate the weighted averages, standard deviations, relative frequencies, and percentages. Data layouts for continuous data processing were generated using SPSS version 21.0 in analytical data processing. Correlation, regression, and other inferential statistical tools were employed to find out the variables' relationships. For purposes sake of clarity, frequency tables were used to break down the data. According to the study, SMEs in Machakos County grew more quickly when they had access to financing, favourable repayment terms, entrepreneur innovation, physical resources, and government policy. The research supported the credit rationing and resource-based theories.

Mutinda (2019) investigated how financial factors affected SMEs' access to loans in Kenya's Machakos County. The researcher's target population was 380 SMEs and used both simple random selection as well as stratified sampling to arrive at a sample size of fifty seven. The study employed the use of both descriptive analysis inferential statistical methods. The study found that factors such as the cost of credit, the length of the payback period, and the size of the organization all had an impact on the availability of loans. More than half of all SMEs were unable to provide all the necessary business information required for credit approval.

Using a case study of young entrepreneurs in Makuyu, Kenya, Mwangi and Bwisa (2013) investigated the hurdles to financing faced by entrepreneurs in that region. A random selection technique was used to select 40 young entrepreneurs from a pool of 200 who had registered their businesses in 2013. We collected and analyzed data from a variety of sources, both primary and secondary, using statistical representations. According to one survey, the high expenses of processing, interest, legal fees, and credit insurance kept the majority of young people from acquiring credit.

## **2.4 Summary of the Literature Review**

According to an examination of the research evidence, the current study made a significant contribution both locally and regionally. However, the emphasis has been more on SMEs' access to funding than on its affordability. As a result, the bulk of past study has focused on one or two independent factors, the most commonly utilized being loan collateral and credit cost. As a result, a much more comprehensive investigation is required, one that evaluates important aspects of affordability such collateral, cost of credit, repayment of loans, and the credit history of borrowers. Several research have revealed substantial negative and positive relationships as a consequence of correlation and regression analysis, underlining the need for the current study to resolve the observed gaps.

**Table 2.1 The summary of research gaps from empirical literature**

<b>Authors</b>	<b>Objective or purpose of study</b>	<b>Research findings</b>	<b>Research gaps</b>	<b>How the current research gaps were closed</b>
Barasa (2013)	Interest rates paid by various financial institutions, product kinds, and the influence of competition on lending organizations in terms of credit access for SMEs	The study discovered that microfinance institutions (MFIs) and savings and credit cooperatives are the key sources of financing for SMEs (SACCOs). However, access to credit funding for SMEs remained insufficient.	The study focused primarily on interest rates and credit products accessible to small and medium-sized businesses. It made no connection between this and the performance of SME.	This study examined the characteristics affecting credit affordability and their relationship to SME success.
Cheng, Ya and Zhifei (2014)	An investigation on SMEs' financing issues in China's southern city of Guangzhou was based on theories of information asymmetry and credit rationing.	SMEs with high growth potential were largely excluded from receiving financing because of the study's findings that there was an informational imbalance that led to selection bias and moral hazard. Financial assessments of small	The study focuses on borrowers' prior credit histories but made no linkages to other aspects of credit administration.	The creditor's history, loan collateral, interest rates, and loan repayment time were all be examined, as these are all key credit administration qualities.

		businesses should be conducted by lending institutions to prevent unfair choice in the financing industry, according to a research.		
Gichuki, Njeru & Tirimba (2014)	To determine the finance challenges faced by Nairobi County's Kangemi Harambee Market's micro and small businesses.	The survey discovered that the key hurdles to financing for micro and small firms include high repayment costs, severe collateral requirements, a lack of willing guarantors, high credit facility processing fees, and a short repayment period.	The study made no reference to the components of borrowers' prior credit history.	The analysis took into account the borrower's prior credit history as well as credit affordability.
Jens and Lars (2011)	We evaluated the impact of two dimensions on SME loans using data from the United States and Germany: bargaining power and information. The study found that SMEs are informationally opaque and heavily reliant on banks. The study was predicated on the premise that banks	The study revealed that when borrowers possess more favorable soft information, such as managerial qualities and character, their bargaining power increases. Additionally, they proved that providing borrower bargaining power with more positive soft information rather than hard facts.	Credit rating modification or statistical constraints had no effect on the research findings.	The conclusions of the research was influenced by credit rating manipulation or statistical constraints and included all credit administration constructs.

	rely primarily on soft information in SME lending due to the scarcity of hard data on a large scale and scope.			
Kasivu, Kilonzo & Sang (2020)	In Machakos County, small and medium-sized businesses are thriving because of a number of strategic factors. Research in Machakos County focused on determining how entrepreneurs' access to credit and creativity impacted growth of small and medium-sized businesses.	There was a significant impact on the growth of SMEs in Machakos County and that the availability of loans, repayment conditions, entrepreneurial innovation, physical resources, and government policy. Researchers found that credit rationing and resource-based theories were correct in their predictions.	The report makes no mention of loan rates or collateral as significant variables determining affordability.	Identifying and filling in any research gaps necessary to fully address the parameters of credit affordability was part of this project.
Kwambai and Wandera (2013)	The study's objectives were to ascertain the impact of credit information exchange and bad debts management, more precisely to ascertain the trend of non performing loans prior to and following the establishment of the Credit Reference	The examination determined that the biggest contributors to the bank's bad loans were lending to borrowers of dubious character, serial loan defaulters, excessive interest rates that made payment difficult for some borrowers, and borrowers' cash	A comprehensive analysis, notwithstanding the omission of loan payback period and collateral as structures. It made no evaluation of the performance of SMEs.	The study considered loan payback time and collateral, as well as a performance metric for SME's.

	Bureau, to ascertain the factors contributing to bad loans, and to ascertain the economic sector with the highest rate of bad loans and the risk mitigation measures implemented in that sector.	diversion.		
Maalim (2016)	Small and medium-sized businesses in Garissa County, Kenya, and how interest rates affect their ability to obtain funding.	Association and regression analysis found a high correlation between interest rate policy and credit availability.	The primary focus is on interest rates and credit availability.	Beyond interest rates, the focus was expanded to include SME performance.
Magnifique (2013)	The impact of credit risk management on Rwandan commercial banks' financial performance was investigated. Credit risk analysis and assessment, identification, scoring, and monitoring systems for commercial banks in Rwanda were all examined as part of this research to see how they impacted their financial results.	The results showed that credit scoring, credit risk analysis, and credit risk assessment all had a favorable and significant impact on Rwanda's commercial banks' financial performance.	This research focused on credit information and scoring in the context of risk management, but did not take into account loan repayment duration, interest rates, or collateral. It made no evaluation of the performance of SMEs.	The study analyzed all facets of credit administration, including loan repayment period, interest rates, and collateral, as predictors of SME performance.

<p>Marus <i>et al</i> (2021)</p>	<p>From selected districts in the Lango subregion of Uganda, evidence of the correlation between financial inclusivity and small and medium-sized business growth. A list of specific goals: Analyzing how small and medium-sized businesses have an influence Financial inclusion and small and medium-sized business growth was examined in this study to determine the obstacles faced by small and medium-sized firms and to analyze how financial inclusion helps to business growth.</p>	<p>The study found that financial inclusion was essential to the growth of small businesses. Financial services were also found to be expensive in terms of both obtaining them and providing them, according to the research. It was also found that some lenders lacked civility and respect for small businesses.</p>	<p>The study evaluated the financial inclusion of SMEs and the treatment of lending institutions. No mention was made of credit affordability.</p>	<p>The study focused on financing options for small and medium-sized firms, as well as their success.</p>
<p>Marus <i>et al.</i>, (2017)</p>	<p>SMEsin Uganda's Lira Municipality were studied to see how loan funding affected their performance. Credit financing, interest rates, creditor information, collateral security, and</p>	<p>Lending institutions should continue to offer reasonable loans while educating their consumers on proper financial information management, which is crucial for establishing a borrower's</p>	<p>Additional dimensions, such as the borrower's prior credit history or loan repayment duration, were not mentioned in the study.</p>	<p>The research was undertaken in Kenya and expanded to include new features of credit affordability, such as borrower history and loan repayment duration.</p>

	performance of the firm were all studied in the research.	credit worthiness.		
Muema & Wamugo (2020)	To find out how collateral, loan-to-income, and branch penetration affect the financial health of small enterprises.	All three of these factors were taken into account to determine the financial health of small businesses in Kenya's Machakos County.	However, other loan affordability factors, such as creditor information or repayment length or interest rates were not mentioned in the study by the researchers.	SME loans were examined in terms of collateral, past borrowers' information, loan repayment lengths, and interest rates as part of the research.
Muratha (2015)	A case study of Family Bank Limited's impact on credit availability for young Kenyan entrepreneurs:	Results showed that for young Kenyan entrepreneurs, there was a clear correlation between collateral and credit availability.	SMEs performance was measures were out of scope for the study which delved mainly credit availability and collateral requirements.	SME performance and credit affordability characteristics such as collateral, interest rates, or payback time were examined in this study.
Mutinda (2019)	In the Kenyan sub-county of Machakos, investigate the financial factors that influence SMEs ability to access credit financing or debt	The research found that factors such as credit cost, the length of the payback period, and the size of the organization had an impact on credit access. The majority of small and medium-sized businesses also had difficulty providing	The researchers found a negative correlation between small business success and ease of access to capital.	The research endeavored to identify a relationship between credit affordability components and performance of SMEs

		all of the required company information in order to get loans		
Mwangi & Bwisa (2013)	Examine the challenges that entrepreneurs face when it comes to obtaining funding through the lens of a case study of adolescent entrepreneurs in Makuyu, Kenya.	The statistics suggested that the majority of youngsters failed to access credit as a result of the high cost connected with hidden fees such as processing fees, interest, legal fees, and credit insurance.	The research did not address all credit access characteristics completely, including repayment period and borrower credit history.	In this study, SMEs were shown conclusively to be linked to important characteristics of loan affordability.
Mwanyika (2013)	In Taita, Kenya, small-scale farming performance is affected by the availability of credit.	Established a negative correlation between the required collateral and the availability of loans.	There was a strong correlation between the availability of loans and collateral in the study.	The scope of the study was expanded to include more credit affordability criteria, as much has changed since 2013.
Ndegwa (2016)	Find out what influences the loan availability of microfinance banks for small-scale youth entrepreneurial agriculture projects in Kiambu County, Kenya.	The findings suggested that credit availability is influenced by a variety of factors, including literacy level, interest rate, collateral requirement, and lending institution count. With all other variables being constant, a one-unit fall in interest rates resulted in a	The study was thorough, but did not cover the loan payback length or the borrower's credit history. We did not assess the performance of SME's.	The examination would cover both the borrowers' prior credit history and loan repayment period. Made an effort to establish a link between SME performance and

		31% increase in credit availability.		
Ndemi & Mungai (2018)	The effect of formal financing on the financial health of Nanyuki, Kenya's small and medium-sized businesses	SME financial viability is positively correlated with formal funding options, according to Pearson correlation study.	According to the findings, both large and small businesses performed equally well in terms of formal financial management.	This research delved considerably deeper into the details of formal financing, with an emphasis on affordability and small business performance.
Rithaa, Munene, and Kariuki (2019)	(SMEs) in Maua, Meru County and effect of bank loan collateral requirements on their performance.	In a linear regression analysis, small businesses' performance was found to be negatively associated with collateral requirements.	An emphasis was placed on the connection between collateral and SMEs' performance in the research.	Numerous other factors affecting small business credit affordability were examined in this study.
Yeboah <i>et al</i> (2014)	Why do banks in underdeveloped nations typically have a lower exposure to SMEs?	That banks supply a smaller proportion of investment loans and demand greater fees and interest rates on those loans.	The study focused primarily on the interest rate-related cost of credit.	The study's scope was expanded to incorporate other credit affordability considerations.
Zachary (2012)	Determine the impact of interest rates on the willingness of SMEs in Nairobi	There was a substantial association between demand for interest rates,	The study concentrated on interest rates and credit	This study examined the relationship between interest rates, collateral, and

	County to get funding.	credit, owner's equity, and yearly profit, and interest rates accounted for 86.9% of loan demand among Nairobi's SMEs.	demand, omitting other constructs affecting loan affordability. Additionally, the performance of SME's was not addressed.	other loan affordability factors and SME success.
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**Source: Review of empirical literature (2022)**

## 2.5 Conceptual Framework

Dependent and independent variables are shown to have a clear relationship within the conceptual framework. The following independent variables were evaluated in the study: a borrower's credit history, the cost of borrowing, and the repayment terms of the loan. The only dependent variable is the net profit margin.

### Independent Variables

#### CREDIT AFFORDABILITY

#### Dependent Variable

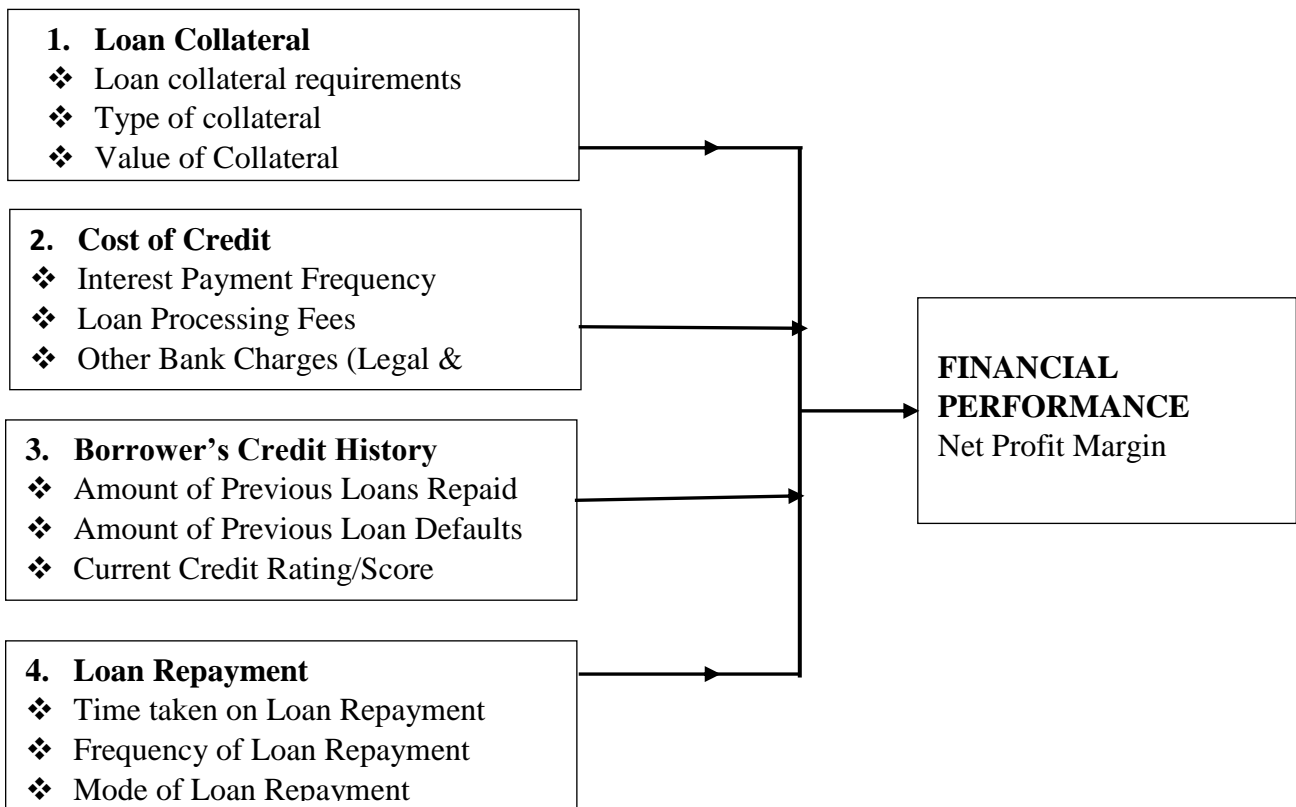


Figure 2.1: Conceptual framework

Source: researcher (2022)

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.1 Introduction

This chapter anchored the research design and methodology of the study. It further explored the methods that enabled the research initiative including the target population, sampling design, data collection, data sorting, data analysis and presentation of the results. The research methodology adopted was aimed at achieving the required study outcome.

#### 3.2 Research Design

Mugenda & Mugenda (2012) posits that research design is critical in getting studies done efficiently. Explanatory research design was adopted for purposes of this study. This methodology was found to be successful in demonstrating the link between small businesses' ability to pay back their loans and their overall financial health within Machakos County, Kenya. Explanatory research techniques, such as those used by Bell *et al.*, (2018), were impactful in explaining the existence of a situation or a problem. It provided a connection among the variables being studied. In the view of Bulmberg *et al.*, (2011), an explanatory research method would aid in describing the links between the variables of interest by addressing the what, why, how and the when of an occurrence. Therefore, the study approach was advantageous for demonstrating a correlation between credit accessibility and small businesses financial success.

#### 3.3 Target Population

There needs to be a correlation between study participants and research objectives, as suggested by Daniel (2016). A subset of a larger population, the target population consists of all elements classified as people or objects and sharing similar features (Buchanan and Bryman, 2009). There were 1,000 small businesses within Machakos County's eight constituencies, as outlined in the

county's 2018-2022 Integrated Development Plan (2021). One hundred small business owners/proprietors were sampled from a pool of a thousand to participate in the study.

### **3.4 Sampling Technique and Sample Size Determination**

To collect data, the researcher used stratified random sampling. In this sampling technique, the population was divided into smaller groupings known as strata. The formation of the stratum was based on the shared qualities or traits of the members. A random sample was drawn from each stratum in a quantity proportionate to its size relative to the population. The strata's subsets were then combined to create a random sample. By dividing the number of SMEs in each sector by the overall number of SMEs in Machakos County, sector weights were used to create a sample of 100 SMEs. Through the use of stratified sampling, the researcher introduced probability sampling, in which each subject had an equal chance of being chosen. Mugenda & Mugenda (2003) recommended a 10%–30% range for typical approximations, and this was within that range. The sampling period was between the years 2015 and 2020.

### **3.5 Data Collection Tools**

In order to gather primary data, a questionnaire was employed to solicit the opinions of various study participants. Ideally, the tool was designed to encourage responders to respond. A semi structured questionnaire composed of closed ended as well as open ended questions was used for primary data collection. As posited by Mugenda and Mugenda (2012), questionnaires had the advantage of being both inexpensive and easy to administer for large data collection.

### **3.6 Pilot Study**

#### **3.6.1 Test for Validity**

Validity is the degree to which a test is accurate and authentic. The validity of the research instruments was ensured by the application of variable validity. Construct validation meant

putting a variable's measure to a series of tests to discover its correlation with other possibly linked constructs, whether negative, positive, or absent (Bell *et al.*, 2018). Pre-testing the financial performance against data from two SMEs ensured there was enough and favorable information. Saunders and Lewis (2012) emphasizes that a data collection instrument is valid only when it is capable of measuring what it was intended to measure. Pre-testing of the research instrument and expert opinion was included in the study. Piloting was conducted by distributing five questionnaires at random to small businesses in Machakos County, Kenya. This assisted in finding outliers which required more clarification thereby increasing the questionnaire's quality and validity.

### **3.6.2 Test for Reliability**

This was the level of consistency with which research methodologies yielded similar results when applied in a variety of contexts. The test-retest method was used to verify the instrument's dependability. Reliability can be judged by a coefficient of at least 0.70 or higher. It is appropriate to use coefficients greater than 0.70 in situations involving the social sciences (Gliem & Gliem, 2003).

### **3.6.3 Data Collection Procedure**

The questionnaires were distributed via online using Google forms platform and a pick-and-drop approach. The study was entirely reliant on primary data for both the independent and dependent variables. Questionnaires were administered by research assistants working under the direct supervision of the principal researcher.

### **3.7 Data Analysis**

Multiple regression as well as descriptive statistical analysis was used to perform data analysis. SPSS version 28 was used to code and analyze the data in accordance with the study's goals. For

the purpose of summarizing data, descriptive statistics employ the mean and standard deviation. The financial performance of the dependent variable was examined through the use of multiple regression analysis (Tiwari, Arya, & Bansal, 2017).

We'll use the following regression model in our study.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where:

**Y**= Financial performance measured in terms of the Net profit margin

**$\alpha$** = Intercept

**$X_1$** = Loan Collateral

**$X_2$**  = Cost of Credit

**$X_3$**  = Borrowers Credit History

**$X_4$** = Loan Repayment, and

**$\epsilon$** = error term.

Statistical data shall be provided in forms of graphs, tables as well as figures.

### **3.8 Variable Definition and Measurement**

The target variable was financial performance (net profit); while the predictor variables were loan repayment period, loan collateral, cost of credit and borrowers credit history. Coefficient of correlation, descriptive statistics using mean and standard deviation and multiple regression analysis were done to investigate the relationships between the target variable and predictor variables. Analysis of Variance was done as an indicator for predicting whether the regression

model was significant in prediction of relationship between credit affordability and financial performance.

### **3.9 The Ethical Considerations**

Ethical research was conducted through adherence to all applicable ethical guidelines. The confidentiality and anonymity of the respondents was protected (Babbie, 2011). We sought permission from the School of Business, Economics & Tourism at Kenyatta University before proceeding with this research. We also sought and got permission from national commission for Science, technology and innovation (NACOSTI) to conduct this study. It was the goal of the study to look into plagiarism and uniqueness. By hiring and training research assistants, we made certain that no information or data was falsified during this study.

## **CHAPTER FOUR**

### **DATA ANALYSIS, PRESENTATION AND INTERPRETATIONS**

#### **4.1 Introduction**

This section involved analysis of data and presentation of the results on the relationship between credit affordability and financial performance of SMEs in Machakos County, Kenya. The results herein were further interpreted in the context of related previous work done.

#### **4.2 Response Rate**

This represented the sampled respondents who participated in the research and returned their questionnaires as intended by the researcher. The questionnaires were presented to the respondents both on a personal basis as well as through the online google forms platform to increase the response rate. This study employed the use of 100 questionnaires and got feedback from 70 of them which represented a 70% response rate. This means that 70% of the respondents whom we were sampled did participate with valid responses to the study. 80% of sampled SMEs had been in operations for periods ranging between 1-7 years. From the responses received, most of the SMEs were in the retail and IT industry operations. In addition, 84.3% of the SMEs had a net worth of fifty million Kenya shillings and below. 91.4% of the SMEs had employee numbers between 1 to 30 while the remaining 8.6% had employee numbers between 30 to 50.

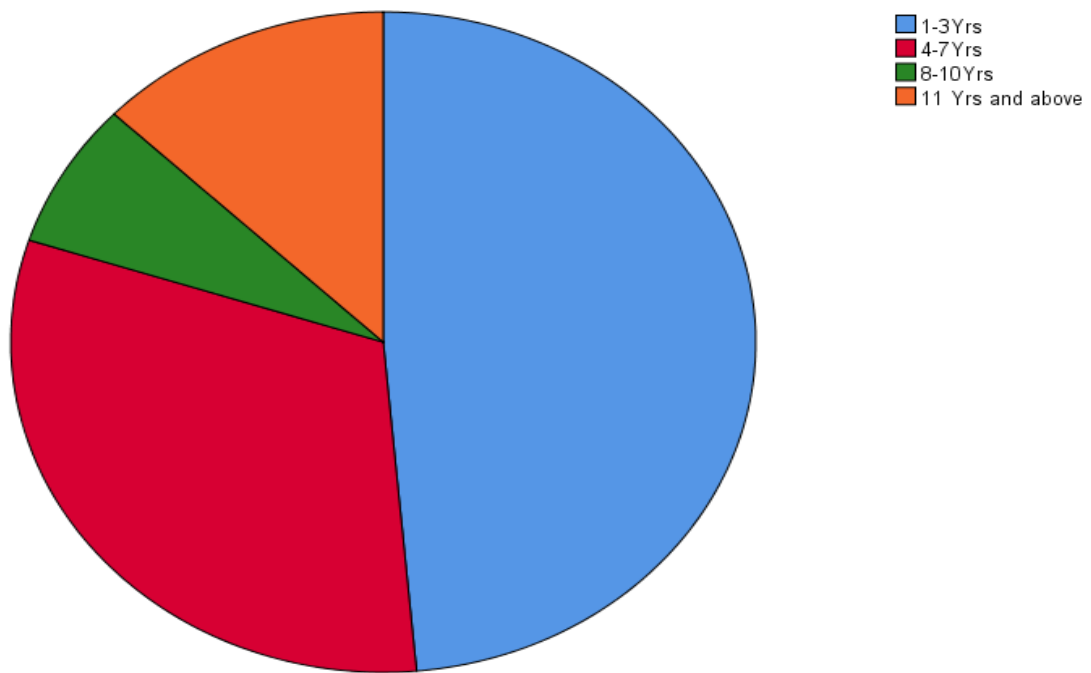
### 4.2.1 Operation Period

**Table 4.1 Operational period**

<b>Year</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
1-3 Years	34	48.6	48.6
4-7 Years	22	31.4	80.0
8-10 Years	5	7.1	87.1
10 and Above Years	9	12.9	100
	70	100	

**Source: Research data 2022**

**Figure 4.1 Operation period**



The study sought to examine the operational period of the SMEs to determine their experience in the industry and whether they had sought credit facilities from the various lending institutions. The results were as shown Table 4.1. The table indicates that majority of the SMEs (48.6%) had been in operation between 1-3 years followed closely by those that had been in operation for between 4-7 years at 31.4% giving a cumulative percentage of 80% for SMEs that had be in operations from between 1-7 years. The same was captured on pie figure 4.1.

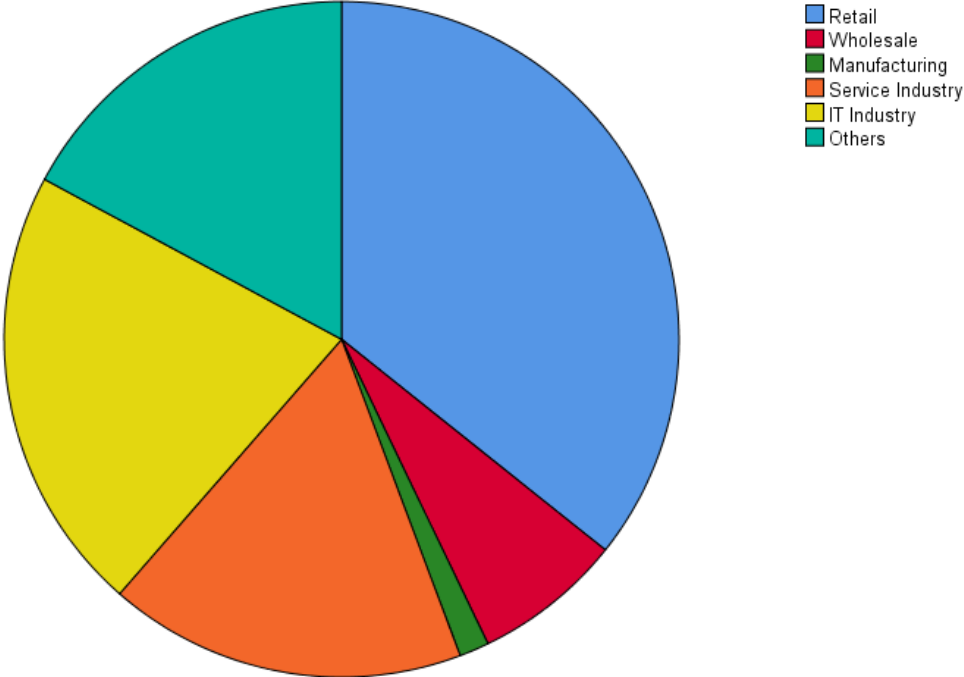
#### **4.2.2 Distribution of SME by Sector**

**Table 4.2 Distribution of SME by Sector**

<b>Type of Business</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
Retail	25	35.7	35.7
Wholesale	5	7.1	42.9
Manufacturing	1	1.4	44.3
Service Industry	12	17.1	61.4
IT Industry	15	21.4	82.9
Others	12	17.1	100
Total	70	100	

**Source: Research data 2022**

**Figure 4.2 Distribution of SME by Sector**



This study sought to investigate the type of SME business that was operational in the county whether manufacturing, retail, wholesale, service industry, IT industry among others. The outcome was captured on table 4.2. The results showed that majority of the SMEs (35.7%) operated under the retail industry closely followed by the IT industry at 21.4% among others. This is illustrated in figure 4.2.

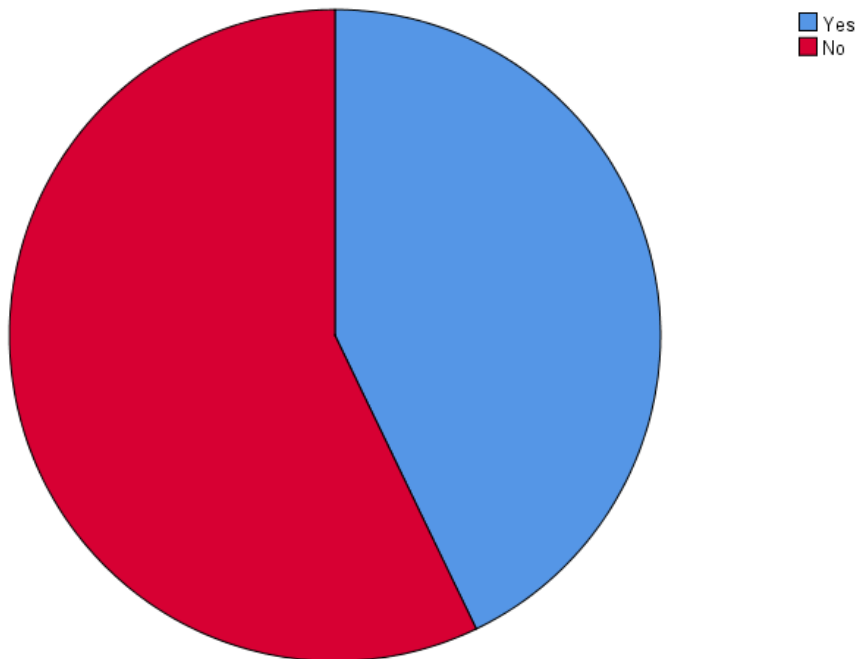
### 4.2.3 SME Loan Financing

**Table 4.3 Loan financing**

Successful SME Loan Application	Frequency	Percent	Cumulative Percent
Yes	30	42.9	42.9
No	40	57.1	100
Total	70	100	

**Source: Research data 2022**

**Figure 4.3 Loan financing**



The study sought to investigate the number of SMEs which had applied for a loan to finance their businesses in Machakos county and whether they were successful or not. The results were presented in table 4.3. It showed that only 42.9% of the SMEs had successfully applied for loan

to finance their businesses from the lending institutions while the remaining 57.1% were unsuccessful in their loan applications. This is illustrated in figure 4.3

### 4.3 Descriptive Statistics

The study aimed at providing results for both the standard deviation and mean analysis for loan collateral, cost of credit, borrowers credit history, loan repayment and financial performance of SMEs in Machakos County from 2015 to 2020. Koutsoyannis, 1977 posits that research data needs to be empirical gathered, recorded and tabularized to ascertain patterns and behavior using charts and graphs in order to address the research gaps.

**Table 4.4 Descriptive analysis**

	<b>N</b>	<b>Mean</b>	<b>Standard Deviation</b>
Loan Collateral	70	3.87	0.900
Cost of Credit	70	3.60	1.027
Borrowers Credit History	70	3.09	1.113
Loan Repayment	70	3.39	1.080
Financial Performance	70	3.74	1.017

**Source: Research data 2022**

The observations made were that the mean ranged from 3.09 and 3.87 as the standard deviations ranged from 0.900 and 1.113. The outcome indicated small variation in credit affordability and financial performance meaning a much higher degree of agreement. Loan collateral requirements provided the least standard deviation observed with a mean of 3.87 and a standard deviation of

0.900. While the highest standard deviation was observed on borrowers credit history with a mean of 3.09 and a standard deviation of 1.113. The cost of credit had a mean of 3.60 and a standard deviation of 1.027 and loan repayment had a mean of 3.39 and a standard deviation of 1.080. The dependent variable financial performance had a mean of 3.74 and a standard deviation of 1.017.

#### 4.4 Correlation Analysis

**Table 4.5 Correlation Analysis**

<b>Credit Affordability Variables</b>	<b>Financial Performance (Net Profit)</b>	
Loan collateral	<b>r1</b>	0.794
Cost of Credit	<b>r2</b>	0.854
Borrowers credit history	<b>r3</b>	0.895
Loan repayment	<b>r4</b>	0.903

The research sought to investigate the existence of a relationship between credit affordability and financial performance of SMEs in Kenya' Machakos County. To achieve this, correlation coefficient analysis was used. Table 4.5 shows that a linear relationship was established between financial performance (net profit) and loan collateral represented by  $r_1 = 0.794$  hence a positive and strong relationship between loan collateral and financial performance of SMEs. The linear relationship established between financial performance (net profit) and cost of credit was represented by  $r_2 = 0.854$ . This confirms a strong positive relationship between the cost of credit and financial performance of SMEs in Machakos County, Kenya.

The linear relationship established between financial performance (net profit) and borrowers credit history was represented by  $r_3 = 0.895$  hence a strong positive relationship between the borrowers' credit history and financial performance of SMEs in Machakos County, Kenya. Finally, the linear relationship established between financial performance (net profit) and loan repayment was represented by  $r_4 = 0.903$ . This was an indicator of a positive and strong relationship between the loan repayment and financial performance of SMEs.

#### 4.5 Regression Analysis

This research sought to investigate the strength of the relationship between credit affordability and financial performance of SMEs in Kenya' Machakos County. To enable achievement of this, a multiple linear regression was done on the independent variable financial performance (net profit) against the four dependent variables namely loan collateral, cost of credit, borrowers' credit history and loan repayment. The derived model for regression was as shown below;

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where:  $R_1$  was the financial performance represented in the study by net profit,  $\alpha$  is the intercept or regression constant,  $X_1$  is the loan collateral,  $X_2$  is the cost of credit,  $X_3$  is the borrowers credit history,  $X_4$  is the loan repayment and  $\epsilon$  the models error term.

**Table 4.6: Model's goodness of fit statistics**

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.926 <sup>a</sup>	.857	.849	.278	2.072

a. Predictors: (Constant), Loan Repayment, Loan Collateral, Cost of Credit, Borrower's Credit History

b. Dependent variable: Financial performance (Net profit)

**Source: Research data 2022**

Table 4.6 indicates the presence of a good linear relationship between financial performance and credit affordability. This fact is supported by coefficient correlation (R) of 0.926. The value of 0.849 which is the coefficient of determination indicates a strong relationship between financial performance and credit affordability. It is measured by adjusted R-Squared. This is translated to mean that credit affordability accounted for 84.9% of the variations in financial performance (net profit) while 15.1% was explained by other factors other than credit affordability. In order to test the presence of any chance of autocorrelation within the residuals of the model, Durbin Watson test was used. The Durbin Watson test results returned no autocorrelation with a value close to 2 (2.072). As relates to Pearson’s correlation (R) the existence of a positive and strong correlation was established between financial performance and credit affordability among SMEs in Machakos County, Kenya.

**Table 4.7 Analysis of variance (ANOVA)**

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	30.080	4	7.520	97.681	.000 <sup>b</sup>
Residual	5.004	65	.077		
Total	35.084	69			

a. Predictors: (Constant), Loan Repayment, Loan Collateral, Cost of Credit, Borrower’s Credit

History

b. Dependent Variable: Financial performance (Net profit)

**Source: Research data 2022**

Table 4.7 represented ANOVA data used in presenting significance of the regression model. An indicator for predicting whether the regression model was significant in prediction of the relationship between credit affordability and financial performance was a P-value of 0.000. From the results since the P-Value was less than 0.05, the model overall was a good fit. The F critical at 5% level of significance was 97.681 since F calculated was more than F critical, it showed that the overall model was statistically significant in explaining financial performance of SMEs in Machakos County and thus the model was very significant.

**Table 4.8 Regression Coefficients**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	.419	.182		2.304	.024
Loan collateral	-.098	.095	-.104	-1.029	.307
Cost of credit	.202	.093	.216	2.178	.033
Borrowers credit history	.378	.115	.419	3.291	.002
Loan repayment	.388	.123	.421	3.149	.002

a. Independent variables: Loan Repayment, Loan Collateral, Cost of Credit, Borrower's Credit History

b. Dependent variable: Financial performance (Net profit)

**Source: Research data 2022**

In order to determine the relationship between financial performance and credit affordability, regression analysis was done and the regression equation used was

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

$$Y = 0.419 - 0.098X_1 + 0.202X_2 + 0.378X_3 + 0.388X_4$$

The analysis results on table 4.8 indicated that with all factors constant, (loan collateral, cost of credit, borrowers credit history and loan repayment), the financial performance of SMEs in Machakos County was 0.419. The analysis findings showed that with all other three independent variable held constant, a unit increase in loan collateral requirement led to -0.098 decrease in financial performance; a unit increase in favorable cost of credit leads to a 0.202 unit increase in financial performance all else held constant; a unit increase in usage of favorable borrowers credit history led to a 0.378 unit increase in performance financially all else held constant and a unit increase in favorable loan repayment conditions led to a 0.388 unit increase in financial performance all else held constant.

This was in line with Marus *et al.* (2017) who assessed the impact of debt finance on performance of SMEs and found that low interest loans and availability of creditor information had an impact on access to credit financing. This was in line with a study by Kasivu, Kilonzo, and Sang (2020) who found that SMEs in Machakos County grew more quickly when they had access to financing, favorable repayment terms, entrepreneur innovation, physical resources, and government policy. In addition, Ndegwa (2016) found that variables such as literacy level, interest rate and collateral requirement impact access to credit and that a 1% fall in interest rates

increased credit availability by 31% when all other factors were held constant. This finding was in agreement with the current research findings which indicated the existence of a significant relationship between cost of credit and financial performance of SMEs.

The results indicated a significant relationship between credit affordability and the financial performance of SMEs in Machakos County, Kenya. From the results in table 4.8 with a P-value of 0.307 which was greater than the level of significance of 0.05, loan collateral had no significant relationship with financial performance of SMEs in Machakos County, Kenya. We therefore failed to reject the null hypothesis in the study that there is no significant relationship between loan collateral and financial performance of SMEs in Machakos County, Kenya. This was attributed to most lending institutions offering unsecured loans through guarantors instead of collateral requirements. This was in agreement with a study by Calice *et al.*, (2012) which found that because collateral requirements could not be met by the SMEs, many opted to hunt for alternative sources of capital.

Cost of credit has a P-value of 0.033 which is less than the level of significance of 0.05 hence there is a significant relationship between cost of credit and financial performance of SMEs in Machakos County, Kenya. Thus, we rejected the null hypothesis that there was no significant relationship between cost of credit and financial performance of SMEs in Machakos County, Kenya.

The output indicated that borrowers' credit history had a P-value of 0.002 which was less than the level of significance of 0.05 thus there was a significant relationship between borrowers' credit history and financial performance of SMEs in Machakos County, Kenya. Consequently, we reject the null hypothesis that there is no significant relationship between borrowers' credit history and financial performance of SMEs in Machakos County, Kenya. The results also

indicate that loan repayment conditions has a P-value of 0.002 which is less than the level of significance of 0.05. Hence there is a significant relationship between loan repayment and performance financially of SMEs in Machakos County, Kenya. Therefore we reject the null hypothesis that there is no significant relationship between loan repayment and financial performance of SMEs in Kenya's Machakos County, Kenya.

The current study found that there existed a significant relationship between cost of credit and financial performance of SMEs in Machakos County, Kenya. This concurs with a study by Mutinda (2019) which concluded that factors such as the cost of credit, the length of the payback period, and the size of the organization had an impact on the availability of loans and that more than half of all SMEs were unable to provide all the necessary business information required for credit approval. In addition, Muema and Wamugo (2020) found that SMEs in Machakos County, Kenya, had low profitability due to a lack of access to financial capital. They found that loan-to-income ratios and regional branch penetration had a significant positive impact on the financial performance of SMEs in Machakos County, Kenya.

Gichuki, Njeru, and Tirimba (2014) investigated the barriers to funding for SMEs in Kangemi Harambee Market within Nairobi city. They found that high payback costs, strict collateral requirements, a lack of willing guarantors, expensive credit line processing fees, and a short repayment term were the major barriers for SMEs access to credit financing. This was in agreement with the current study findings which identified cost of credit as having a significant relationship with SMEs financial performance. The above studies concluded that there existed a significant relationship between credit affordability and financial performance of SMEs. The study findings were therefore in line with other previous studies.

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

From the data analysis results and review of previous work done based on literature, the chapter summarizes the research findings as well as conclusions arrived at. In addition, the research limitations, recommendations including areas that require further study have been elucidated. A summary of recommendations and conclusions from the research findings forms the basis for this chapter.

#### 5.2 Summary of the Study

The main aim of the investigation was to establish the relationship among credit affordability and financial performance of SMEs in Kenya's Machakos County. SMEs are key enablers of economic growth, as they significantly contribute to job creation, innovation, and poverty reduction. SMEs employ 74% of Kenya's workforce and contribute 18% to the country's GDP. At 34.3 percent of the economy, Kenya's small businesses are a major contributor to the *Jua-Kali* informal sector, which has consistently grown between 1993 when it was 13.8 percent to 18 percent in 1999 and to 25 percent in 2012. There are a number of ways to say this: According to a 2007 SME banking sector analysis, Kenya has 2.2 million SMEs, with 88% of them being unregistered. The failure rate for small businesses in Kenya is high, with three out of every five failing during the first few months of operation, according to the country's statistics. Poor financial management and credit availability are to blame for lenders' predisposition to demand collateral in order to hedge against the risk of the borrower.

The regression analysis indicated a significant relationship between cost of credit and the financial performance of SMEs in Machakos County. Correlation analysis results indicated a strong positive relationship among cost of credit and financial performance of SMEs in Machakos County, Kenya. This meant that improvement in cost of credit terms led to increase in net profit hence directly proportional to financial performance. Lack of improved cost of credit terms led to decrease in financial performance (net profit).

The study found a significant relationship between borrowers' credit history and financial performance of SMEs in Machakos County in Kenya. The correlation analysis results reflected a strong positive relationship between borrowers' credit history and financial performance of SMEs in Machakos County, Kenya. This meant that increased availability of borrowers past credit history led to increased financial performance. A decrease in available borrowers' past credit history led to reduction in fiscal performance.

In view of regression analysis outcome, it was noted that a significant relationship existed among loan repayment and financial performance of SMEs in Kenya's Machakos County. Loan repayment terms and financial performance showed a strong and positive relationship based on correlation analysis results for SMEs in Machakos County, Kenya. This meant that an improvement in loan repayment conditions led to increased financial performance. Lack of improvement in loan repayment condition led to decrease in financial performance of SMEs in Kenya's Machakos County.

The regression analysis findings further indicate that loan collateral had no significant relationship with financial performance of SMEs. The correlation coefficient analysis however reflected a strong and positive relationship among credit collateral and fiscal performance of SMEs in Kenya's Machakos County. It meant therefore that more flexible credit collateral

requirements led to improved fiscal performance while more stringent credit collateral requirements led to decrease in fiscal performance of SMEs.

The significant relationship established among cost of credit and fiscal performance of SMEs, borrowers credit history and financial performance of SMEs as well as credit repayment terms and fiscal performance of SMEs was a prove of the existence of a strong relationship between credit affordability and financial performance of SMEs within Machakos County, Kenya. Results showed that from the four independent variables, three variables namely cost of credit, borrowers credit history and loan repayment had positive coefficients. This meant that improvement in cost of credit terms, availability of borrowers past credit history and favorable loan repayment terms led to growth of net profit a measure for financial performance in this research. To the contrary, stringent cost of credit terms, unavailability of borrowers past credit history as well as unfavorable loan repayment conditions led to decrease in financial performance (net profit).

### **5.3 Conclusion**

The study addressed four specific objectives with related research hypothesis. The first objective involved evaluation of the existence of a relationship between loan collateral and financial performance of SMEs within Kenya's Machakos County. Null hypothesis tested for this objective stated that there was no significant relationship between loan collateral and financial performance of SMEs in Machakos County, Kenya. Regression analysis results showed that there was no significant relationship between loan collateral and financial performance of SMEs hence we failed to reject the null hypothesis. This was attributed to most lending institutions offering unsecured loans through guarantors instead of loan collateral requirements.

The second objective involved determination of the existence of a relationship between the cost of credit and financial performance of SMEs within Machakos. Null hypothesis tested for this

objective stated that there was no significant relationship between cost of credit and financial performance of SMEs in Machakos County, Kenya. Regression analysis showed that there was a significant relationship between cost of credit and financial performance of SMEs hence we rejected the null hypothesis. The correlation results also establish a strong positive relationship between cost of credit and financial performance of small and medium enterprises in Machakos County, Kenya. The study therefore concluded that improvement in cost of credit terms led to increase in net profit hence directly proportional to financial performance while lack of improved cost of credit terms led to decrease in financial performance (net profit).

The third objective involved as assessment of the existence of a relationship between borrowers' credit history and financial performance of SMEs within Kenya's Machakos County. Null hypothesis tested for this objective stated the existence of no significant relationship between borrowers' credit history & financial performance of small and medium enterprises within Kenya's Machakos County. Regression analysis results showed that there was a significant relationship between the borrowers' credit history and financial performance of SMEs hence the null hypothesis was rejected. The correlation results also did establish a strong positive relationship between borrowers' credit history and financial performance of SMEs in Machakos County, Kenya. The study therefore concluded that increased availability of borrowers past credit history led to increased financial performance while a decrease in available borrowers' past credit history led to decrease in financial performance (net profit).

The last specific objective involved establishment of the existence of a relationship between loan repayment and performance financially of SMEs within Kenya's Machakos County. Null hypothesis tested for this objective was premised on the existence of no significant relationship between loan repayment verses performance financially of small and medium enterprises

Kenya's Machakos County. Regression analysis showed that there was a significant relationship between loan repayment and financial performance of SMEs hence we rejected the null hypothesis. The correlation results also establish the existence of a strong and positive relationship between credit repayment and financial performance of SMEs in Machakos County, Kenya. The study therefore concluded that an improvement in loan repayment conditions led to increased financial performance while lack of improvement in loan repayment condition led to decrease in performance financially by SMEs within Machakos County, Kenya.

The results affirmed that the credit affordability variables studied had a statistically significant relationship with financial performance of SMEs. This implied that credit affordability had a significant relationship with financial performance in SMEs and as such lending institutions needed to tailor their loan products putting into consideration the loan collateral requirements, cost of credit, borrowers credit history as well as loan repayment terms to ensure improved SMEs financial performance in Machakos County, Kenya.

This research made a contribution to the credit score cards theory which provides a quantitative assessment of the likelihood that a client would participate in a defined activity, such as loan default, in connection to their current or prospective credit position with a lending organization. The study showed that borrowers' past credit history had a significant relationship with the financial performance of SMEs. This implied that borrowers' credit history which was a product of credit score cards theory found use and established a strong relationship with financial performance of SMEs in Machakos County, Kenya.

## **5.4 Study Recommendations**

### **5.4.1 Policy Recommendations**

In view of the study findings, both the national and county governments should be able to adopt laws and regulations that will safeguard SMEs from financial institution exploitation and ensuring that they have access to inexpensive finance. For the sake of the Big Four Agenda, Vision 2030, and the Millennium Development Goals (MDGs) of eradicating poverty and unemployment in Kenya, the findings of this study on the financial performance of SMEs in Machakos County provides additional impetus to the national government in streamlining the cost of credit across the country in line with the bottom up economic model.

### **5.4.2 Recommendations for Practice**

Lending institutions need to periodically relook at the lending guidelines to ensure their loan offerings are affordable SMEs. The lenders need to tailor specific loan products to cater for SMEs. Small business owners need to be sensitized to better understand credit administration variables including loan collateral requirements, cost of credit, borrower past credit history, and loan repayment conditions. This will enable increased uptake of SME tailored loan facilities. In addition, lending institutions need to avail more information on their credit facilities and receive feedback from SMEs on their credit services to help build more enticing product offerings for business people in various financial categories. This will help in significantly lowering the loan repayment default risks since lenders will appropriately package their loan products. Financial institutions need to improve on their loan application reviews and ensure accurate appraisals based on borrowers' credit history. Financial institutions need to put in place loan control and monitoring measures to manage and track loan performance timely. This helps in ensuring that loan defaults are adequately managed.

From this research, small business owners are able to better understand credit administration variables such as loan collateral, cost of credit, borrower history, and loan payback. In addition, the knowledge acquired can be put to good use by SMEs when approaching lending institutions for financial assistance. The outcomes of this study also provides financial institutions with more information on SMEs impressions of their credit services, which in turn helps in building more enticing product offerings for business people in various financial categories. The lending institutions benefits significantly through lowering the loan repayment default risks since they are able to correctly package their loan products.

To the academia, this study provides a chance for more detailed and targeted research on credit scoring, risk management with regards to loan default in a much wider perspective. In addition, based on the study findings SMEs need to channel their credit requirements through the many available unsecured loans online loans as well as making use of guarantors to access collateral free loan facilities available in the market.

#### **5.4.3 Study Limitations and Recommendations for Further Research**

The study's primary limitation included the high mobility and attrition of SMEs in Machakos County, as well as the time and money required to survey the complete population of study. This was overcome by undertaking sampling to generate a manageable sample, which included timely consultation with respondents on realistic schedules providing feedback from the questionnaires. The study was delayed by participants' reluctance to fill out the surveys out of fear for their privacy. This was addressed by reassuring all participants that the information acquired was to be treated with the highest levels of secrecy and professionalism, as well as being solely utilized for the intended research purposes.

Secondly, the use of primary data from the SMEs posed a problem since there was no repository on required SME data including profitability partly attributed to the inadequate record keeping by the SMEs. In addition, respondents did not manage to finalize the questionnaires in time leading to lengthening of the data analysis timelines. In order to mitigate this, regular reminders existed both online via google forms platform as well as through phone calls. Because some of the information requested through open ended questions were dependent on the respondents' opinion, biases occurred due to differences in individual opinion

The research suggests that further studies be done on credit affordability for SMEs in other counties in Kenya as each county has its own challenges, strengths and weaknesses which are likely to impact the financial performance of the SMEs. Other factors affecting financial performance of small and medium enterprises may be subjected to further research to enable identification of other limitations on realizing the wealth maximization principle. The significance of loan collateral requirements on financial performance of small and medium enterprises may form an area for further research to validate similar findings from this and other related previous studies. Additional factors that impact financial performance of small and medium enterprises including firm size, number of lending institutions available among others should form a basis for further research.

## REFERENCES

- Abdul-Rahamon, O.A., & Adejare, A.T. (2014). The Analysis of the impact of Accounting Records Keeping on the Performance of the Small Scale Enterprises. *The International Journal of Academic Research in Business and Social Sciences*, 4, 1-17.
- Anderson, W. (2017). Factors affecting small & medium enterprises (SMEs) start-up and growth in Tanzania. *Pan-African Journal of Business Management*, 1(1), 1-26.
- Babu, P. K. (2017). *Factors affecting access to formal finance by youth owned SMEs in Kenya: A case of Kiambu County* (Doctoral dissertation, United States International University-Africa).
- Barasa, W. (2013). *Competition among lending institutions and accessibility to credit by small and medium enterprises in Nakuru Kenya*. Unpublished MBA Project, University of Nairobi
- Barboni, G., Cassar, A., Trejo, A. R., & Wydick, B. (2013). Adverse Selection and Moral Hazard in Joint-Liability Loan Contracts: Evidence from an Artefactual Field Experiment. *Journal of Economics and Management*, 9(2), 153-184.
- Bell, E., Bryman, A., & Harley, B. (2018). *Business research methods*. Oxford university press.
- Bertocco, G. (2013). On Keynes's Criticism of the Loanable Funds Theory. *Review of Political Economy*, 25(2), 309-326.
- Bijak, K., Mues, C., So, M. C., & Thomas, L. (2015). Credit card market literature review: Affordability and repayment.
- Chaniwa, M., Nyawenze, C., Mandumbu, R., Mutsiveri, G., Gadzirayi, C. T., Munyati, V. T., & Rugare, J. T. (2020). Ending Poverty Through Affordable Credit to Small-Scale. *Scaling*

*up SDGs Implementation: Emerging Cases from State, Development and Private Sectors*, 115.

Cowan, A. (2019). The SME finance gap in Kenya: how are investors missing the ‘missing middle’? *Institute of Studies Development*. Retrieved from <https://www.ids.ac.uk/opinions/the-sme-finance-gap-in-kenya-how-are-investors-missing-the-missing-middle/>

Daniel, E. (2016). The usefulness of qualitative and quantitative approaches and methods in researching problem-solving ability in science education curriculum. *Journal of Education and Practice*, 7(15), 91-100.

Donkor, J., Donkor, G. N. A., Kankam-Kwarteng, C., & Aidoo, E. (2018). Innovative capability, strategic goals and financial performance of SMEs in Ghana. *Asia Pacific Journal of Innovation and Entrepreneurship*.

Fiseha, G. G., & Oyelana, A. A. (2015). An assessment of the roles of small and medium enterprises (SMEs) in the local economic development (LED) in South Africa. *Journal of Economics*, 6(3), 280-290.

Hackmann, M. B., Kolstad, J. T., & Kowalski, A. E. (2015). Adverse selection and an individual mandate: When theory meets practice. *American Economic Review*, 105(3), 1030-66.

Haddad, K., & Lotfaliei, B. (2019). Trade-off theory and zero leverage. *Finance Research Letters*, 31, 165-170.

Haron, H., Said, S. B., Jayaraman, K., & Ismail, I. (2013). Factors influencing small medium enterprises (SMES) in obtaining loan. *International Journal of Business and Social Science*, 4(15).

- Hovakimian, A., Kayhan, A., & Titman, S. (2012). Are corporate default probabilities consistent with the static trade-off theory?. *The Review of Financial Studies*, 25(2), 315-340.
- Hsing Y. Determinants of the Government Bond Yield in Spain: A Loanable Funds Model. *International Journal of Financial Studies*. 2015; 3(3):342-350.  
<https://doi.org/10.3390/ijfs3030342>
- Ibrahim, A. H., & Bauer, S. (2013). Access to microcredit and its impact on firm profit among rural farmers in dryland of Sudan. *Global Advanced Journal Research on Agricultural Science*, 2(3), 88-102.
- Jakab, Z., & Kumhof, M. (2015). Banks are not intermediaries of loanable funds and why this matters.
- Kagwathi, G. S., Kamau, J. N., Njau, M. M., & Kamau, S. M. (2014). Risks faced and mitigation strategies employed by small and medium enterprises in Nairobi, Kenya. *IOSR Journal of Business and Management*, 16(4), 1-11.
- Karanja, J., Mwangi, A., & Nyakarimi, S. (2014). Analysis of factors influencing access to credit services by women entrepreneurs in Kenya. *Research Journal of Finance and Accounting*, 5(11).
- Karfakis, P., Ponzini, G., & Rapsomanikis, G. (2017). On the costs of being small: Case evidence from Kenyan family farms. *Food and Agriculture Organization of the United Nations*. Retrieved from <http://www.fao.org/3/i7562e/i7562e.pdf>
- Kenya National Bureau of Statistics (KNBS) (2018). *Population by county and sub-county*. Retrieved from [https://www.knbs.or.ke/?page\\_id=3142](https://www.knbs.or.ke/?page_id=3142)

- Kiplimo, J. C., Ngenoh, E., Koech, W., & Bett, J. K. (2015). Determinants of access to credit financial services by smallholder farmers in Kenya. *Journal of Development and Agricultural Economics*, 7(9), 303-313. doi:10.5897/JDAE2014.0591
- Kisaka, S. E., & Mwewa, N. M. (2014). Effects of micro-credit, micro-savings and training on the growth of small and medium enterprises in Machakos County in Kenya. *Research Journal of Finance and Accounting*, 5(7), 43-49.
- Machakos.go.ke (2018). *County Integrated Development Plan 2018-2022*. (2021). Retrieved from <https://Machakos.go.ke/documents/2018-2022%20CIDP%20.pdf>
- Machakos.go.ke (2019). *Machakos County Cooperatives Development Policy*. Retrieved from <https://www.Machakos.go.ke/documents/November%202019%20COOPERATIVE%20DEVELOPMENT%20POLICY%20Final.docx.pdf>
- Madanchian, M., Hussein, N., Noordin, F., & Taherdoost, H. (2015). The role of SMEs in economic development: Case study of Malaysia. *International Journal of Academic Research in Management*, 4(3), 77-84.
- Manzoor, F., Wei, L., & Sahito, N. (2021). The role of SMEs in rural development: Access of SMEs to finance as a mediator. *Plos one*, 16(3), e0247598.
- Mokua, K. (2013). *Factors influencing credit financing of small scale business enterprises, in Kisii County, Kenya*, Unpublished MBA Project, University of Nairobi.
- Mole, S. A., & Namusonge, G. S. (2016). Factors affecting access to credit by small and medium enterprises: A case of Kitale Town. *The international journal of social sciences and humanities invention*, 3(10), 2904-2917.

- Muhammad, T., & Meleми, A. (2021). Assessment of 5Cs Relationship towards Credit Risk Management: Evidence from Islamic Banks. *Journal of Islamic Finance*, 10(1), 76-89.
- Mutinda, A. K. (2020). *Financial factors affecting access to credit among small and medium enterprises in Machakos town sub-county, Kenya* (Doctoral dissertation).
- Mwangi, J., & Bwisa, H. (2013). Challenges facing entrepreneurs in accessing credit: a case of Youth entrepreneurs in Makuyu, Kenya. *Prime journal of business administration and management*, 3(10), 1232-1238.
- Mwanyika, N. T., & Koori, J. (2020). Credit accessibility and performance of small scale farms in Taita Taveta County, Kenya. *International Academic Journal of Economics and Finance*, 3(5), 220-237.
- Ndungu, C. (2016). *Factors affecting credit access among small and medium enterprises in Murang'a County* (Doctoral dissertation, University of Nairobi).
- Njuguna, E., & Nyairo, N. (2015). Formal conditions that affect agricultural credit supply to small-scale farmers in rural Kenya: A case study for Kiambu County. *International Journal of Sciences: Basic and Applied Research (IJSBAR)*, 20(2), 55-66.
- Nkuah, J. K., Tanyeh J. P. & Gaeten, K. (2013). Financing small and medium enterprises (SME's) in Ghana: Challenges and determinants in accessing bank credit, Published Project, Kwame Nkrumah University of Science and Technology. Kumasi Ghana
- Nkuah, J. K., Tanyeh, J. P., & Gaeten, K. (2013). Financing Small and Medium Enterprises (SMEs) in Ghana: Challenges and Determinants in Accessing Bank Credit. *International Journal of Research in Social Sciences*, 2, 12-25.

- Ongore, V. O., & Kusa, G. B. (2013). Determinants of financial performance of commercial banks in Kenya. *International journal of economics and financial issues*, 3(1), 237.
- Peussa, A. (2016). Credit risk scorecard estimation by logistic regression.
- Rithaa, M. J., Munene, N. H., & Kariuki, A. (2019). Effects of Banks Loan Collateral Requirement on Performance of SMEs in Maua Town, Meru County, Kenya. *World Journal of Innovative Research*, 6(1), 90-95.
- Saleem, M. A., & Jan, F. A. (2016). The impact of agricultural credit on agricultural productivity in Dera Ismail Khan (District) Khyber Pakhtonkhawa Pakistan. *European Journal of Business and Management*. Retrieved from <https://core.ac.uk/download/pdf/234624007.pdf>
- Salim, M. M. (2013). Revealed objective functions of microfinance institutions: evidence from Bangladesh. *Journal of Development Economics*, 104, 34-55.
- Stiglitz, J. E., & Weiss, A. (1981). Credit rationing in markets with imperfect information. *The American economic review*, 71(3), 393-410.
- Tehseen, S., & Ramayah, T. (2015). Entrepreneurial competencies and SMEs business success: The contingent role of external integration. *Mediterranean Journal of Social Sciences*, 6(1), 50-50.
- Thuku, A. G. (2017). *Factors Affecting Access to Credit by Small and Medium Enterprises in Kenya: A Case Study of Agriculture Sector in Nyeri County* (Doctoral dissertation, United States International University-Africa).

- Tiwari, R., Arya, R. K., & Bansal, M. (2017). Motivating students for project-based learning for application of research methodology skills. *International journal of applied and basic medical research*, 7(Suppl 1), S4.
- Treece, K & Tarver, J. (2021, May 24). Understand The 5 C's of Credit Before Applying for a Loan. *Forbes ADVISOR*. <https://www.forbes.com/advisor/credit-score/5-cs-of-credit/>
- Yip, A. W., & Bocken, N. M. (2018). Sustainable business model archetypes for the banking industry. *Journal of cleaner production*, 174, 150-169.

**APPENDIX I: Research Questionnaire**

*Dear Respondent,*

*This research endeavors to analyze the **Credit Affordability and financial performance of Small and Medium enterprises within Machakos County in Kenya**. You have been selected to be part of this research with the assurance that the information you will provide shall be treated with highest level of confidence and used only for academic purposes. We therefore request your utmost objectivity as you proceed with filling in the questionnaire. Thank you.*

*Mr. Fredrick Okoth Bitta*

*MBA (Finance) student; Student Registration Number: D53/PT/28222/2019*

*School of Business,*

**Kenyatta University.**

**PART A: THE RESPONDENT AND BUSINESS INFORMATION**

The respondents business name [optional].....

{Please tick as applicable}

- 1. **Sex:** Male  Female
- 2. **Age:** 20 yrs and below.  . 20-30yrs.  . 31-40yrs  41yrs and above
- 3. **Level of Education**  
 KCSE  Diploma  First Degree  Second Degree  Doctorate Degree
- 4. **Years of Experience as an SME Business Owner in Machakos County:**  
 1-3Yrs  4-7Yrs  8-10Yrs  11 Yrs and above

5. **Type of SME Business:**

Retail  Wholesale  Manufacturing  Service Industry  IT Industry  Others

6. **The Number of Years in SME business:**  Below 1Yr  1-3Yrs  3-5Yrs  Above 5 Yrs

7. **Business Net worth:**  Less than Kshs 50,000,000  50,000,000-100,000,000  above Kshs 100,000,000

8. **Number of Employees:**  1- 30  30 - 50  Above 50 people

9. **Have you successfully applied for a loan to finance the enterprise from a lending firm/bank previously?** Yes  No

10. **If the above answer is No, what was the reason for loan denial** Loan collateral  Cost of credit  Borrowers Credit History  Loan Repayment terms  Others

**PART B: LOAN COLLATERAL**

Kindly mark the boxes below on the degree by which you agree or disagree with the statements in relation to Loan collateral.

The Key: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4= Agree, 5=Strongly Agree

	Statement	Responses				
		5	4	3	2	1
<b>a</b>	All lending institutions (Banks) where financial support (loan) was sought required a collateral/loan security					
<b>b</b>	The collateral requirements differed from on					

	lending institution to the other					
<b>c</b>	The type of collateral required was different for each lending institution					
<b>d</b>	The value of the collateral required was higher compared to the loan requested					
<b>e</b>	The value of the collateral required differed from one lender to the other for a similar loan request					
<b>f</b>	You often compare loan collateral requirements among various lenders within Machakos County					

11. Does your business operate a single or multiple accounts with different financial institutions (Banks)? Single Account.  Multiple Accounts with Different Banks.

12. Have you ever been denied a business loan due to lack of adequate collateral or loan security? Yes.  No.

13. Please explain your answer above.....

14. In your opinion, are collateral requirements prohibitive for SME business borrowers in Machakos County? Yes.  No.

15. Kindly provide more details on your answer above .....

**PART C: COST OF CREDIT**

Kindly mark the boxes below on the degree by which you agree or disagree with the statements in relation to Cost of credit

The Key: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4= Agree, 5=Strongly Agree

	<u>Statement</u>	Responses				
		5	4	3	2	1
<b>a</b>	The loan-interest payment charged differed from one lender to another					
<b>b</b>	The loan processing fees charged was different from one lender to another					
<b>c</b>	Other banks charges including legal fees and insurance fees was made known to the borrower					
<b>d</b>	Penalties on loan default was different from one lender to the other					
<b>e</b>	The total cost of the loan was made known to the borrower prior to taking the loan facility					
<b>f</b>	You often compare the cost of credit among various lending institutions within Machakos County					

16. Does your Bank(s) have a specific loan facility tailored to SME businesses in Machakos County?

Yes.  No.

17. Please explain your answer above.....

18. Have you ever defaulted on a loan repayment resulting in a loan penalty fee? Yes.  No.

19. Do you consider the cost of credit prohibitive for SME business borrowers in Machakos County?

Yes.  No.

20. Please explain your answer above .....

**PART D: BORROWERS CREDIT HISTORY**

Kindly mark the boxes below on the degree by which you agree or disagree with the statements in relation to Borrowers Credit History.

The Key: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4= Agree, 5=Strongly Agree

	<u>Statement</u>	<b>Responses</b>				
		<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
<b>a</b>	The amounts of previous loans repaid was used to determine a successful loan application					
<b>b</b>	The amounts of previous loans defaults was used to determine unsuccessful loan application					
<b>c</b>	The borrowers previous credit history was sought from the CRB during the loan application					

	processing					
<b>d</b>	Other borrower characteristics were reviewed during the loan application apart from the credit score on previous loan performance					
<b>e</b>	The borrowers past credit history was used to reduce or deny a loan application					

21. Have you ever defaulted on repayments of previous loan obligations? Yes.  No. .

22. Please explain your answer above.....

23. Have you ever been listed in the Credit Reference Bureaus (CRB) for loan defaults by any lending institutions (Banks)? Yes.  No. .

24. Have you ever been charged higher interest on a loan based on your high risk profile (credit score)? Yes.  No. .

25. Please explain your answer above.....

**PART E: LOAN REPAYMENT**

Kindly mark the boxes below on the degree by which you agree or disagree with the statements in relation to Loan Repayment

The Key: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4= Agree, 5=Strongly Agree

	<u>Statement</u>	Responses				
		5	4	3	2	1

<b>a</b>	The time taken for loan repayment was longer for some lending institutions as compared to others					
<b>b</b>	The frequency of loan repayment was different from one lender to another					
<b>c</b>	The lenders allowed various modes of loan repayment including cash, Mpesa among others.					
<b>d</b>	The mode of loan repayment was different from one Lender to another					
<b>e</b>	Information on loan repayment was all disclosed to the borrower					

26. From previous experience with your financier, were you able to negotiate a flexible loan repayment period? Yes.  No.

27. Please explain your answer above.....

28. Have you ever defaulted on a loan obligation due to the frequency of loan repayment? Yes.  No.

29. Do you consider the frequency of loan repayments prohibitive for SME business borrowers in Machakos County?  
Yes.  No.

30. Please explain your answer above .....

**PART F: INCOME STATEMENT**

Kindly mark the boxes below on the degree by which you agree or disagree with the statements in relation to financial performance of SMEs

The Key: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4= Agree, 5=Strongly Agree

**Table 1**

	<u>Statement</u>	Responses				
		5	4	3	2	1
<b>a</b>	The business faced frequent stock outs due to lack of funds thereby affecting its net profit					
<b>b</b>	There was a reduction in sales volumes due to lack of funds thus impacting the net profit					
<b>c</b>	The net profit margin was reduced due to high costs of loan repayments					
<b>d</b>	The business could not secure funding due to lack of collateral thus impacting its income statement					
<b>e</b>	The business could not secure funding due high costs of credit and thus affecting its income statement					
<b>f</b>	The business could not secure funding due to the borrowers past credit history thus affecting its financial performance					
<b>g</b>	The business could not secure funding due the stringent and shorter repayment period and thus impacting its income statement					

**Table 2**

Please fill in the boxes below with data on financial performance including annual sales revenue, cost of sales and expenses of the SME business to enable calculation of the Net Profit Margin, the dependent variable of the study

	<b>Year</b>					
<b>Item</b>	2015	2016	2017	2018	2019	2020
Sale Revenue						
Cost of Sales						
Expenses						
Net Profit /Loss Margin						

**APPENDIX II: Letter of approval from graduate school**



**KENYATTA UNIVERSITY  
GRADUATE SCHOOL**

E-mail: [dean-graduate@ku.ac.ke](mailto:dean-graduate@ku.ac.ke)

Website: [www.ku.ac.ke](http://www.ku.ac.ke)

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

Internal Memo

**FROM:** Dean, Graduate School

**DATE:** 23<sup>rd</sup> August, 2022

**TO:** Fredrick Bitta  
C/o Accounting and Finance Dept.

**REF:** D53/PT/28222/2019

**SUBJECT:** APPROVAL OF RESEARCH PROJECT PROPOSAL

This is to inform you that Graduate School Board at its meeting of 17<sup>th</sup> August, 2022 approved your Research Project Proposal for the MBA Degree Entitled, "Credit Affordability and Financial Performance of Small & Medium Enterprises in Machakos County, Kenya".

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

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking and progress report Forms per semester. The Forms are available at the University's Website under Graduate School webpage downloads.

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

Thank you.

**ANNBELL MWANIKI  
FOR: DEAN, GRADUATE SCHOOL**

c.c. Chairman, Accounting and Finance.

Supervisors:

I. Dr. Job Omagwa  
C/o Department of Accounting and Finance  
Kenyatta University

AMM/202



**APPENDIX III: Letter from graduate school to NACOSTI**



KENYATTA UNIVERSITY  
GRADUATE SCHOOL

E-mail: [dean-graduate@ku.ac.ke](mailto:dean-graduate@ku.ac.ke)

Website: [www.ku.ac.ke](http://www.ku.ac.ke)

P.O. Box 43844, 00100  
NAIROBI, KENYA  
Tel. 8710901 Ext. 57530

Our Ref: D53/PT/28222/2019

DATE: 23<sup>rd</sup> August, 2022

Director General,  
National Commission for Science, Technology  
and Innovation  
P.O. Box 30623-00100  
NAIROBI

Dear Sir/Madam,

**RE: RESEARCH AUTHORIZATION FOR FREDRICK BITTA – REG. NO. D53/PT/28222/2019.**

I write to introduce Fredrick Bitta who is a Postgraduate Student of this University. The student is registered for M.B.A degree programme in the Department of Accounting and Finance.

Bitta intends to conduct research for a M.B.A Project Proposal entitled, “**Credit Affordability and Financial Performance of Small & Medium Enterprises in Machakos County, Kenya**”.

Any assistance given will be highly appreciated.

Yours faithfully,

A handwritten signature in blue ink, appearing to read 'E. Kimani'.

PROF. ELISHIBA KIMANI  
DEAN, GRADUATE SCHOOL




AM/inn

**APPENDIX IV: Approved research permit from NACOSTI**

Republic of Kenya  
**REPUBLIC OF KENYA**

Ref No: **999073**

**RESEARCH LICENSE**




**This is to Certify that Mr.. Fredrick Okoth Bitta of Kenyatta University, has been licensed to conduct research in Machakos on the topic: Credit Affordability and Financial Performance of Small and Medium Enterprises in Machakos County Kenya for the period ending : 31/August/2023.**

License No: **NACOSTI/P/22/20040**

**999073**  
Applicant Identification Number

**Director General**  
**NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION**

Verification QR Code



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