

**THE EFFECT OF INTEREST RATE ON CREDIT ACCESS BY SMES IN THE  
FISHERIES SECTOR KISUMU COUNTY, KENYA**

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D61/37441/2020**

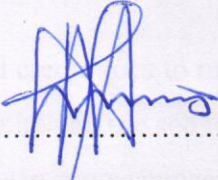
**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS  
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UNIVERSITY OF NAIROBI.**

**NOVEMBER, 2022**

## DECLARATION

I hereby declare that this project is my own work and effort and that it has not been submitted anywhere for any award.

Signature.....



Date.....

26/11/2022

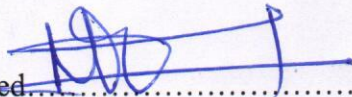
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This research project has been submitted for examination with my approval as the University Supervisor.

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Finally, I dedicate this project to my family members, whose support and prayers, remain my bedrock to never giving up in my master's study.

## **DEDICATION**

I dedicate this research to my lovely wife Mercy Atieno Ong'any

And

My children Tivan Jabali Juma and Mirella Adia Juma

## **ABSTRACT**

This study sought to assess the effect of interest rates on credit access in SMEs in the fisheries sector in Kisumu County, Kenya. In order to achieve this, the study adopted the use of mixed research design. The study collected primary data from a sample of 209 SMEs. In addition, the study collected secondary data from a sample of ten Commercial Banks, Ten Micro Finance Banks and ten Microfinance Institutions. The study collected time series data for a period of 22 years between 2000 and 2022. The findings from the multiple linear regression supported the hypothesis about the negative impact of interest rates on credit accessibility among SMEs in the fisheries sectors. Offering higher interest rates has a negative effect of introducing more restrictive measures hence leading to the increased rejection of credit application from SMEs. In addition, the study showed negative relationship between credit accessibility and different levels of interest rates.

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## CHAPTER ONE: INTRODUCTION

### 1.1 Background of the Study

Businesses use credit access as one of important processes for accessing more capital (Aggarwal, Klapper, and Singer, 2013). Businesses of all sizes routinely seek for capital infusion to meet their short- and long-term obligations. Microcredits offers a great promise involving joint liability loans to small and medium enterprises (SMEs) and groups of people lacking collateral. Consequently, this enables them to make productive investments. Lenders experience risks and increased costs of lending large capital to finance operations among borrowers. The implication out of this is when borrowers find themselves trapped into a credit poverty snare for failure to identify most profitable ventures because of credit limitations. Microcredits offers a great promise that involves joint liability loans to SMEs and groups of people that lack collaterals (Gichuki, Njeru, & Ondabu, 2014). Proponents of microcredit maintain the possibility of raising income and consumption, creditworthiness, financial self-sufficiency, and empowering entrepreneurs (Balogun, Nazeem, and Agumba, 2016). Critics hold it can contribute towards over indebtedness causing unending poverty and crowding out of other interventions. Zachary (2012) argues that microcredits come along with many charges as interest rates.

This study used the Loanable Funds Theory (Robbertson, 1934; Ohlin (1937) and Credit Rationing Theory (Stiglitz & Weiss, 1981) of interest rates and credit availability. Zachary (2012); Aggarwal, Klapper, Singer, (2013) contend institutions providing microcredits to borrowers now charge interest rates to cover all costs. Such institutions can advance their services to many SMEs, cover administrative costs, and be higher than conventional lenders. Interest rates in sustainable microfinance Institutions (MFIs) need to remain higher than what other commercial banks charge their customers. SMEs experience enormous obstacles limiting them to access credit financing from either micro or commercial financial institutions (Ndungu, 2014). SMEs need internal or external financing to stimulate their profitability - which helps accelerate business growth and stability (Baum and O'Malley, 2003). Several theories have been developed to underscore the link between interest rates and credit access among borrowers (Ogujiuba, Ohuche, & Adenuga, 2004). SMEs in Kenya cover 98 percent of all businesses operating in the country (Central Bank of Kenya [CBK], 2021). While they comprise a mixture of self-employment outlets conducting a myriad of activities, they are always concentrated in towns, cities, and trading centers within the rural areas across the country. They continue to play important economic roles by employing 30 percent of

jobs annually, contributing 3% to GDP (gross domestic product) (CBK, 2021). Efforts to access more finances to invest in their daily operational activities remain the center for their continued existence. While SMEs operate in different sectors across the country, their focus is in industries that do not require heavy investments. The Lake Victoria fishery supports the export market chain that handles supplies to fish processing factories as well to the export and regional markets. The second chain covers supplies distributed to the domestic market consumer market in Kenya (Almubarak, et al., 2018). Moreover, Lake Victoria handles a large number of SMEs operating in fisheries value chain and other related services across production, processing, delivery, and selling of fish products.

### **1.1.1 Rate of Interest**

Krugman (2018) defines rate of interest as the reward one gets after advancing liquid assets as a measure of the willingness of those that have money as an opportunity cost (p. 146). He further argues, the rate of interest acts as a price of a loan lenders charges borrowers when they use the borrowed money in form of loans. Mankiw (2018) adds economists differentiate between the nominal and real interest rates. The former explains what the central bank reports while the latter refers to the interest rate corrected for the effects of inflation (p. 455).

The Kenya Bankers Association launched the total cost of credit (TCC) in collaboration with the CBK in 2017 to provide lenders and borrowers a platform to understand the cost of borrowing (Kenya Bankers Association [BA], 2017). Consequently, microfinance banks (MFBs) and commercial banks (CBs) in Kenya had adopted the TCC to enable their customers to compare loans offered in different banks. The TCC uses standardized parameters and a common computational model to arrive at the annual percentage rate (APR). In specific, the KBA notes MFBs and CBs use interest rates component, bank charges & fees, and third-party costs (legal fees, government levies and insurance) to calculate the final cost of credit. Both MFBs and CBs in Kenya have adopted the APR model that converts all associated costs (TCC) to arrive at one number expressed into percentage form.

### **1.1.2 Credit Access**

Regis (2017) refers to credit access as the contractual agreement between a borrower and a lender to receive valuable assets repayable over a later date with an Interest rate. Here, the credit can be

a creditworthiness or a credit history of a firm. Ingham (2012), credit is when a business maintains a balance sheet by decreasing assets or increasing liabilities and equity. Osoro and Muturi (2013) also refers to credit access as the ability of an enterprise or individuals to secure a mix of capital structures through debt or equity in order to finance operations.

Different studies have come up with varying models to measure credit access among businesses. Heinz and Nabokin (2013) used nominal scales of 0 and 1 to measure access to credit across three measures – firms applied for credit and secured, firms applied and were rejected, those that were encouraged or not encouraged from applying for credit. One, Sanni, and Ijaiya (2019) applied nominal scale to measure credit access by focusing on the number of SMEs that applied and secured credit as 1 and 0 for those that applied for and got rejected by financial institutions. Zachary (2013); Malik and Gikandi (2016); Regis (2016) measured the credit access among SMEs through two approaches - access to credit (dummy variable 1 if a firm has a loan, 0 otherwise) and amount of the loan granted to firms). Hainz and Nabokin (2013) used a unique firm-level survey data to develop a direct measurement for access to credit. They provided for the first time, one of an empirical evaluation of such methods. They classified credit access into three categories firms using loans, firms that have applied for a loan but were rejected, and firms that were discouraged from applying for credit.

### **1.1.3 SMEs in the Fisheries Sector, Kisumu County**

The 2005 Sessional Paper No 2 presents a clear definition of SMEs as an enterprise employing a workforce ranging between 1 to 50 members. The MSMEs 2011 bill covers two aspects to give a general definition. First, it uses the number of employees and people working in such businesses and second; it uses the annual turnover. The Micro and Small Enterprises Act, 2012 uses four criteria to define MSMEs - sector, annual turnover, number of employees, and assets/investment. Small businesses operating in all sectors, must have a turnover of Ksh. 500,000 to 5 million with 10 to 49 employees. The medium-size businesses in manufacturing, service, farming, and other sectors, should have an annual turnover of Ksh. 5 million and Ksh. 10 million with 50 to 250 employees and assets/investments amounting to Ksh. 125 million and Ksh. 250 million respectively (MSEA Act, 2012). According to the World Bank, five criteria are important when referring to SMEs in any country. It should be a registered business with annual turnover of K.sh. 8 - 100 million, an asset base of at least Ksh. 4 million and 5 - 150 employees.

These three definitions show a lack of one agreed definition of SMEs. The definition presents a lack of scale of operations because of different sectors of operation, currency, and variability in their annual turnover. For clarity of this study, it was important to adopt a definition that considers registered enterprises with the County government of Kisumu. Those employing employees ranging from 1 to 20, and those operating in the fisheries supply value chain within Kisumu County. According to the data available from Kisumu County, the fisheries value chain SMEs covers enterprises involved in production, processing, delivery, and selling. According to the 2009 Economic Survey, developing countries have many informal and micro enterprise sectors. This also explains the strategic functions the sector plays in economic development.

A study of SMEs by Karuga and Abila (2007); Kizito, Kimani, & Lodiaga (2017) in Murangá County revealed SMEs experience challenges of accessing finances despite availability of numerous financial institutions that are supposed to support them through financing. Kisumu County has 25 branches of major banks such as Standard Chartered Bank Kenya, African Banking Corporation, Bank of India, Barclays Bank of Kenya, and Bank of Baroda among others. In addition, the region has 170 micro finance institutions such as the Kenya Women Finance Bank (KWFT), Kenya Women Holding Limited, SMEP Microfinance Bank Ltd, Unity Micro Investment, Association of Micro Finance Institutions, and Mega Micro Finance Ltd. The country also has numerous micro saving institutions, Credit Cooperatives, and insurance firms with the responsibility of advancing credit to SMEs. However, SMEs in Kisumu County have not been successful in benefiting from credit from these institutions (Luis, 2019). One out of five SMEs were successful in securing credit after applying. Besides, Lake Victoria remains the main source of different types of fish that supports the economy of Kisumu and the rest of Kenyan markets. Despite the growth in the number of SMEs operating in this sector, many of them are not supported by the numerous financial institutions in the same county. Many SMEs that depend on this industry still experience the challenge of growth and completion from their peers in other countries. This explains the reason to focus on this sector to understand the relationship between interests and credit access.

## **1.2 Research Problem**

Studies raise concerns around issues that make the majority of SMEs not to secure credit from intermediary financial institutions. More importantly, Malhotra (2007) finds when SMEs access credit, they find the opportunity to become flexible, allocate resources, and cut down on problems

arising out of cash flow. A majority of SMEs experience limited external financing because of the fact that many of the intermediary financial institutions have internal policies that restrict them from providing funds to applicants. Banks find themselves lending credit on short term as opposed to long term period. Credit accessibility theories such as the loanable funds help explain the connection between interest rates accessibility to loanable funds among borrowers. So far, research on this topic still shows divergent views of the impact of interest rates on credit accessibility (Lugo, 2008).

In Kisumu County, a majority of SMEs operating in fisheries sectors have failed to grow to the same level as other sectors (Andoh and Nunoo, 2011). Studies on the fisheries sector have relied on a number of performance indicators such as profitability, market share, returns on investment, and earnings (Kimuyu and Omiti, 2000). While other SMEs in other counties have succeeded in securing loans from microfinance institutions, the fisheries sector has ranked in the 15th position in accessibility to financing index (Muigai and Maina, 2018). According to the report published by the Central Bank of Kenya (CBK, 2022), one out of five SMEs succeeded in securing loans from financial institutions. Central Bank of Kenya (2020) report also notes in 2020, the commercial banks advanced the largest credit to MSMEs amounting to 34.2%. MSMEs operating in real estate and transport and communication received credit amounting to 22.2% and 10% respectively. While on the other hand, the fisheries sector received the lowest credit accounting at 3.7% and 1.9% respectively. Besides, the CBK report shows microfinance banks advanced credit amounting to 45.4% to MSMEs operating in the trade sector followed by 13.7% and 12.6% for those in real estate and agricultural sectors, respectively. While energy and mining MSMEs received the lowest allocation at 0.5% and 0.2% respectively.

Considerable studies have been done in the fisheries sector to establish the relationship between interest rates and credit access. Malhotra (2007); Maguchu (2013) are some of the studies focusing on micro finance services and growth of SMEs and their performance. However, studies fail to include the fisheries sector in Kisumu County. No research exists showing the correlation between rates of interest charges, internal costs, external costs charged by micro-finance and commercial banks, and credit secured by SMEs in fisheries sub-sector. The objective of this study is to examine the impact of interest rates on access to credit among SMEs operating in the fisheries sector in Kisumu County. The study was restricted on internal costs, interest rate charges, and external costs



on credit access (amount applied, amount given. The study seeks to answer the question: what is the effect of interest rate on credit access in SMEs in the case of Kisumu County fisheries sector?

### **1.3 Research Objective**

To assess the effect of interest rates on credit access in SMEs in the fisheries sector in Kisumu County, Kenya

### **1.4 Value of the Study**

The study seeks to build knowledge for future reference among scholars. Future researchers will understand the concept of credit access and interest rates. In addition, researchers can understand some of the limitations they are likely to face and how to bridge them.

Second, the study seeks to help owners of SMEs in their management responsibilities. The findings from this study helps owners of SMEs operating in Kisumu and other counties across Kenya to understand how they can access credit. The insights from this study helps leaders responsible for business growth in the county to come up with enabling policies to support business growth.

Third, the study seeks to support policy making in banks, small financial institutions, educational institutions and other business development agencies in Kisumu County to understand the needs of businesses. The findings also shape how they draft their training modules, areas to provide funding, and the reason to target interest related charges. For banks, to understand why they need to focus more on interest rates to increase credit issuance to businesses. The study results guide policy and credit issuers to businesses. Policy makers have little understanding about the perception of SMEs towards appraisal costs, internal penalties, and huge differences between amounts applied and amount issues.

## **CHAPTER TWO: LITERATURE REVIEW**

### **1.1 Introduction**

Earlier literature of theoretical foundations on the credit access-interest rate nexus focused on understanding intermediary financial institutions across the world in order to illustrate their roles in providing finances for the growth of businesses (Saleh and Abu Afifa, 2020). The focus of this chapter is on theoretical frameworks and associated empirical studies that have examined the relationship between credit access and interest rates (Ali, Ago, Ukwuaba, and Chiemela, 2017).

### **1.2 Theoretical Framework**

This section adapts the use of two theories – the Loanable Funds Theory and Credit Rationing Theory as two interest rates and credit availability theories to study the impact of interest rates on credit access among Fisheries SMEs in Kisumu County.

#### **1.2.1 Loanable funds Theory**

The Loanable Funds Theory guided this study and understand the relationship between interest rates and credit availability to borrowers. Dennis Robbertson (1934) and Bertil Ohlin (1937) developed the loanable funds doctrine in the 1930s to explain the market interest rates using the price level, the real savings, and the real investments to determine the bank credit availability to borrowers. In order to get changes in credit availability, banks must multiply the price level by the difference between the real savings and real investment. Proponents of this theory agree that the market for loanable funds is an open market that brings together the savers who come into the market to save, and the borrowers who come to the market to apply for loans. Within this market, there exists one interest rate applicable to both the return to savings and the cost of borrowing. Mankiw (2018) advanced this theory to explain the supply and demand for loanable funds and how it can affect credit accessibility to borrowers.

This theory informed this study by understanding that the market for loanable funds in the fisheries sector, just like any other goods and services market, governed by the supply and demand. The supply of loanable funds arises from people and businesses with extra income and who are willing to save and lend out directly (buying a bond) or indirectly (deposit in a bank). Hence, savings becomes the source for the loanable funds. While on the other hand, the demand for loanable funds by SMEs come from businesses in the fishing value chain that seek to access more credit to support their investment. Banks charge interest rates as a price to the loans - this represent the amount borrowers pay to access credit and the amount lenders receive out of their savings.

### **1.2.2 Credit Rationing Theory**

Stiglitz and Weiss (1981) used the argument of internal risk to develop the credit rationing theory in a market of imperfect information. He referred to credit rationing in two scenarios - either among borrowers who appear to be identical but only a few receive the loan while others fail to. The rejected borrowers/applicants fail to receive a loan even when a bank demands higher interest rates. Second, when a bank identifies a group of individuals within a population that can provide credit but cannot obtain loans at any given interest rates. They showed that in an equilibrium market, the loans markets are always characterized by credit rationing. Commercial banks advancing loans to borrowers are always concerned about the interest rates they get on the loan as well as the risk of internal charges on the loan. However, they argue that the interest rates a bank charges is likely to have an effect on the riskiness of a loan through - selecting a few borrowers to lend to or affections behaviors of borrowers. Banks experience the challenge of selecting good borrowers thus, they use different screening devices such as willingness to pay interest rates, appraisal costs, penalty on internal charges, principal amount applied for, collateral, and equity demanded by banks from borrowers.

The study used the CRT to inform the understanding of an equilibrium market which Stiglitz and Weiss (1981) defines as the presence of many banks and many potential borrowers. While both borrowers and banks seek to maximize profits, the former do so through projects while the latter selects interest rates, collaterals, appraisal changes, and Internal charges from the borrowers. The study confined the screening devices to the interest rates, appraisal costs, and internal charges.

### **1.3 Empirical Studies**

De Meza (2002) refers to loan appraisal as evaluation of the solvency of the potential borrower. This generally includes appraising the debtor's credit history and instituting the sustainability and quality of his income. The creditor contents himself of the moral intentions of the debtor, generally through an interview. Four appraisal systems include asset-based lending, financial statement lending, relationship lending, and credit scoring. These methods are used to address the forms of issues that can contribute to either credit restriction. Furthermore, Berger and DeYoung (2001) posit exposure to loan risk is a main issue in modern financial management. Credit executives must implement suitable justification measures to reduce the risk. According to the Kenya Bankers

Association (KBA) external parties levy charges on credit that are beyond control of MFBs, CBs, or MFIs. In specific, KBA categorizes third party costs as external charges into legal fees, insurance, government levies, stamp duty, valuation fees, security registration fees, and other third party costs (KBA, 2020).

Kithae (2012) categorizes internal charges into all fees such as penalty fees when a debtor misses to pay back a debt as per the initial agreement. The time between failing a loan payment and having the loan avoidance is called delinquency. The delinquency period gives the borrower time to evade Internal by communicating with their credit servicer or making up failed payments. Anthony (2015) studied the elements of loan internal charges and its impacts on monetary performance of Ghana's commercial banks with Fidelity Bank. Results showed SME customers (49.5%) evade more than salary, agriculture, and personal loan clients. Similarly, Mark and Gabriel (2017) found out that the related loan reporting demote itself accounts for 25% to 65% of their perceived decline in loaning at several horizons over the subsequent several years.

However, Athreya, Xuan and Eric (2014) argued disciplinary penalties and internal charges ensured reasonable loaning financial organizations are obligated to improve credits at or close to duties that are risk-free, as well as increase admission to loans. Nevertheless, severe penalties also make loan seekers precarious, as loans must be paid irrespective of a debtor's ex post situations.

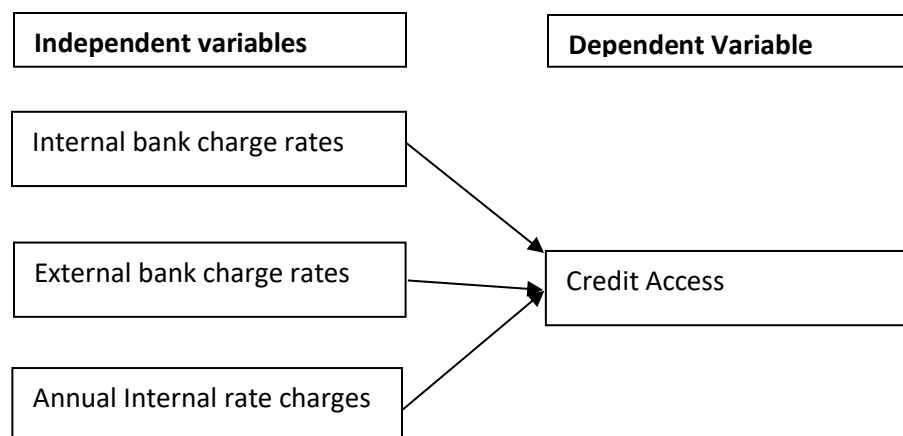
Habibulla (2010) found lesser interest rates directly affect the bond market. As rates increase, individuals are also less probable to refinance or borrow current loans, due to the costly nature. Variations in interest rates have both negative and positive impacts on the marketplace. Juan et al., (2021) studied SMEs in liberalization rate in Colombia and its impacts on loan expansion. Results showed for each percentage point boost in the microcredit lending rate, the number of fresh credits grew by 4.5% and the full credit portfolio rose by 3.7%. Similarly, Apergis (2000) posits a rise in actual interest rates thus inspires both total and monetary savings and, subsequently, investment. The latter impact, enhancement in the quality of investment, happens because an upper interest level rule out deals projects with low yield.

Scholars in microfinance posit borrowers are never sensitive to rates of interest imposed by lenders when making funding agreements (Maguchu, 2013). Central Bank of Kenya (2021) posits businesses considered the importance of accessing funds than rates of interest between 2015 and 2017. Most enterprises earned higher profits provided it was easier for them to secure working capital from financial institutions. Malhotra (2007) studied the impact of lower lending rates on

demand for funds by SMEs in the U.S.A. The findings showed a negative statistically significant impact of lending interest rates on credit demanded. Lower interest rates attracted many borrowers to request for credit from financial institutions. More new borrowers were attracted to apply for more funds.

Lower lending rates increase the quantity demanded for funds. While excessive rates of interest reduce the level at which business owners are willing to apply for more funds to support their operations. Microfinance institutions consider lower interest rates to increase the rate at which they depend on donors' money. Moreover, higher rates of interest create more scrutiny leading to worse borrowers because of adverse selection. The average rate of interest in Kenya charged on micro small and medium enterprise loans ranged between 10 percent to 21 percent for the period running between January 2018 and 2021 (Central Bank of Kenya, 2021). The commercial banks and other microfinance banks charged an average of 12% and 15.6% respectively. The CBK report notes the average interest rates for institutional category ranged between 16.6% for micro enterprises, 12.4% for small enterprises, and 12.3% for medium enterprises. The banking industry advanced a majority of its funding to MSMEs. The funding accounted for 14% and 15% of total deposits made across commercial and microfinance banks in Kenya, respectively. Despite a high level of rate of interest, the 2000 CBK report shows banks design different credit products targeting MSMEs operating in many sectors in Kenya. For example, over 60% of products were designed to target three categories of MSMEs. Over the same year, 10% of commercial banks provided credits targeting only medium-size enterprises, 8% targeting small enterprises, and 60% came from microfinance banks. 36% included credit products advanced to only micro and small enterprises (Central Bank of Kenya, 2021).

#### 1.4 Conceptual Framework



**H1:** The internal bank charge rate on credit is related to the level of credit access by SMEs in the fisheries sector

**H2:** The external bank charges imposed on credit by third parties is related to the level of credit access by SMEs in the fisheries sector

**H3:** The annual internal rate charges on credit is related to the level of credit access by SMEs in the fisheries sector

### **1.5 Summary of Literature Review**

Extant studies reviewed under the empirical section focused on understanding the relationship between interest rates and credit access among different types of businesses (Berger and DeYoung, 2001; De Meza, 2002). Despite the use of varying theories on this topic, the studies indicate conflicting results (Kithae, 2012; Athreya, Xuan and Eric (2014). Moreover, there is a gap in how studies measure credit access and interest rates in Kenya. There is a need for a study that captures the true measurements and determinants of credit accessibility and interest rates that lenders MFBs, MFIs, and CBs in Kenya charge as interest rates to business borrowers. In specific, reviewed studies do not acknowledge the Total Cost of Credit (TCC) pricing mechanisms adopted by all MFBs and CBs to allow consumers to compare varying bank loan costs based on standardized parameters and common computation model (Kenya Bankers Association, 2022).

## CHAPTER THREE: RESEARCH METHODOLOGY

### 3.1 Introduction

This study seeks to examine the effect of interest rates on credit access in small and medium sized enterprises among fisheries in Kisumu County. The six areas of focus are: Research design, population, sample design, data collection, validity and reliability, and data analysis.

### 3.2 Research Design

The study used explanatory research to study the situation of interest rates and credit access among the owners of SMEs in Kisumu County. This method has been used successfully by other studies to find a relationship between credit availability and interest rates (Kimuyu and Omiti, 2000). Experience surveys was used to administer questionnaires to owners of SMEs in the fisheries sector in Kisumu County. The outcome of questioning from experience surveys might help studies develop new hypotheses, reject the old one, or come up with new information about the practicality of conducting research (Saunders, Lewis, and Thornhill, 2016).

### 3.3 Population

The study targeted 1,239 registered SMEs operating in fisheries value chain, microfinance banks (MFBs), 80 microfinance institutions, and 30 commercial banks (CBs) in Kisumu County. The fisheries value chain SMEs participate in an interlinked value chain addicting activities whose objective is to transform inputs into outputs and in turn, add to the bottom line in order to reach the final consumer (Food and Agriculture Organization (FAO, 2011). The study seeks to collect data from managers involved in decision making and those responsible for applying, processing, and managing credit access from financial institutions. Moreover, 1,239 SMEs are involved in the fisheries industry in Kisumu County obtained from the county's department of business and trade.

### 3.4 Sample Design

$$\text{Sample Size} = \frac{(Z - score)^2 \times stdDev \times (1 - StdDev)}{(Confidence Interval)^2}$$

$$\text{Sample Size} = \frac{(1.96)^2 \times .5 \times 0.5}{(0.05)^2}$$

$$\text{Sample Size} = 385$$

The study used simple random sampling to select a sample of SMEs businesses from the sampling frame unit provided by the county government. Saunders, et al, 2016) also suggests that simple

random sampling remains suitable for studies that seek to collect data from accurate and easily accessible sampling frames listing the target population.

**Table 1: Sample size**

<b>Target</b>	<b>Sample size</b>
SMEs	385
Microfinance banks	10
Microfinance institutions	10
Commercial banks	10

### **3.5 Data Collection**

Both primary and secondary data were used to find answers to the study questions. Primary data was collected through self-administered structured questionnaires. All questionnaires were delivered to business premises and respondents given a period of two weeks to go through and fill all the relevant questions. Besides, follow-up mobile phone calls were made as polite reminders to respondents who had not filled their questionnaires after two weeks. Second, secondary was collected from Microfinance Institutions (MFIs), microfinance banks (MFBs) and commercial banks (CBs) that operate in Kisumu County. The data was collected from a sample of ten commercial banks and ten microfinance banks (MFBs) and ten Microfinance Institutions (MFIs). The data collected covered a period of 22 years (2000-2022). The annual data was collected from the credit records maintained by the credit departments and published by the CBK annual Bank Supervision reports. Banks with less than 10 years of data were dropped from the sample.

### **3.6 Validity and Reliability**

The study used validity to test the goodness of measures of credit access and interest rates. The empirical model was drawn from the Kenya Bankers Association (2017) for developing the TCC to guide all microfinance banks (MFBs) and commercial banks (CBs) in costing credit to borrowers. The main model is a modification of previous approaches used by Muigai & Maina (2018). To measure credit access, the study designed the questionnaire to have a categorical question for 1 = have a loan, 2 = rejected, 3 = discouraged. The secondary data focused on credit access for 1 = have a loan and 2 = rejected. Second, the study used internal consistency of measures to achieve reliability. The study used Cronbach's coefficient alpha to test for the inter item



consistency reliability. Coefficient values ranged between 0 and 1. Values over 0.7 indicated questions measure the same thing.

### 3.7 Data Analysis

The study conducted descriptive and inferential statistics tests. The former analysis involved description of a sample of SMEs by showing the frequency and percentage of years in operation, area of operation in the value chain, number of employees, total annual venue, and number of applications made to financial institutions to access credit. Multiple linear regression explained the relationship between credit accessed by SMEs in the fisheries sector in Kisumu as a response/dependent variable and three explanatory/independent variables - opinion on internal costs, external costs, and interest charges.

### 3.8 Econometric model

The model was specified as follows;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_p X_p + \varepsilon \quad Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_p X_p + \varepsilon \quad \text{----- 1}$$

Where  $\beta_0, \beta_1, \beta_2, \dots, \beta_p$  constants are referred to as the model regression coefficients.  $\varepsilon$  is a stochastic random disturbance or error term. While  $X_1, X_2, \dots, X_p$  are values of explanatory/independent variables. The study used model 2 to estimate the values of coefficient variables affecting credit access among SMEs.

$$CA = \beta_0 + \beta_1 IRC + \beta_2 INC + \beta_3 EXC + \mu \quad \text{..... 2}$$

Where,

*CA = Credit access*

IRC = Interest rate charges

INC = Internal charges

EXC = External charges

$\beta_0 = \text{constant term}$

$\beta_{1-3} = \text{regression coefficients of independent variables}$

The study used the t-test statistics at 5% level of significance interval to test the hypothesis about the relationship between the response and predictor variables.

## **CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION**

### **4.1 Introduction**

This chapter presents the response rate as a percentage of the total number of respondents that returned their filled questionnaires divided by the total number of respondents who received the questionnaires. In addition, it explains the data validity, descriptive statistics, correlation analysis, regression analysis and hypothesis testing of two models, as well as the final discussion of research findings.

### **4.2 Response Rate**

The study targeted a sample of 385 SMEs through their managers. However, a total of 209 respondents returned their questionnaires achieving a response rate of 54%. The study attributed to respondents who failed to return their questionnaires to a number of factors. Sekaran and Bougie (2016) suggests while the response rate is always low, a 30% response rate is still acceptable. Cooper and Schindler (2014) on the other hand, maintains that a 30 - 77% response rate is acceptable. Therefore, this response rate is adequate for this analysis.

### **4.3 Data Validity**

The study applied both judgment and a panel of persons to make judgment on how well the questionnaire and secondary data met the standards. First, review of literature on Loanable Funds Theory, Credit Rationing Theory, and KBA TCC model on costing of credit. Moreover, the Total cost of a loan (Interest rate) was measured on interest rates charges, internal charges, and external charges. Moreover, a panel of expert through external moderator assisted in guiding the scales to use for all the 7 questions. The study applied item-level Content Validity Index (CVI) by asking three content experts to rate each of the scale items based on how relevant the item is on underlying construct. The study achieved a CVI of 0.881. Polit and Beck (2006) suggested a CVI of number less than 0.78 for less than five experts. The study used reliability analysis of Cronbach's alpha to calculate coefficients for the multi-item scales at interval level of measurements. According to Cooper and Schindler (2014), higher cronbach's alpha of over 0.7 are recommended to show reliability of items measuring similar construct. The study obtained a reliability of 0.81 indicating items were used to measure similar construct of interest rate charges.

#### 4.4 Descriptive Statistics

The study analyzed descriptive statistics by understanding the frequency and percentage proportions of variables across the SMEs. The values present in the Table 1-8 below describes the nature of SMEs that participated in the study.

##### 4.4.1 Areas of operation

Table 2 shows the frequency and percentage distribution of SMEs that participated in this study. Over one quarter of SMEs operate by delivering of fish to either the final consumers or across the value chain (26%). The second majority of the SMEs operate in the direct fishing (24%). Processing also has a considerable number of SMEs that account for over 21%. Both material delivery and storage accounts for the lowest number of businesses at 16% and 12% respectively. Such a widespread participation of SMEs provides clear picture of representation of fishing businesses in the county.

**Table 2: Areas of operation of SMEs**

<b>Areas of Operation for SMEs</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Fishing	51	24.4
Fish delivery	54	25.8
Material delivery	34	16.3
Processing	45	21.5
Storage	24	11.5
Other	1	.5
Total	209	100.0

##### 4.4.2 Years of operation

Table 3 below displays categorical number of years the business has been into operation in Kisumu County. The largest number of businesses have been in operation for the 15 years at 34%. This is higher than SMEs that indicated to have operated for less than 10 years. Out of this number, 22% have operated for less than five years while another 21% have been in operation for between 6-10 years. Moreover, the study found 16% of the SMEs have operated for 16 – 20 years. However, only a small number of SMEs indicated to have been in operation for over 21 years accounting for 6%. Such a long period of time provides owners with enough understanding of charges on their credit.

**Table 3: Years SMEs has been in operation**

<b>Years</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
1-5	46	22.0
6-10	45	21.5
11-15	72	34.4
16-20	33	15.8
21+	13	6.2
Total	209	100.0

**4.4.3 Number of Employees**

Table 4 describes the number of employees working in the sample of SMEs. The highest number of SMEs (28%) had between 101 and 150 employees working in different departments. This was slightly above 25% who indicated they have between 51 and 100 employees. Moreover, 20% of the sample indicated they have between 1- 50 employees. While on the other hand, over 26% of the SMEs have over 151 employees.

**Table 4: The number of employees**

<b>Number of Employees</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
1-50	41	19.6
51-100	53	25.4
101-150	59	28.2
151-200	36	17.2
201+	20	9.6
Total	209	100.0

**4.4.4 Status of credit access**

The study also considered the importance of collecting data on credit access among the sampled out SMEs. Results from Table 5 showed a majority of SMEs have had an access to credit from commercial and financial institutions. In specific, only 38% indicated they had credit they were servicing at the time when the study was conducted. This number was slightly higher than those who were discouraged to apply for a loan. Moreover, 25% were rejected the loan.

**Table 5: Status of credit access**

<b>Status of Credit Access</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Loan	80	38.3
Rejected	53	25.4
Discouraged	76	36.4
<b>Total</b>	<b>209</b>	<b>100.0</b>

#### **4.4.5 External Interest Charges**

Table 6 showed opinion of respondents on external charges and other fees charged from third parties. More than half of the sample paid high external charges ranging between Ksh. 5,001 – 10,000 annually. This was double the number of SMEs who paid medium external charges of Ksh. 1001 – 5,000. However, only 6% and 4% indicated to pay the lowest and very high external charges imposed by third parties.

**Table 6: External charges**

<b>External Charges</b>	<b>Frequency (%)</b>	<b>Percentage (%)</b>
Low (1-10,000)	5	6.3
Medium (10,001-50,000)	23	28.7
High (50,001-100,000)	49	61.3
Very high (100,000+)	3	3.8
<b>Total</b>	<b>80</b>	<b>100.0</b>

#### **4.4.6 Internal charges**

The study also sought to understand opinion of respondents on internal charges imposed by financial institutions to lenders. Table 7 showed over half of SMEs (55%) paid high annual internal charges ranging between Ksh. 5,001 – 10,000. This was double the number of SMEs who paid medium internal charges (20%) and very high charges (22%). Only 3% of SMEs with loans paid between Ksh. 1-100 internal charges.

**Table 7: Internal charges**

<b>Internal charges</b>		<b>Frequency (N)</b>	<b>Percentage (%)</b>
Low	(1-10,000)	2	2.5
Medium	(10,001-50,000)	16	20.0
High	(50,001-100,000)	44	55.0
Very high	(100,000+)	18	22.5
<b>Total</b>		<b>80</b>	<b>100.0</b>

**4.4.7 Total Interest rates**

Table 8 showed the opinion of respondents on the total annual interest rates charged on their loans. Over 46% indicated they paid high annual interest rates of between 22 – 26%. This was higher than the 26% who indicated they paid very high interest rates of over 27%. Moreover, the results showed 23% of respondents paid medium interest rates of between 17 – 21%. However, only a small percentage of SMEs (5% paid annual interest rates of between 12- 16%).

**Table 8: Total Interest rates**

<b>Total Interest rate charges</b>		<b>Frequency (N)</b>	<b>Percentage (%)</b>
Low	(12 - 16%)	4	5.0
Medium	(17-21%)	18	22.5
High	(22-26%)	37	46.3
Very high	(27+)	21	26.3
<b>Total</b>		<b>80</b>	<b>100.0</b>

**4.4.8 Secondary data from Commercial and micro finance**

The study also collected external bank charges, internal bank charges, annual interest rates, and credit access from secondary data from microfinance and commercial banks for the years between 2000 and 2022. According to Table 9, the minimum average third party mandatory external charges was at 3.25% while the maximum average rate was 13.59% ( $M = 6.43$ ,  $SD = 2.83$ ). The banks and micro institutions also charged a minimum internal fee rate of 2.75% and almost similar maximum fees of 13% with a mean of ( $M = 5.93$ ,  $SD = 2.83$ ). Moreover, the banks and microfinance charged higher annual interest rate charges at a minimum of 12% and a maximum of 22%. The average annual interest charge rate for the period between 2000 and 2022 was at ( $M = 15.18\%$ ,  $SD = 2.83$ ).

**Table 9: Secondary data**

Secondary data	Min	Max	Mean	Std. D	Skewness	Kurtosis
External bank charges	3.25	13.59	6.43	2.83	0.96	0.30
Internal bank charges	2.75	13.09	5.93	2.83	0.96	0.30
Annual Interest Rate charges	12.00	22.34	15.18	2.83	0.96	0.30
Credit Access	1.19	12.63	5.31	3.44	0.75	-0.48

Figure 1 showed the commercial and micro financial institutions in Kisumu County had experienced two reasons of interest rates decline over the last 22 years. The first decline in interest rates were experienced between 2000 and 2004. The second wave occurred shortly for four years (2012 – 2016), an incident that pushed the CBK to implement the 2016 interest capping law. This was as a result of increased public outcry concerning higher cost of credit in Kenya that limited a majority of population not to access credit. Since 2016, the market began to record steady decline in the interest rates.

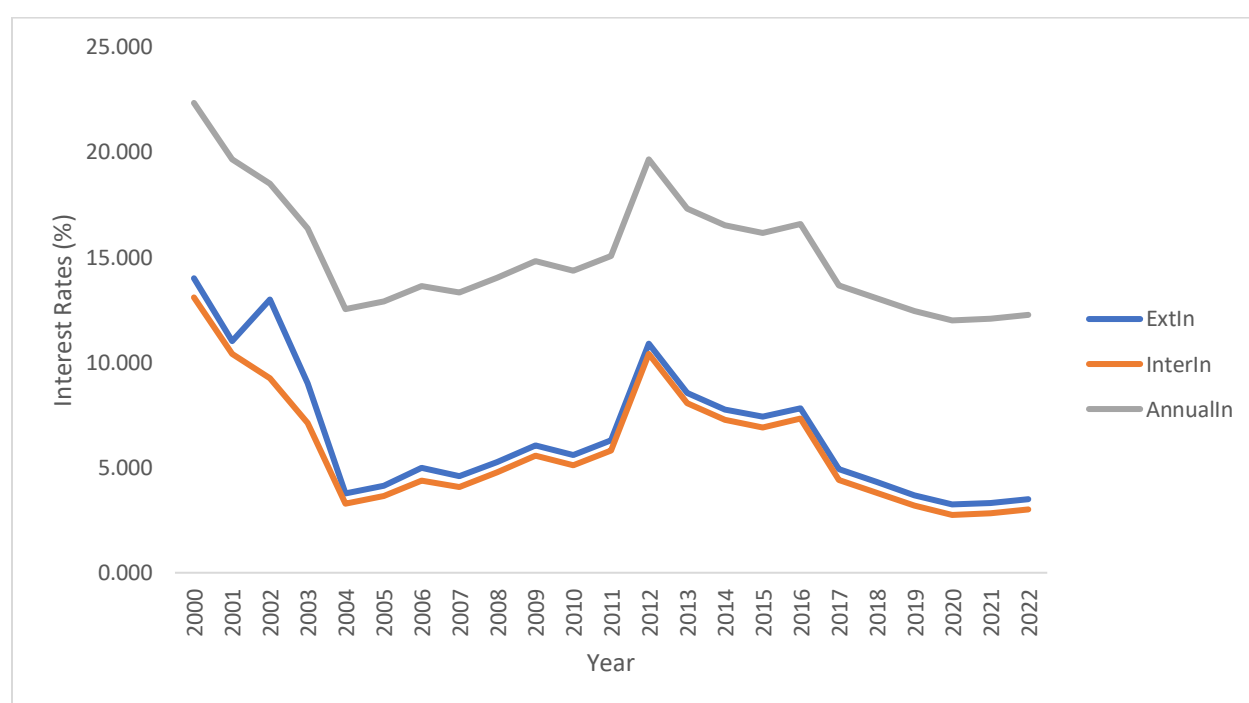
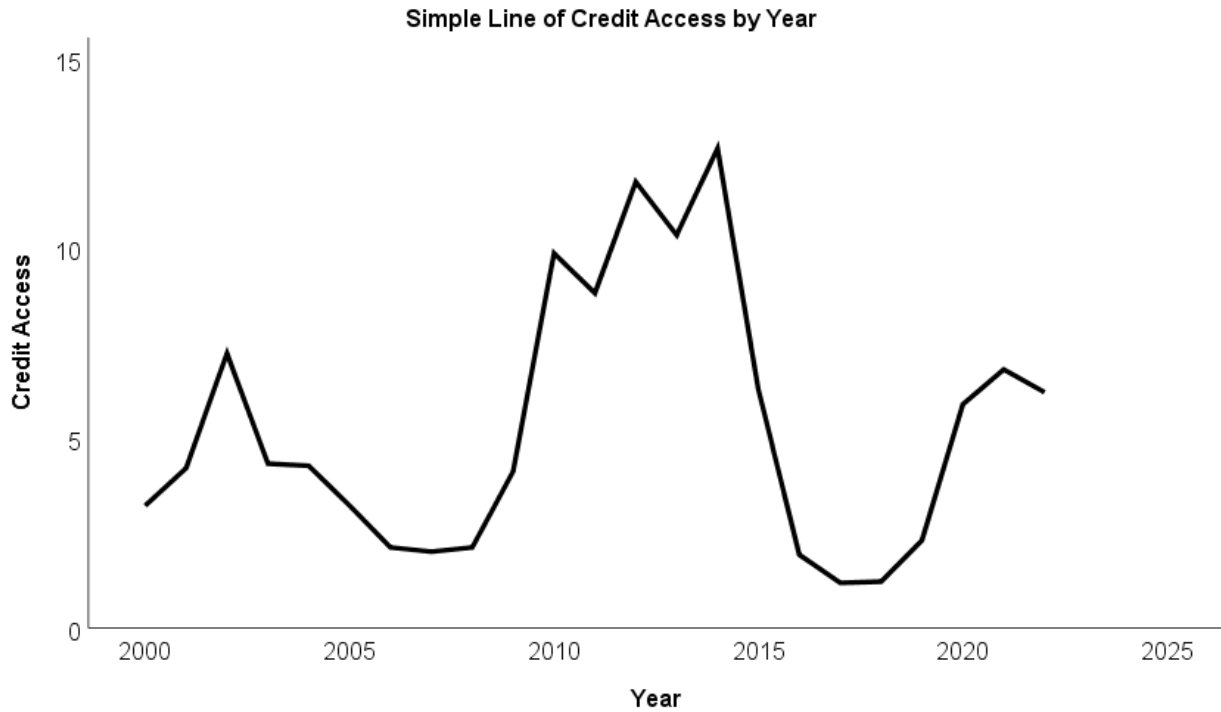
**Figure 1: Trends in internal and external lending rates (2000 – 2022)**

Figure 2 also showed SMEs access to credit had two patterns of declines and increases following an increase in interest rate charges. The first decline occurred between 2001 and 2007. It then

increased reaching a high of 12.6% in 2014 before declining again to 2016. This reflects how an increase in interest rates led to declining credit access rates. Moreover, while the market had experienced a decline in interest rates between 2016 and 2021, this had a negative relationship causing an upsurge in credit access rates.

**Figure 2: Trends in credit access among SMEs in Kisumu County (2000 – 2022)**

to





#### 4.5 Correlation Analysis

Table 10 showed a strong correlation among independent variables at 0.001 significance levels. The value of  $r = 1.00$  showed there was a strong positive association between external bank charges and internal bank charges. Similarly,  $r = 1.00$  showed a strong positive correlation between external bank charges and annual interest rates charges. A similar trend was also visible in a strong positive correlation between internal bank charges and annual interest rates charges ( $r = 1.00$ ).

**Table 10: Correlation**

<b>Correlation</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Credit Access	1.000			
External bank charges	0.296	1.000		
Internal bank charges	0.296	1.000**	1	
Annual Interest Rate charges	0.296	1.000**	1.000**	1

\*\* Correlation is significant at the 0.01 level (2-tailed).

#### 4.6 Regression Analysis and Hypotheses Testing

##### 4.6.1 Bivariate regression analysis from primary data

The study applied logistic multiple regression analysis in order to test three hypotheses that interest rates charges were related to credit accessibility. The study used primary data to establish a relationship between accessibility to credit coded as 1 for having a loan and 0 for having been rejected a loan against three predictor variables. The findings in Table 11 showed a statistical significance relationship between credit access and three independent variables at  $p < 0.05$ . This helps us reject the null hypothesis that there is no statistical significance relationship between credit access and interest rate changes.

**Table 11: Likelihood Ration Tests**

Effect	Model Fitting Criteria	Chi-Square	df	Sig.
Intercept	154.994 <sup>a</sup>	.000	0	.
External Interest Charges	164.248	19.255	6	.040
Internal interest charges	185.566	30.572	6	.000
Total Interest rate charges	171.415	16.422	6	.012

Moreover, the study tested categories under each of the variable that affected credit access. The findings showed both external and total annual interest rate charges had statistically significant impact on credit access ( $p < .05$ ). In specific, the study found a positive relationship between credit access and two external bank charges at medium and high ( $p < .05$ ). However, the study found a negative relationship between credit access and two of the total interest rates charges ( $p < .05$ ) at low and medium.

**Table 12: Parameter estimates**

Credit Access <sup>a</sup>		B	Wald	df	Sig.	Exp(B)
External bank charges	Intercept	-0.50	0.46	1.00	0.50	
	Low (1-10,000)	1.17	1.39	1.00	0.24	3.24
	Medium (10,001-50,000)	1.54	3.11	1.00	0.04	4.66
	High (50,001-100,000)	2.22	5.97	1.00	0.02	9.16
	Very high (100,000+)	0b	.	0.00	.	.
Internal bank charges	Low (1-10,000)	-0.59	0.28	1.00	0.60	0.56
	Medium (10,001-50,000)	-0.77	1.41	1.00	0.24	0.46
	High (50,001-100,000)	-0.61	1.06	1.00	0.30	0.55
	Very high (100,000+)	0b	.	0.00	.	.
Total interest rate charges	Low (12-16%)	-2.22	7.07	1.00	0.01	0.11
	Medium (17-21%)	-2.95	2.73	1.00	0.03	0.39
	High (22-26%)	-0.24	0.22	1.00	0.64	0.79
	Very high (27+)	0b	.	0.00	.	.

#### 4.6.2 Linear regression from secondary data

The linear regression in Table 13 was conducted to test hypotheses, H1, H2, and H3 that there is a relationship between credit access and interest rate charged by banks in Kisumu. The linear multiple regression was conducted after combining both internal and external bank charges because of strong collinearity diagnostics as shown in Table 13. In specific, the model summary shows and ANOVA table shows statistically significant effect of interest rates charges and credit access  $F(1, 22) = 3.017, p < .05$  with r-squared showing 24% of credit accessibility is determined by the interest rates charges.

**Table 13: Collinearity diagnostics**

Dimension	Eigenvalue	Condition Index	Variance Proportions (Constant)	Annual Interest Rate charges
1	1.984	1	0.01	0.01
2	0.016	11.07	0.99	0.99

After combining both internal and external bank charges to form one bank charges variables, multiple linear regression was conducted to predict the impact of bank charges and annual bank rates on credit access. The results in Table 14 showed bank charges statistically significantly predicted Credit access  $t(1, 22) = 1.42, p < .05, r^2 = .23$ . Similarly, annual bank rates were statistically significantly related predicted credit access  $t(1, 22) = 2.81, p < .05, r^2 = .23$ .

**Table 14: Multiple linear regression coefficients**

Variable Name	<i>b</i>	<i>t</i>	<i>sig</i>
(Constant)	3.08	1.795	.007
Bank charges	-.296	1.420	.040
Annual bank rates	-.437	2.812	.004
R-Squared	.239		

The overall model from the above regression coefficients are:

$$CA = 3.08 - 0.296 \text{ Bank charges} - 0.437 \text{ Annual bank rates}$$

#### 4.7 Discussion of Research Findings

The bank charges and annual interest rates charges imposed by micro financial institutions and commercial banks may play a significant role in determining the total cost of credit. High TCC is always considered the single biggest obstacle that limits a majority of borrowers to apply for loans from financial institutions (Ndungu, 2014). Thus, banks use internal charges, external charges, and interest rates to evaluate the applicants of credit in order to allocate accordingly. In a study conducted by Malik and Gikandi (2016) for example, found a significant effect of internal bank charges on loans to SMEs in Garissa. Moreover, the study found other charges came from collateral security, government charges, and processing fees were all statistically significant determinant of credit access. In specific, when commercial banks imposed higher internal charges, only a few of SMEs applied and succeeded in accessing loans to support their operations. While a

majority of studies seem to support this view, my findings in this study paints a greater picture about the negative relationship between annual bank rates and bank charges towards credit access by SMEs operating in fisheries sectors. In addition, annual bank rates seek to play a significant role in determining the TCC banks impose on borrowers.

In overall, this study found both bank charge and annual interest rates provided by the sample of commercial banks and micro financial institutions had negative effect on the level of credit accessed among SMEs. Even though the analysis of bank charges was as a result of getting the average of internal and external charges to come up with one variables as bank charges, it was evident they had an effect of decreasing overall credit access by 29%. This was relatively smaller than the annual interest rates found to reduce credit access by 44%. This is in contrast to previous studies that have tended to only focus on the overall interest rates (Ali, Ago, Ukwuaba, and Chiemela, 2017; Anthony, 2015).

## **CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS**

### **5.1 Introduction**

This chapter presents the conclusion to the project. This chapter presents the overall summary of the entire project, conclusion, recommendations, and limitations.

### **5.2 Summary**

The findings presented in this study showed a negative correlation between the credit accessibility and the overall annual interest rates. This shows an increase in annual interest rates charged by commercial and financial institutions would contribute towards less number of borrowers accessing credit from financial institutions among SMEs that operates in Kisumu. The bivariate regression analysis revealed a significant relationship between credit accessibility and interest rate charges on SMEs.

Moreover, the multiple linear regression analysis helped conform the hypothesis that an increase in the level of interest rates charges by the bank and other third party fees, it would contribute towards limiting a majority of SMEs from applying for loans. The two model adapted for this study fits well into primary and secondary data. The study findings support other extant literature concerning the impact of higher interest rates charges on credit accessibility among the borrowers. Additionally, the theory of loanable funds supports the findings in this study.

### **5.3 Conclusion**

At the start of 2014, the Kenyan banks began to apply annual interest rates charges as annual percentage rate (APR) to cover all the total cost of credit (TCC). This is now mechanism financial institutions use to determine the cost of credit issued to businesses. The cost not only the base rate established by the CBK, but also internal charges and external charges from third parties. However, before 2014, Stakeholders complained about the non-readiness of financial institutions to disclose all charges imposed on loans. They made only a few borrowers working closely with the banks to access the TCC. The adoption of the TCC of loans is now a new breadth for banks to ensure that any borrower accesses banks charges before applying for a loan.

Despite banks understating the role of disclosing any charges to the public, it is also imperative to consider the impact of such charges to borrowers and especially to SMEs who continue to experience challenges of accessing more credit. The findings showed that credit accessibility to

SMEs operating in fisheries sectors in Kisumu has a statistically significant negative relationship with interest rates charges imposed by both the micro financial institutions and commercial banks.

#### **5.4 Recommendations**

This study has found the importance of Loanable Funds and Credit Rationing as two significant theories of interest rates and credit availability to explain the impact of interest rates on credit accessible to borrowers. Moreover, this study found the total cost of credit comes from three components – the internal bank charges, the external charges imposed by third parties as well as the overall interest rates limit by the CBK.

Second, owners of SMEs who wish to apply for credit from any financial institution should gain more understanding about types of charges available to them before applying for credit. The KBA published the Annual Percentage Rate (APR) that now computes all the TCC for borrowers. The TCC combines three components interest rates component, bank charges & fees, and third-party costs (legal fees, government levies and insurance) to calculate the final cost of credit.

Third, the study recommends stakeholders in charge of policy making in the micro financial institutions and commercial banks to consider lowering all types of costs that sum up to raise the overall interest rates charges. For example, the internal bank charges come from internal levies that covers among them the negotiations, appraisals, and arrangement fees banks charge to process credit. The levy banks charge covers administrative costs at the time of processes credit. While bank levies vary from one bank to another, banks can adopt only application systems that support SMEs across the country. Online application system ensure automated processing of loans with the help of artificial intelligence (AI). Moreover, the system marked it possible for borrowers to compare different from other financial institutions before committing themselves to take a loan.

#### **5.5 Limitations**

Despite the above findings, it is also important to point out that the current study experienced two limitations. The first limitation involved focusing on SMEs operating in Kisumu County alone. While the study achieved a high response rate from the respondents, such findings cannot be applicable to other sectors in the country. Any scholar should take caution in extending the findings from this study. In specific, the findings are only applicable to SMEs that operate in Kisumu country within the fisheries sector.

The second type of limitation involves focusing on financial matrices alone to determine the impact of interest rates on the credit access. Even though the study found the interest rates played a significant role in determining how SMEs access credit from the financial institutions, the study failed to capture other important factors related to operations and the nature of SMEs.

#### **5.6 Suggestions for further research**

This study uses the above limitations to offer two clear recommendations. The first recommendation covers extending the study to other sectors with a high number of SMEs. Even though fisheries sector play an important role, financial institutions have tried to avoid advancing credit to businesses operating in agricultural sectors in Kenya. Future studies should focus on expanding the study in other sectors in the same county or advancing it to areas with a majority of SMEs operating within the fisheries sectors. The second recommendation covers extending the study beyond financial interest rates used in this study. In specific, future studies that seek to focus on fisheries sector in Kisumu County, should do so by focusing on other structural or management related measures.

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## APPENDICES

### a. Questionnaire

#### Primary data

This questionnaire seeks to collect data about the effect of interest rates on credit access in SMEs using the case of Kisumu County fisheries sector. You have been selected because of your experience in your business to assist in providing responses in this questionnaire. Please, note that you have the freedom to decline to participate in this study. Any responses you give will be treated with a high level of confidentiality and was not be used by third parties but solely for this study.

#### PART A: General Information

##### 1. Area of operation?

- 2. Fishing
- 3. Fish delivery
- 4. Material delivery
- 5. Processing
- 6. Storage
- 7. Other

##### 2. Years the business have been in operation

- 1. 1-5
- 2. 6-10
- 3. 11–15
- 4. 16-20
- 5. Over 20

##### 3. Number of employees in your business

- 1) 1-50
- 2) 51-100
- 3) 101-150
- 4) 151-200
- 5) over 200

## **PART B: CREDIT ACCESS**

This section seeks to understand the level of credit access by your business.

### **4. Status of credit in your business**

My firm is currently using a loan

My firm applied for a loan, but rejected all

My were discouraged from applying for a loan

## **PART C: INTEREST CHARGES**

### **5. External charges**

This section seeks to understand the total annual external charges you pay on your loan

1. My business pays the below annual external charges on the loan (Ksh) (Tick appropriate check box)

a) Low external bank Charges (1-10,000)

b) Medium external bank charges (10,001-50,000)

c) High external bank charges (50,001-100,000)

d) Very high external Bank charges Over 100,000

### **b. Internal charges** (This covers the bank charges & fees)

This section seeks to understand the total annual internal charges you pay on your loan

6. My business pays the below annual internal charges on the loan (K.sh) (Tick appropriate check box)

a) Low Internal Bank Charges (1-10,000)

b) Medium Internal Bank charges (10,001-50,000)

c) High Internal bank charges (50,001-100,000)

d) Very high Internal Bank charges Over 100,000

## **PART E: The total interest rate charges**

This section seeks to understand the total annual interest rate charges your business pays on the loan

7. My business pays the below annual interest rate on the loan (Tick appropriate check box)
- a. Low Total Interest Rate (12% - 16%)
- b. Medium Total interest Rate (17% - 21%)
- c. High total Interest rate (22% - 26%)
- d. Very high Total Interest rate Over 26%

**PART F: Secondary data**

Secondary data was collected from financial institutions operating in Kisumu County. The following table presents the type of data and sources.

Variable name and data type	Measures	Source	Yearly
Annual Interest rate charges	Percentage Annual interest rate charges	Kenya National Bureau of Statistics (KNBS)	2000 - 2021
Internal bank charges	Net annual bank charges	Central Bank of Kenya (CBK)	
External bank charges	Net annual external charges	Micro financial institutions	
Credit Access (CA)	SMEs servicing the loan	Commercial banks	2000 - 2021
	SMEs denied the loan		2000 - 2021

**END**