

**FIRM CHARACTERISTICS AND CREDIT ACCESS BY SMALL AND MEDIUM  
ENTERPRISES IN KIRINYAGA COUNTY, KENYA**

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## DECLARATION

### Declaration by Candidate

This research project is my original work and has not been presented for a degree in any other university

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**Date**

**D53/CTY/38713/2017**

### Declaration by Supervisor

I confirm that the work in this research project has been done by the candidate under my supervision

.....

.....

**Signature**

**Mr.AnthonyThuo**

**Date**

## **DEDICATION**

I dedicate this project to my family for the support they have given me throughout the entire course of this study.

## **ACKNOWLEDGEMENT**

First,my great concern goes to the Almighty God for giving me strength and endurance during the period i was doing this project, with great concern my sincere thanks goes to my supervisor Mr. Anthony Thuo for the great support and guidance towards writing of this project. Further extension is to my parents for financial support towards typing and printing of this work, also I acknowledge my friends and workmates for great ideas towards development of this project More so my institution of learning Kenyatta University for provision of necessary materials and resources towards completion of the work.

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## THE TABLE OF CONTENTS

<b>DECLARATION</b> .....	<b>ii</b>
<b>DEDICATION</b> .....	<b>iii</b>
<b>ACKNOWLEDGEMENT</b> .....	<b>iv</b>
<b>THE TABLE OF CONTENTS</b> .....	<b>v</b>
<b>LIST OF TABLES</b> .....	<b>ix</b>
<b>LIST OF FIGURES</b> .....	<b>xi</b>
<b>OPERATIONAL DEFINITION OF TERMS</b> .....	<b>xii</b>
<b>LIST OF ACRONYMS AND ABBREVIATIONS</b> .....	<b>xiii</b>
<b>ABSTRACT</b> .....	<b>xiv</b>
<b>CHAPTER ONE</b> .....	<b>1</b>
<b>INTRODUCTION</b> .....	<b>1</b>
1.1Background of the Study .....	1
1.1.1Firm Characteristics .....	5
1.1.2 Credit Access by SMEs.....	7
1.1.3 Small and Medium Enterprises in Kenya.....	9
1.1.4 Small and Medium Enterprises in Kirinyaga County .....	10
1.2Problem Statement.....	11
1.3 Objectives of the Study.....	14
1.4 Hypotheses of the study .....	14
1.5 Significance of the Study .....	15
1.6 Scope of the Study .....	16
1.7 Limitations of the Study.....	16
1.8 Organization of the Study .....	17
<b>CHAPTER TWO</b> .....	<b>18</b>
<b>LITERATURE REVIEW</b> .....	<b>18</b>
2.1 Introduction .....	18

2.2 Theoretical Review .....	18
2.2.1 Credit Rationing Theory.....	18
2.2.2 Financial Intermediation Theory .....	20
2.2.3 Information Asymmetry Theory.....	21
2.2.4 Adverse Selection Theory .....	22
2.3 Empirical Review .....	24
2.3.1 Location of the Firm and Credit Access .....	24
2.3.2 Firm’s Collateraland Credit Access .....	26
2.3.3 Age of the Firm and Credit Access.....	29
2.3.4 Firm Size and Credit Access .....	30
2.4 Summary of Literature Review and Research Gap .....	32
2.5 Conceptual Framework.....	33
<b>CHAPTER THREE .....</b>	<b>41</b>
<b>RESEARCH METHODOLOGY.....</b>	<b>41</b>
3.1 Introduction .....	41
3.2 Research Design .....	41
3.3 Target Population .....	41
3.4 Sample Size and Sampling Design.....	42
3.5 Data Collection Tools .....	42
3.6 Data Collection Procedure .....	43
3.7 Pilot Testing .....	43
3.7.1 Reliability of Instruments.....	44
3.7.2 Validity of Instruments .....	44
3.8 Diagnostic Tests .....	44
3.8.1 Heteroscedasticity .....	44
3.8.2 Multicollinearity .....	45
3.8.3 Normality.....	45

3.9 Operationalization of the Variables .....	46
3.10 Data Analysis and Presentation .....	47
3.11 Ethical Consideration.....	48
<b>CHAPTER FOUR .....</b>	<b>49</b>
<b>RESEARCH FINDINGS AND DISCUSSIONS.....</b>	<b>49</b>
4.1 Introduction .....	49
4.2 Background Information .....	49
4.2.1 Distribution of Respondents by Gender .....	49
4.2.4 Highest Academic Qualification.....	50
4.2.2 Distribution of Respondents by Age .....	50
4.3 Location of the Firm and Credit Access .....	52
4.4 Collateral Requirement and Credit Access .....	54
4.5 Age of the Firm and Credit Access .....	56
4.6 Firm Size and Credit Access .....	57
4.7 Compliance to Government and Regulations.....	58
4.8 Credit Access.....	59
4.8.1Percentage of Total Capital Financed Through Bank Loan .....	59
4.8.2 Purpose for the Loan .....	60
4.8.3 Interest Rate Attached to The Business Loan Obtained.....	60
4.8.4 Statement Regarding Credit Access.....	61
4.9 Diagnostic Test Results.....	62
4.9.1 Heteroscedasticity .....	62
4.9.2 Multicollinearity .....	63
4.9.3 Normality.....	63
4.9 Regression Analysis.....	64
4.9.1 Regression Analysis with Independent Variables and Dependent Variable ....	64
4.9.2 Regression Analysis with Independent Variables and Moderating Variable ...	66

4.9.3 Regression Analysis with Moderating Variable and Dependent Variables .....	69
4.9.4 Regression Analysis with Independent, Moderating and Dependent Variable	71
4.10 Discussion .....	74
<b>CHAPTER FIVE.....</b>	<b>80</b>
<b>SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.....</b>	<b>80</b>
5.1 Introduction .....	80
5.2 Summary of Findings.....	80
5.1.1 Location of the Firm and Credit Access .....	80
5.1.2 Collateral Requirement and Credit Access .....	81
5.1.3 Age of the Firm and Credit Access .....	82
5.1.4 Firm Size and Credit Access .....	83
5.1.5 Compliance to Government and Regulations.....	84
5.3 Conclusion.....	84
5.4 Recommendations .....	86
5.5 Ares for Further Research .....	87
<b>REFERENCES.....</b>	<b>88</b>
<b>APPENDICES .....</b>	<b>93</b>
Appendix I: Introduction Letter .....	93
Appendix II: Questionnaire.....	94

## LIST OF TABLES

Table 3.1:Operationalization and Measurement of Variables .....	46
Table 4. 2: Response Rate.....	49
Table 4.3: Distribution of Respondents by Gender.....	50
Table 4.4: Highest Academic Qualification .....	50
Table 4.5 Respondents by Age Group.....	51
Table 4.6: Period of service .....	51
Table 4.7: Effect of location of the firm and credit access.....	52
Table 4.8: Effect of collateral requirement and credit access .....	54
Table 4.9: Age of the Firm and credit access .....	56
Table 4.10: Effect of firm size on credit access .....	57
Table 4.11: Statements relating to compliance on government and regulations in SMEs	58
Table 4.12: Percentage of Total Capital Financed Through Bank Loan .....	59
Table 4.13: Purpose for the Loan.....	60
Table 4.14: Interest Rate Attached to The Business Loan Obtained .....	60
Table 4.15: Credit Access.....	61
Table 4.16: Test for Heteroscedasticity.....	62
Table 4.17:Test for Multicollinearity .....	63
Table 4.18: Shapiro-Wilk test for Normal Data.....	63
Table 4.19: Model SummaryBetween Independent Variables and Dependent Variable ...	64
Table 4.20: Summary of One-Way ANOVA results.....	65
Table 4.21: Coefficients.....	65
Table 4.22: Model SummaryBetween Independent Variables and Moderating Variable ..	67
Table 4.23: Summary of One-Way ANOVA results.....	67
Table 4.24: Coefficients.....	68
Table 4.25: Model Summary Between Moderating Variable and Dependent Variable.....	69

Table 4.26: Summary of One-Way ANOVA results .....	69
Table 4.27: Coefficients.....	70
Table 4.28: Model Summary with Independent, Moderating and Dependent Variable ....	72
Table 4.29: ANOVA Analysis of Independent, Moderating and Dependent Variable .....	72
Table 4.30: Coefficients.....	73

## LIST OF FIGURES

Figure 2.1: Conceptual Framework.....	34
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## **OPERATIONAL DEFINITION OF TERMS**

**Age of the Firm:** This refers to the number of years that a firm has been in existence and also the experience of the management staff.

**Collateral:** This relates to the ability to which debtors pledge assets to a lender as security for debt repayment.

**Cost of Credit:** This is the amount of money that businessmen pay to financial organizations when they borrow money. Processing costs, negotiating fees, interest rates, personal insurance, legal fees, and travel expenditures are among charges that entrepreneurs face while obtaining financing.

**Credit Access:** This refers to a person's or a company's capacity to acquire outside finance in order to alleviate cash flow issues.

**Credit:** Refers to the ease with which SMEs can secure financial assistance or loans from lending institutions.

**Firm Size:** This is measured in terms of total assets and includes profit margin and return on assets, among other accounting profitability indicators.

**Firm's Characteristics:** These are the firm's demographic and managerial variables which, in turn, comprise part of the firm's internal environment which has an effect on credit access.

**Location of the Firm:** This refers to where the firm is situated mainly whether it's in the urban or the rural centre and its proximity to the financial institution.

**Small and Medium Enterprise:** Small are classified as firms employing 11 to 50 employees while medium firms are classified as those employing 51 to 100 employees.

## **LIST OF ACRONYMS AND ABBREVIATIONS**

CMA:	Capital Markets Authority of Kenya
ERIA:	Economic Research Institute for ASEAN and East Asia
GDP:	Gross Domestic Product
MFI:	Micro Financial Institutions
MIME:	Ministry of Industry, Mines and Energy
MSEs:	Micro and Small Enterprises
NACOSTI:	National Commission for Science, Technology & Innovation
OLS:	Ordinary Least Squares
SEDA:	Small Enterprise Development Agency
SMEDC:	National SME Development Council
SMEs:	Small and Medium-Sized Enterprises
SPSS:	Statistical Package of Social Sciences
UNDP:	United Nations Development Programme
VIF:	Variance Inflation Factors

## ABSTRACT

Accessing credit is considered to be an important factor in increasing the development of SMEs. It is thought that credit access increase income levels, increases employment and thereby alleviates poverty. The biggest problem most SMEs face is credit access and statistics show that credit access by SMEs has been a problem which has been an unsolved issue faced by the majority SMEs. The general objective of the study was to establish firm characteristics and credit access by small and medium enterprises in Kirinyaga County, Kenya. The specific objectives of the study were to examine how location of the firm, firm's collateral, age of the firm and how firm size influence credit access by small and medium enterprises in Kirinyaga County. The theories used in the study included Credit Rationing theory, Financial intermediation theory, Information asymmetry theory and Adverse selection theory. The descriptive research technique was used for this study. The population that was targeted for this research was 356 SMEs from Kerugoya town and its environs and a total sample of 124 respondents constituted the sample size. The study adopted a purposive sampling design to sample the owners of SMEs. The study used close-ended questions in the questions. A total of 12 owners of the SMEs was used for the pilot study. Data analysis was done with the use of SPSS Version 22 and STATA software and presented using percentages, frequencies, means and standard deviations. In addition, inferential statistics in form of regression and correlation analysis were used. Based on the research findings, this study concludes that location of the firm, firm's collateral, age of the firm, compliance to government regulations and firm size has significant impact on credit access by SMEs in Kirinyaga County. The study variables under study (location of the firm, collateral requirement, age of the firm and firm size) Accounted for 42.2% of the variations on credit access by small and medium enterprises in Kirinyaga County. Other factor accounting for 57.8% should be established and their effect investigated.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background of the Study**

Small and Medium-Sized Enterprises (SMEs) are important for economic growth and development in industrialized and developing countries because they play a key role in job creation. Financing is necessary to help them set up and expand their operations, develop new products, and invest in new staff or production facilities. Many small businesses start out as an idea from one or two people, who invest their own money and probably turn to family and friends for financial help in return for a share in the business (Berger & Udell, 2016). If they are successful, there come at times for all developing SMEs when they need new investment to expand or innovate further. That is where they often run into problems, because they find it much harder than larger businesses to obtain financing from banks, capital markets or other suppliers of credit (Mulandi, 2013).

SMEs are facing many challenges, one of which is access to finance. In the context of Cambodia, according to ERIA Research Project Report (2015) the challenge is a result of the early stage of development of the financial sector. The banking sector is profit-oriented, and banks focus on big business transactions to maximize their profit. The MFIs that tailor-make credit for micro-sized firms usually set small loan sizes, charge high interest rates and allow only short maturity. Moreover, all credit from the formal sector must come with collateral. According to a Ministry of Industry, Mines and Energy (MIME) report on SME statistics in Cambodia in 2013, Cambodia had a total of 31,149 small industrial establishments with fewer than 50 employees. Based on

similar data from 1999, this number represents growth in total establishments of approximately 26%. Food, beverage, and tobacco manufacturers comprise the largest number of small industrial establishments. The same report also reveals that according to data from Ministry of Economy and Finance and the Tax Department, there are 55,466 SMEs (Fatoki & Smith, 2015).

According to Howorth (2017) the Republic of Korea's economic development has been the envy of many countries, transitioning from one of the world's poorest nations in the 1960s, to being the 12th largest economy (in GDP). As of 2012, 99.9% of all companies in Korea were SMEs accounting for 87.7% of all employees. The sector is characterized by heavy reliance on bank funding to meet financing needs. The Korean government has long supported SMEs as an engine of growth in the economy. Since 1979, it has supplied public funds to SMEs both directly and through credit guarantee schemes. It has also used moral suasion, for example, in 2009 in the wake of the global financial crisis banks were told to roll over loans to viable SMEs. Support for small companies has increased following the financial crisis, while large business groups have been forced to restructure.

In Malaysia, SMEs generally face difficulties in obtaining finance with lack of collateral and insufficient documents to support loan application. This lack of financial track record is the main constraint faced by Malaysian SMEs in accessing financing (Haron et al., 2013). According to Gunto and Alias (2014) the Malaysian government has given priority to SMEs and has put in place a policy and institutional framework that addresses their developmental needs (UNDP, 2007). To ensure implementation of the policy, the government set up in 2004 a National SME Development Council (SMEDC) chaired by the Prime Minister. Also, in the Third Industrial Master Plan (2006-2020), which is currently under development, is scheduled to commit to a variety

of technical and financial assistance policies targeting improved market accessibility for SMEs, the promotion of activities involving technical innovation and information technologies and the promotion of linkages with key industries.

According to Osano and Languitane (2016) in the context of Mozambique indicate that financial institutions have highlighted several constraints encountered by SMEs which limit their provision of finance products. The constraints faced by SMEs are associated with the lack of clear financial plans, the accounting documentation, higher rate of interest, and the lack of collateral requirements. As in other countries, Mozambique focuses on both demand and supply side (Central Bank of Mozambique, 2013). The demand side encourages the commercial banks to provide finance to the small businesses through guarantees and provide more financial assistance through the affordable cost of capital, micro finance, and innovation fund. On the supply side, this focus on diminishing the asymmetries of information between the two players (lenders and borrowers). The relevant information between lenders and borrowers should be provided to improve the situation (Central Bank of Mozambique, 2013).

In South Africa, SMEs account for about 91% of the formal business entities, contribute to about 57% of GDP, and provide almost 60% of employment (Kongolo, 2015). The country has introduced a number of SME support frameworks that include both financial and non-financial assistance. For instance, the Small Enterprise Development Agency (SEDA) was set up to oversee the development of small businesses in the country. To underscore the importance of SMEs, the government established a Ministry of Small Business Development in 2014. Evidently, this has in fact helped proliferation of SME in various parts of the country (Waari et al., 2015). According to Mazanai and Fatoki (2012) in South Africa, SMEs face constrained access to both debt and equity financing. Theoretically and in practice a problem of

access to finance exist when there is a need for finances from a client with an investment project that warrants financing, but are impeded access to external financing. This occurs due to the gaps that exist between the suppliers of external financing and the demand for financial resources.

According to Mutai (2015). Small and micro enterprises (SMEs) have become important players in the Kenyan economy, but at the same time they continue to face constraints that limit their development. Lack of access to credit is one of the main constraints, and a number of factors have been identified to explain this problem. These include the segmented and incomplete nature of financial markets, which increases transaction costs associated with financial services. On the supply side, most formal financial institutions consider SMEs uncreditworthy, thus denying them credit. According to CMA Report (2017), it was estimated that there were 9.5 million SMEs in Kenya, providing employment and income generation opportunities to low income sectors of the economy. Due to their characteristics, SMEs in Kenya suffer from constraints that lower their resilience to risk and prevent them from growing and attaining economies of scale.

Access to credit by small and medium enterprises (SMEs') contributes to incremental growth of SME employment and income. SMEs' holders are thereby able to increase their stocks as well as increase on sales made periodically. They are able to take bigger risks due to the financial aid given by the micro finance institutions (Chege, 2014). In Kenya, strong SMEs tend to be located in urban and peri-urban centres and are usually registered. However, they face a number of constraints, which include the difficulty in employing competent people with techniques in financial management because of the salaries such people would demand, financial problems arising from late payments by debtors, and inability to raise own finance and access

financial services from formal sources. This category of SME usually looks to the banking sector and other financial Intermediaries for instruments to finance working capital and to provide credit for short-term liquidity management (Chege, 2014).

### **1.1.1 FirmCharacteristics**

Egbunike and Okerekeoti (2018) described firm characteristics as a firm's demographic and managerial variables which, in turn, comprise part of the firm's internal environment which has an effect on credit access. According to Kira and He (2012), firm characteristics include location of the firm, firm's collateral, age of the firm and firm size. The primary objective of assessing firm's characteristics is to ensure that the money is given in the right hands and the capital and interest income of the bank is relatively secured. Every firm has different characteristics compared to another firm thuswhile appraising term loans, a financial institution would focus on evaluating the credit-worthiness of the company and future expected stream of cash flow with the amount of risk attached to them. Creditworthiness is assessed with parameters such as the willingness of promoters to pay the money back and repayment capacity of the borrower (Eze&Okoye, 2014)

Calice et al (2012) posited that obstacles to SME lending are perceived differently across the countries and perceptions are influenced by the nature and ownership structure of the bank concerned. Bank size is considered as one of the major determinants of bank lending decisions. Large-sized banks have the advantage of providing a larger menu of financial services to their customers and there by mobilize more funds. A study by Ladime et al (2013) established that that bank size and capital structure have a statistically significant and positive relationship with bank lending behaviour and that

bigger banks seem to be in a better position to lend more than otherwise. Large, complex banks tend to lend few loans to small-scale enterprises, and that small banks have comparative advantages in producing soft information whereas large banks also have comparative advantages in lending based on hard information (Ladime et al., 2013). Malede (2014) also established that bank size has a positive and statistically significant influence on commercial bank lending.

Firm age in years is frequently used to control for the fact that older firm may have more experiences of applying for loans and have deeply long relationship with banks and therefore more probability to get bank loans. It seems that financial life-cycle pattern is homogenous for different industry and consistent over time (La Rocca, 2015). As business is in the start-up life cycle stage, the main challenge that they face is how to mobilize money because they need overestimated money for formation of fixed asset and working capital. Whereas in the growth life stage, businesses face challenges based on time and money (Eze&Okoye, 2014). According to Ngoc (2017) states that young SMEs face more difficulty to access bank financing and incur higher costs, due to information asymmetry between the banks and the firms. The lenders use the financial information obtained from the firm's financial statements to determine the possibility of delinquency.

Lending to SMEs is considered riskier since they provide no or less collateral and banks may be more unwilling to accept credit risk. According to Financial Sector Deepening Kenya (2008), one major reason why lenders are reluctant to lend to SMEs is that they lack cost-effective ways to quantify credit risk. This is because SMES do not have standardized data procedures and the available data may be of unreliable quality and accuracy. Studies point out that banks charge high interest premium for the borrowers who have higher credit default risk to repay the loan (Akinyomi, 2014).

Malede (2014) established that credit risk is statistically significant determinant of commercial bank lending. Credit risk is critical since the default of a small number of important customers can generate large losses, which can lead to insolvency, and variation in credit risk may reflect a change in the health of a banks' loan portfolio, which in turn may influence the performance of the institution (Malede, 2014).

According to Pandula (2015), asserts that spatial variations exist in both cost and availability of finance, especially for small firms. In rural areas, there are a variety of factors which may contribute to spatial variations in the availability of bank finance for small firms. Banks may be reluctant to lend to small firms located in rural areas, as the assets offered as collateral by these firms may have less market value, and in case of default, they may find it difficult to realize these assets (Pandula, 2015). However, According to Rand (2017) probability of accessing credit is higher in rural than in urban areas. He further states that most of government bank credit is allocated towards rural areas since its distinctly protective of firms in rural areas, which are more oriented towards serving local markets and therefore tend to escape from some of the credit barriers inherent in larger, possibly more outward oriented markets (Rand, 2017).

### **1.1.2 Credit Access by SMEs**

Access to credit refers to the ability of individuals and enterprises to obtain external funding to enable them ease cash flow problems (Osoro&Muturi, 2013). Credit can be either short term or long term depending on the lender's assessment of the borrowers' ability to repay. Access for credit by SMEs in Kenya has been identified as a necessary condition for job creation and economic growth. The ability to access credit by businesses is a critical factor of private sector growth and especially for SMEs' that most often lack adequate capital that they need to grow and expand. Credit access also

has an impact on the agricultural sector where expenditure on inputs exceeds the returns from sale of the proceeds.

Monteiro (2013) observed that smaller enterprises generally have limited access to non-bank lenders due to lack of creditworthiness in their information which is usually unpublished hence they are challenged by finance. The main concern of this study is the external credit facilities available to SMEs. According to Mensah and Agbekporu (2015) external financing or credit facilities is kind of finance provided by person(s) other than the actual owner of the company who are the company creditors. Manasseh further added that credit can be in any of the following forms overdrafts, trade creditors, leasefinancing, debentures, loans, overdrafts among others. All these external sources depend on the enterprise's creditworthiness.

The availability and accessibility of external financing has positively impacted on the growth and performance of any business (Osoro& Muturi, 2013). Financial institutions have packaged different credit facilities that are aimed at different forms of business. These products when offered to SMEs help them improve their performance; by raising productivity, improving returns on investment, and increasing incomes (Karanja, Mwangi&Nyakarimi, 2014). The trainings that some of the financial institutions provide to their clients help entrepreneurs to understand basic issues like record keeping which in turn help them better understand their business operations. Trainings add to the skills of the entrepreneurs, change their attitude on how they perceive and conduct business activities and in turn enhance the ability of their firms to perform better. A financially literate entrepreneur can make better decisions regarding utilization of other financial services like saving more, taking full advantage of credit facilities, and mitigating risks through the utilization of insurance services (Andoh&Nunoo, 2014).

SMEs still face several limitations to credit access. According to Ogiji&Ejembi (2015), there is still less knowledge on financial management by SME managers and or owners despite the huge importance that this has on sound decision making. BialowolskiandWeziak (2013), on the other hand, observed that small firms have smaller asset bases to secure loans to finance their investments as compared to larger firms. Munoz (2016) concludes that banks, in most African countries for example, have not made a great effort to reach out to SMEs due to challenges with the processes and procedures involved in administering loans, the high costs of managing small loans and the high risk of loan defaults. This limited access to finances by SMEs therefore translates to slow growth.

### **1.1.3 Small and Medium Enterprises in Kenya**

The 2012 bill on Micro and Small Enterprises (MSE) describes: Micro enterprises being any industry, business activity, firm, trade or service which is informal or formal having an income not exceeding five hundred thousand Kenyan shillings and having a labor force of 1 to 9 individuals. The sum of financial investments and assets or the capital registered doesn't exceed 10,000,000 in the sector of manufacturing and is not above Kenya Shillings 5,000,000 the service as well as the sector of farming. Small enterprises like the service, trade, firms, business activities or industry that indicate a yearly income between Five hundred thousand and five million and have a labor force of 10 employees to 50 employees. Medium enterprises happen not be taken care of under this act, but are reported entailing enterprises with an income of between five million Kenyan shillings and eight hundred million and having a labor force of fifty to ninety-nine workers (Kenya National Bureau of Statistics, 2015).

Approximately seven million, five hundred thousand Kenyan SMEs, provide employment and generate income opportunities to the sectors with low incomes in the economy (Kenya National Bureau of Statistics, 2015). This sector continues to be of importance to this country's economy. The contribution of the sector to the GDP in 1993 rose from 13.8% to 40% in the year 2014. The informal or Small Enterprise Sector offered around 80 per cent of jobs and gave above 92 per cent of fresh jobs established in the year 2008 with regard to the 2014's Economic Survey. This sector thus is very key in creation of employment, generating income and happens to be the rock layer for industrializing later in the future (Kenya National Bureau of Statistics, 2015).

As a result of their features, Kenyan SMEs go through constraints which reduce their risk resilience and preventing them from growth and attainment of economies of scale (Kenya National Bureau of Statistics, 2015). The difficulties happen not just in working capital and financing investment but as well market access, human resource development and accessibility of modern information and technology. Accessibility to the financial resources happens to be inhibited by the external and the internal factors. Internally, a big number of SMEs are not credit worthy and do not have the management capability, therefore they are challenged in securing finances for their business undertakings say, procurement of products and raw materials and investment on equipment and plant (Economic Survey, 2015). Externally, SMEs are termed as being insecure and expensive businesses to undertake since they do not have the needed security and are capable of absorbing only little amounts of money from financial institutions (Kenya National Bureau of Statistics, 2015).

#### **1.1.4 Small and Medium Enterprises in Kirinyaga County**

Kirinyaga County is located between latitudes 001' and 00 40' South and longitudes 370 and 380 East. The county borders Nyeri County to the North West,

Murang'a County to the West and Embu County to the East and South and also border small part of Machakos County. It covers an area of 1,478.1 square kilometres. The county is divided into five sub-counties namely; Kirinyaga East, Kirinyaga West, Mwea East, Mwea West and Kirinyaga Central. The total rural self-employment is 49,200 persons and sectoral contribution to household income from self-employment is 10 percent. Urban self-employment is 39,365 persons and has a sectoral contribution to household income of 8 percent (Kirinyaga County Integrated Development Plan, 2018).

There are 16 types of SMEs located in Kirinyaga County which specialize mostly in agricultural based products. There are 5 tea factories (Thumaita tea factory, Kimunye tea factory, Kangaita tea factory, Mununga tea factory and Thima tea factory), 1 coffee miller (KPCU), 2 maize millers (Joymax millers and Centur millers), 7 major rice millers (Mwea rice mills, MRGM, Tai rice millers, Victory rice millers, Top grade rice millers, Nice rice millers, Boma rice millers). There is also John Kaburo animal feeds in Kangai ward. There are 22 Jua Kali associations around the county and 1,270 jua kali artisans. There is high industry potential especially on value addition and agro-processing and tinning industries considering the high production of tomatoes, sugarcane, watermelons, bananas and green grams (Kirinyaga County Integrated Development Plan, 2018).

## **1.2 Problem Statement**

Accessing credit is considered to be an important factor in increasing the development of SMEs. It is thought that credit increases income levels, increases employment and thereby alleviate poverty. It is believe that access to credit enable poor people to overcome their liquidity constraints and undertake some investments. However, the lack of access to credit to start or expand small scale

enterprises has often plagued this sector of the economy. Banks remain highly liquid and reluctant to expand credit other than to most credit worthy borrowers which in most cases excludes the SMEs (Mwangangi 2014). However, even though the role of banks and other financial institutions is clear in the small business arena, lending to SMEs remains a laborious and daunting activity as many factors influence the sustainability of these ventures and their loan repayment behavior (Hwarire, 2014). The critical problem most SMEs face is credit access and statistics show that credit access by SMEs has been a tragedy which has been an unsolved issue faced by the majority SMEs (Nawai&Shariff, 2013).

SMEs in Kenya are the driving engine of growth, job creation and competitiveness in domestic and global markets. They also play a pivotal role in innovation and productivity growth (Bassem, 2016). Kenyan SMEs go through constraints which reduce their risk resilience and preventing them from growth and attainment of economies of scale key among them high cost of financing (Kenya National Bureau of Statistics, 2015). Kitonga, (2013) noted that 86% of the entrepreneurs surveyed in Kitui County obtained their initial capital from informal sources while 87% got their operating capital from informal sources. Such informal finance was said to be very expensive and that interest rates in this sector are very high. Kirinyaga County with a large number of small and medium enterprises. Although the Kenyan formal financial sector is quite well developed, it is unable to provide adequate finance to support these enterprises' growth and also the cost of accessing credit is also high. Kirinyaga County SMEs as well as Kenya, have also been affected by lack of access to finance and also the cost of accessing the credit is high (Kitonga, 2013).

Studies have been carried regarding small and medium enterprises; Fatoki and Asah (2016) on the impact of firm and entrepreneurial characteristics on access to debt finance by SMEs in Malaysia found that firm size impacts SMEs access to debt finance from commercial banks whereby small enterprises are less favoured to large firms. However, the above study focused only on firm and entrepreneurial characteristics which affect SMEs finance choices and was from a global context. Locally; Mureithi (2015) factors influencing growth of SMEs in Ngurubani town, Kirinyaga county Kenya. The study concluded that availability of finances, application of entrepreneurial skills, use of marketing and technology had an influence on the growth of SME's. However, the above study focused on factors influencing growth of SMEs and left out the factors that influences credit access by SMEs. Hence the need to fill the existing gap by focusing on firm characteristics and credit access by small and medium enterprises in Kirinyaga County, Kenya.

### **1.3 Objectives of the Study**

#### **1.3.1 General Objective**

The general objective of this study is to establish the effect of firm characteristics on credit access by small and medium enterprises in Kirinyaga County, Kenya.

#### **1.3.2 Specific Objective**

The study was guided by the following objectives;

- i. To determine the effect of location of the firm on credit access by small and medium enterprises in Kirinyaga County.
- ii. To determine the effect of firm's collateral on credit access by small and medium enterprises in Kirinyaga County.
- iii. To establish the effect of the age of the firm on credit access by small and medium enterprises in Kirinyaga County.
- iv. To determine the effect of firm size on credit access by small and medium enterprises in Kirinyaga County.
- v. To determine the moderating effect of compliance to government and regulations on the relationship between firm characteristics and credit access of SMEs.

### **1.4 Hypotheses of the study**

**H<sub>01</sub>:** Location of the firm does not have a significant influence on credit access by small and medium enterprises in Kirinyaga County.

**H<sub>02</sub>:** Firm's collateral does not have a significant influence on credit access by small and medium enterprises in Kirinyaga County.

**H<sub>03</sub>:** Age of the firm does not have a significant influence on credit access by small and medium enterprises in Kirinyaga County.

**H<sub>04</sub>:** Firm size does not have a significant influence on credit access by small and medium enterprises in Kirinyaga County.

**H<sub>05</sub>:** Compliance to government and regulations has no significant moderating effect on firm characteristics and credit access of SMEs.

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

The Study was significant to the Kenyan government since in line with the availability of financial institutions to ensure economic development in the country by providing savings and credit to SMEs. The information from this study may help the government to design and implement policies that are meant to enhance access to credit by SMEs as they contribute significantly to growth and development of the country's economy. The study assisted SMEs by opening their eyes on the ways of managing the challenges they are faced with during access to credit and also provide alternative sources of finance that would give them better chance of survival, growth and success in the global competitive corporate setting.

Financial institution's management benefited from the study as they are formed with the objective of ensuring that low-income earners have access to financial services. These institutions aim at ensuring that all citizens who are low-income earners are catered for in terms of provision of financial services. It is therefore necessary for the institutions to understand the perceptions of the citizens on firm characteristics and credit access by small and medium enterprises. This information may be used by the management of the financial institutions in determining areas for improvement to ensure their success in meeting the financial needs of small and medium enterprises.

The information was important to academicians/ researchers so as to support the studies that have been carried out on firm characteristics and credit access by SMEs.

Considering the benefits attributed to SME's in economic development and the rapid development of these enterprises, credit access has received attention of researchers and academicians. The information from the study formed basis for literature for other researchers and academicians who are willing to carry out studies in the same field. Next, the study will be a starting point for further studies on SME's in Kenya.

### **1.6 Scope of the Study**

The study was carried out in Kirinyaga County. The respondents included the Kirinyaga County residents and data was collected from the 356 SMEs from Kirinyaga County that have been operating from the year 2014 to date who formed the population of this study, with an aim of determining the firm characteristics and credit access by small and medium enterprises. The study adopted a purposive sampling design to sample 124 owners of SMEs. The period above the 5 years was chosen since the owners of SMEs have the relevant knowledge and information in regard to the effect of firm characteristics on credit access by SMEs in Kirinyaga County, Kenya.

### **1.7 Limitations of the Study**

The study faced challenges of data gathering from the secondary sources since not all SMEs have computerized accounting systems. The limitation was addressed through research and consultation with relevant stakeholders in SME industry. The research expected that apathy or unwillingness by SME managers or their assistants to divulge important or correct information could pose a major limitation to the study. However, efforts were made to convince the respondents that the information given was only meant for academic purposes only. The researcher also encountered challenge in securing the respondents precious time considering their busy working schedules. The researcher made proper arrangements with all the participants on time.

## **1.8 Organization of the Study**

This study is structured into five chapters. The first one introduces the study, problem statement, objectives of the study and also outlines the question to be researched. In addition, the first chapter also outlines the significance of the research, its limitations as well as how it is going to be organized. The second chapter includes a literature review of the different aspects on firm characteristics and credit access by SMEs. The third chapter outlines the methodology that was employed in collecting and analyzing data, the target population, population to be sampled and finally instrument of collecting data. The fourth chapter gave a discussion on the presentation and interpretation of the study outcomes derived from the field. The fifth chapter detailed the summary, conclusions and recommendations of the findings.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter focuses on review of firm's characteristics and credit access by small and medium enterprises in Kirinyaga County, Kenya. The chapter began with the theoretical view regarding this study. It as well presented empirical review, the criticisms, research gaps and conceptual framework.

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

This study explored the credit rationing theory, the financial intermediation theory, the information asymmetry theory and the adverse selection theory so as to explain the firm's characteristics and credit access by small and medium enterprises.

##### **2.2.1 Credit Rationing Theory**

The credit-rationing model emanated from the revolutionary work of Stiglitz and Weiss (1981). According to Stiglitz and Weiss (1981) lenders seek to impose quantitative restrictions on the amount of debt the borrower can obtain, called "equilibrium quantity rationing of credit", because higher interest rates may give a further stimulus to adverse selection and risk taking. The model is based on imperfect credit markets characterized by information asymmetry, which makes it too costly for banks to obtain accurate information on the borrowers and to monitor the actions of the borrowers. The model assumes the existence of many banks that seek to maximize their profits through their choice of interest and collateral and many potential borrowers who seek to maximize their profits through the choice of projects (Okurut, Olalekan & Mangadi, 2012).

Helsen and Chmelar (2014) posit that banks to protect themselves and the credit market from the adverse selection problem of rising prices and ever worsening quality of borrowers and decreasing net returns, banks limit the supply of credit and offer this credit at a low interest rate. Consequently, demand will exceed supply without the price being able to help, causing the market failure in order to function (Helsen&Chmelar, 2014). There are a number of different types of credit rationing depending on how excess demand is defined, on whether the excess demand is temporary or continuing, and most importantly, on the factors that cause the loan rate to be depressed. Higher costs of credit, or lack of collateral will have adverse effects on overall economic performance, since SMEs' investment will tend to be limited to what is available from holdings of liquidity and flows of internal finance (Campello, Graham& Harvey, 2016).

In addition, financial markets are not perfect in the presence of adverse selection banks are more likely to opt for credit rationing than to adjust their lending rates in a situation where there has been an upward adjustment of interest rates by the central bank (Ladime et al., 2013). Credit is essential in all economies, as it is required to finance working capital and investment in fixed capital, particularly among small and medium enterprises to accumulate much saving. Access to credit is especially restricted for the small and medium enterprises, owing to their inability to provide collateral. Collateral both reduces default risk and lender exposure in the event of default (Ghosh, Mookherjee&Ray, 2014).

This theory is relevant to the current study as it reveals critical factors that lead to both pure Credit Rationing. these a number of factors include the borrower's observable firms characteristics (age, gender, wealth, experience, credithistory), firm characteristics (business experience, risk profile, earnings), and loancharacteristics (amount demanded,

loan maturity, collateral offered, interest rate) affect both lender willingness and borrower access to financing.

### **2.2.2 Financial Intermediation Theory**

The theory of financial intermediation was developed in the 60's in the 20<sup>th</sup> century, the preliminary work being of Gurley and Shaw (1960). The financial intermediation theory is based on the theory of agency and the informational asymmetry. The theory of financial intermediation relates to access to credit and the cost of doing business. In principle, the existence of financial intermediaries is explained by the existence of high cost of transaction, lack of complete information in useful time; and the method of regulation. The theory analyzes, mainly, the functions of financial intermediation, the way in which the financial intermediation influences the economy and the effects of government policies on the financial intermediaries (Andries&Cuza, 2017).

Financial intermediaries are financial institutions specialized in the activity of buying and selling assets and financial contracts. Financial intermediaries do not resell the assets they buy, but create new assets, which they sell on the market; they are debts of clients to the banking institutions and not to the savers who initially owned the assets bought by the intermediary (Andries&Cuza, 2017). However, SMEs have traditionally encountered problems when approaching providers of finance for funds to support fixed capital investment and to provide working capital for the firm's operations (Lean & Tucker, 2013).

SMEs typically know their collateral, industriousness, and moral integrity better than lenders and thus the SMEs find themselves in a position where credit access is high and also the cost of credit. Thus, there exist a finance gaps for SMEs due to their

disadvantaged position in the market for finance and the incomplete financial intermediation process between financial institutions and SMEs.

Financial intermediaries are an important source of external funding for SMEs, financial intermediation theory builds on the notion that intermediaries serve to reduce transaction costs and informational. Of importance, Loan commitments by SME may reduce borrowing rates and eliminate the associated moral hazard problems on the borrower's side. Therefore, the loan commitments provide a possibility for the reduction in transaction costs. At the same time, loan commitments are an example of lending relationships, which provide a basis for debt renegotiation

### **2.2.3 Information Asymmetry Theory**

The theory of asymmetric information was advanced in Akerlof's (1970) paper "The Market for Lemons, Quality Uncertainty and the Market Mechanism". The information asymmetry arises when one group of participants has better or timelier information than other groups. Theories based on asymmetric information assume that firm managers and insiders possess private information about the firm's characteristics of return stream or investment opportunities that are rarely known by outsiders (Niu, 2016). The nature of the asymmetric information in this case of SMEs lending is that insiders know more about the enterprises prospects, risks and values than commercial banks. Banks know the credit risk breakdown among their borrowers, but due to information asymmetry, they are not able to identify individual amounts of default costs for particular borrowers (Slazak, 2015).

According Lean and Tucker (2013) the general problem of information asymmetry can manifest in different ways in the banking sector which may include acceptance of the loan application but at a higher than risk-adjusted interest rate; acceptance but with

strict collateral requirements; or outright rejection of the loan application. The information asymmetry problem may not only result in good lending prospects being rejected by providers, but also poor prospects being accepted by providers (Lean & Tucker, 2013). With regard to SMEs, the asymmetric information assumes that SME managers and insiders possess private information about the enterprise characteristics of return stream or investment opportunities that are rarely known by financial institutions. The lack of audited financial statements prevents banks from engaging in financial statement lending which the loan contract terms are set based on the company's expected future cash (Andries & Cuza, 2017).

SMEs are high risk and suffer from a high mortality rate this is largely as a result of low capitalization and asset base. SMEs have limited availability of data and where the data is available it is often not reliable leading information asymmetry problem. Even though financial institutions use collateralization in resolving problems associated with asymmetric information in business and lending this has not been able to reduce loan default by SMEs (Kravchenko, 2013).

The Information Asymmetry theory was relevant to this study since the impact of informational asymmetry is critical for SMEs, since they tend to be informational opaque compared to larger firms. The lack of hard information about SMEs creates asymmetry of information between banks and small enterprises and thus they find credit access being a challenge.

#### **2.2.4 Adverse Selection Theory**

The adverse selection theory of credit markets emanated from the works of Stiglitz and Weiss (1981). The theory is based on two main assumptions: that lenders cannot distinguish between borrowers of different degrees of risk, and that loan contracts are

subject to limited liability. The analysis is restricted to involuntary default, i.e., it assumes that borrowers repay loans when they have the means to do so (Ghosh, Mookherjee & Ray, 2014). Helsen and Chmelar (2014) points out that the adverse selection quality of the credit market becomes apparent when looking at the negative effects of allowing interest rates to rise under market influence. Rising interest rates will reduce the quality of the pool of borrowers by pushing out low risk, low yield borrowers and attracting riskier borrowers instead.

The adverse selection theory describes the situation of a bank that cannot distinguish the safe borrowers from risky. In adverse selection, the lender lacks information on the riskiness of its borrowers. Riskier borrowers should be charged higher interest rates to compensate for the increased risk of default than safer borrowers who are less likely to default (Slazak, 2015). Accordingly, safer borrowers should be charged less provided each type can be accurately identified. Since the lender has incomplete information about the risk profile of its borrowers, higher average interest rates are passed on to all borrowers irrespective of their risk profile (Armendariz & Morduch, 2014). To mitigate adverse selection problems, credit providers take their loan applicants through an elaborate screening procedure before granting a loan however, this has been able to reduce loan default among SMEs.

With relation to SMEs, adverse selection problem arises due to incomplete information regarding the underlying quality of the project and the management of the small firm. Small finance market is characterized by risk and uncertainty regarding future conditions and information is distributed asymmetrically between the bank and the firm (Stiglitz and Weiss, 1981). Further, the problem of information asymmetry and the resulting adverse selection problem is further compounded by certain trends like competition, centralizing business lending decisions and strict policy guidelines

which are evident in the banking sector (Lean & Tucker, 2013). The adverse selection theory was relevant to this study since credit markets relates to access to credit and the risks associated with lending and borrowing. Since the financial institutions deem SMEs to be riskier creditors compared to other firms the banks use adverse selection and thus SMEs find themselves charged higher interest rates which increases the cost of credit and thus limit their credit access.

### **2.3 Empirical Review**

Empirical review is based on observed and measured phenomena and derives knowledge from actual experience rather than from theory or belief. Empirical review starts from specific concrete examples/observations to create a model and subsequently, a theory and information is presented only when it affects theoretical issues (Cooper, 2012). The empirical review covered past studies related to interest rate and credit access; collateral requirement and credit access; cost of credit and credit access; firm size and credit access in SMEs.

#### **2.3.1 Location of the Firm and Credit Access**

While assessing the impact of firm and entrepreneurial characteristics on access to debt finance by SMEs in King Williams' Town, South Africa, Fatoki and Asah (2015) collected data through a self-administered questionnaire in a survey. The statistical analyses included descriptive statistics, Pearson correlation and logistic regression. It was noted that geographic proximity to banks and customers had a relationship on a firm's use of leverage. Banks that are geographically closer to their customer firms are better able to use soft qualitative information about their customers' credit quality. Geographical proximity to either critical buyers or suppliers produces a form of enhanced environmental scanning that enables SMEs to more easily identify and

exploit growth opportunities in the market. Firms located in metropolitan areas may therefore have higher chance of success than those located in rural areas.

While assessing the impact of firm characteristics in the access of financing by small and medium-sized enterprises in Tanzania, Kira and He (2016) conducted a Pearson correlation and logistic regression to establish the association between dependent and independent variables. It was noted that the geographic closeness between lenders and customers had an association with a firm ability to access credit. The lenders who were geographically proximate to their customers were capable to utilize soft available qualitative information to establish the credibility of their customers for credit quality. Location of the firm had a noticeable relationship with access to the marketplace, supplies and to other resources such as capital, labor, and land. Consequently, firms sited in urban locations had a higher possibility of success than firms located in rural locations with access to credit, market and other resources. Physical closeness between lenders and borrowers produce an improved form of environmental scrutiny that aid SMEs to access credit from lenders.

Thuku (2017) studied the factors affecting access to credit by small and medium enterprises in Kenya: a case study of agriculture sector in Nyeri County. A descriptive research design was employed to gather quantifiable information through use of open and close ended questions. Data was analyzed using descriptive statistics and SPSS. The findings revealed that SME's located in urban areas are able to easily access debt financing as compared to those located in rural areas. This is because the assets offered as collateral by these firms may have less market value, and in case of default, they may find it difficult to realize these assets. However, the probability of accessing credit is higher in rural areas than in urban areas. This is because most

of government bank credit is allocated towards rural areas confirming that county governments often are distinctly protective of firms in rural areas, which are more oriented towards serving local markets and therefore tend to escape from some of the credit barriers inherent in urban areas.

Katuka, Kagwaini and Waweru (2019) focused on the factors influencing access to debt financing among small and medium agribusiness enterprises in Beni Town, Democratic Republic of Congo. A self-administered questionnaire was used to collect primary data which was analysed using SPSS version 23.0. Both descriptive and inferential statistical analysis were conducted. It was noted that the closeness to financial services providers tends to be positively correlated with access to debt financing. There is a high likelihood for firms operating in rural areas to face the absence of financial institutions. Very often, there are too few financial institutions in rural areas. As a result, most small and medium enterprises end up paying exorbitant interest on loans due to lack of alternatives. In rural areas there is likelihood of either delays in approving loans requested by firms or high amount of loan rejections, as the loan approval and processing are done by the head office officials who seldom have accurate knowledge of customers and their business projects.

### **2.3.2 Firm's Collateral and Credit Access**

According to a survey done by Kamau (2013) found that collateral security is a major constraint to credit access. In addition, 92% of enterprises studied had applied for loans, and were rejected while others had decided not to apply since they knew they would not be granted for lack of collateral security. McMahon (2015) stated that other factors held constant, firms with more intangible assets need to borrow less compared to firms with more tangible assets because of collateral factor. SMEs have fewer collateral and

intangible assets than large firms. Banks have always adopted a risk adverse attitude towards small firms, with an accompanying inability to focus on the income generating potential of the venture, when analyzing the likelihood of loan repayment (Beaver, 2015).

According to a study done by Vuvor and Ackah (2015) on challenges faced by small & medium enterprises (SMEs) in obtaining credit in Ghana findings revealed that SMEs in Ghana like most SMEs in other countries are faced with major challenges in accessing credit. These challenges include; the inability of SMEs to provide collateral and other information needed by banks such as audited financial statement couple with high cost of loan in terms of high interest rates make it extremely difficult to access bank loans. Fatoki and Asah (2015) suggested that operators of SMEs have to own more tangible assets that can create higher value on their firm to accelerate borrowing security. Because, the higher the value of assets the lower the interest rates of the debt to be secured by those assets. Consequently, it is hypothetical of a strong positive relationship between collateral and access of debt financing by SMEs.

Ndungu (2016) on the effect of collateral requirement on credit access among small and medium enterprises in Murang'a County. The study used stratified random sampling and then applied the simple random sampling to select respondents from the selected stratas out of which 102 respondents were selected. The study concluded that there is need to provide collateral security prior to lending as such to minimize the level of risk exposure there is need to evaluate credit rate on SMEs individualized cases so as to ensure there is optimal gain to both the lender and borrower. Moreover, financial institutions ought to use alternative lending methods according to borrowers' risk level and credit worthiness. There is need to seek alternative means of

collateral security as such to improve the level of financial deepening among SMEs. However, the above study focused on collateral requirement alone as a form of credit appraisal characteristics while the current study seeks to link credit appraisal characteristics and credit access.

According to Cressy and Toivanen (2017), states that better borrowers are able to get larger loans and lower interest rates and provision of collateral and loan size helps reduce interest rate that will be paid when a firm borrows. In addition, banks use qualitative and quantitative information in the structuring of loan contracts to small businesses. In order to protect the funds of savers, banks approach the lending process in a risk-averse way hence turn down a number of propositions perceived to be 'riskier'. Agricultural enterprises faces unfavourable factors hence financial service providers classify farmers as high risk clients who cannot use their farms as collateral for credit (Rahaji&Fakayode, 2017).

Subeyr and Muturi (2017) studied collateral requirements and access to credit by microenterprises in Garowe, Puntland. The study used quantitative and comparative research design and purposive sampling was used to select enterprises market, and then cluster sampling to determine enterprises in each zone. The study found out that the collateral requirement is very high, while accessing credits. This is because the banks are willing to reduce the risk of losing their loan. The study also revealed that an individual guarantor also plays a role for a borrower to have access to credit in banks. Every borrower is required to meet the requirements of the collateral before applying the loans from the banks. However, the above study was a global study and it focused on collateral requirement alone as a form of credit appraisal characteristics while the current study seeks to link credit appraisal characteristics and credit access.

### **2.3. Age of the Firm and Credit Access**

As business is in the start-up life cycle stage, the main challenge that they face is how to mobilize money because they need overestimated money for formation of fixed asset and working capital. Whereas in the growth life stage, businesses face challenges based on time and money (La Rocca, 2017). According to research done by Ngoc, Le and Nguyen (2017) on the impact of networking on bank financing in Vietnam supported the argument that younger firms face hardship and more costs in accessing external financing from lenders because of information asymmetry. Consequently, it is hypothetical existence of a positive relationship between firm's age and access to debt finance by SMEs.

Lore (2017) also revealed that younger entrepreneurs are less likely to access loans from banks in Kenya. Age is an indicator of useful experience in self-selecting in the credit market. In addition, Lore (2017) asserted that older entrepreneurs also tend to have higher levels of work experience, education, wealth and social contacts. These resources are important in developing key competencies. Therefore, superior age leads to higher levels of entrepreneurial orientation. Older entrepreneurs are more likely to seek out for credit. The firm's size has a crucial impact on the proportion of debt in the firm's capital structure since real assets have an impact on the long debt whenever vital. Large organizations tend to be sufficiently diversified thus influencing their stability (Honhyan, 2017).

Babu (2017) while studying firm's characteristics that influence access to credit by formal finance by youth owned SMEs in Kenya: a case of Kiambu county used descriptive research design. Descriptive statistics was used to analyze data that was collected. Pearson correlation and regression analysis were used to determine how

independent variables influences dependent variable. SPSS software was used to analyze the data. It was revealed that younger firms face hardship in accessing finance from lenders because of information asymmetry. In their research on the findings, it was revealed that there was a positive relationship between the age of the firm and access to credit. However, the above study focused on firm's characteristics that influence access to credit by formal finance by youth owned SMEs while the current study focuses on the link credit appraisal characteristics and credit access.

Thuku (2017) while studying firm's characteristics that influence access to credit by small and medium size enterprises and used a descriptive survey research design where stratified sampling technique was used. The study data was analyzed for descriptive statistics while inferential statistics were analyzed for correlations and regression. The result findings revealed younger firms (less than 3 years) face challenge accessing loans as compared to older firms. Further older firm (more than 3 years) have more experiences of applying for loans than younger firms below 3 years. However, the above study focused on firm's characteristics that influence access to credit by formal finance by youth owned SMEs while the current study focuses on the link credit appraisal characteristics and credit access.

#### **2.3.4 Firm Size and Credit Access**

According to research done by Berger and Udell (2014) on small business credit availability and relationship lending: the importance of bank organizational structure found that smaller and younger firms are more likely to face higher cost of financing and at the same time they are required to offer collateral. Smaller firms have fewer assets to offer as collateral. In order to reduce the anticipated risk and moral hazard associated with lending, the banks use collateral as one of the

instruments. However, the above study was a global study and it focused on small business credit availability and relationship lending while the current study focuses on the link credit appraisal characteristics and credit access.

According to a study done by Fatoki and Asah (2015) on the impact of firm and entrepreneurial characteristics on access to debt finance by SMEs in King Williams' town found that firm size impacts SMEs access to debt finance from commercial banks whereby small enterprises are less favoured to large firms. Consequently, it's hypothetical existence of a positive association between the firm size and SMEs access to debt financing. With SME's, there is a high risk involved because small firms have high failure rate compared to large firms. However, the above study was a global study and it focused on the impact of firm and entrepreneurial characteristics on access to debt finance while the current study focuses on credit appraisal characteristics and credit access.

Beck (2016) while focusing on the role of firm size on credit accessibility asserted that banks consider the SME segment to be highly profitable, but perceive macroeconomic instability in developing countries and competition in developed countries as the main obstacles. In addition, compared with large firms, banks are less exposed to small enterprises, charge them higher interest rates and fees, and experience more non-performing loans from lending to them. Factors that can reduce the risk and uncertainty and improve the probability of loan success such as institutional stability and predictability are often absent in emerging economies on the impact of firm and entrepreneurial characteristics on access to debt finance by SMEs. However, the above study was a global study and it focused on the role of firm size on credit accessibility while the current study focuses on the link credit appraisal characteristics and credit access.

According to a research done by Oliveira and Fortunato (2016) on firm growth and liquidity constraints found that small firms face greater financial constraints hence having a negative impact on their growth. In addition, medium-sized firms face greater financial constraints than large firms. Small firms cannot exploit economies of scale in the same way as large firms can. These authors claim that since young companies have not accumulated sufficient cash flow and are unable to rely on bank financing, they have to depend on the original equity investment of their owners. However, the above study was a global study and it focused on firm growth and liquidity constraints while the current study focuses on the link credit appraisal characteristics and credit access.

Thuku (2017) studied the factors affecting access to credit by small and medium enterprises in Kenya. A descriptive research design was employed to gather quantifiable information through use of open and close-ended questions. Stratified random sampling was used to select a sample size. Data was analyzed using descriptive statistics and SPSS. Findings revealed banks are willing to lend to small firms located in rural areas. However, the above study focused on factors affecting access to credit by SMEs while the current study seeks to determine loan appraisal characteristics and credit access by SMEs. However, the above study was a global study and it focused on factors affecting access to credit by small and medium enterprises in Kenya while the current study focuses on the link credit appraisal characteristics and credit access.

## **2.4 Summary of Literature Review and Research Gap**

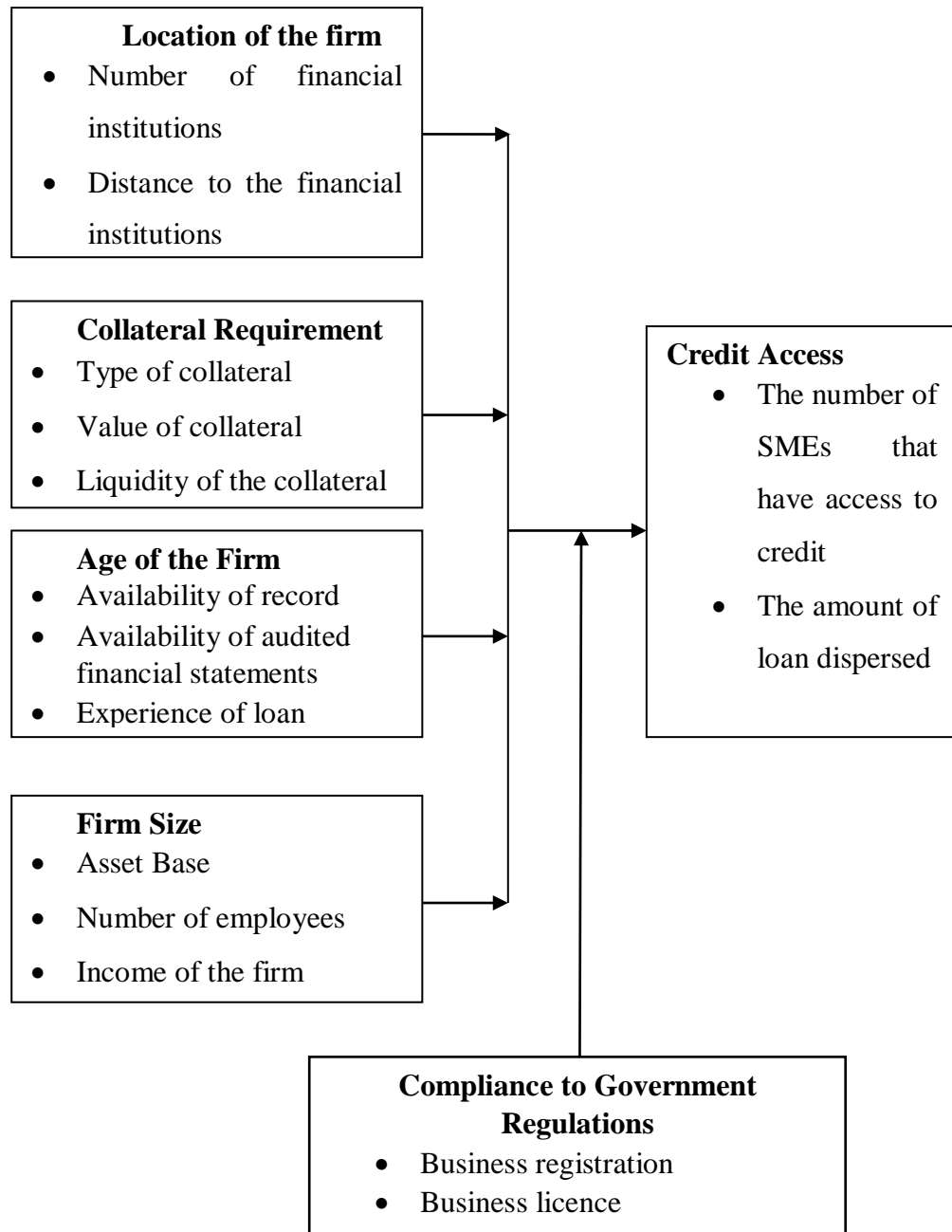
There have been various studies on small and medium enterprises but only a small number of those studies have been done in Kenya and specifically on credit access by small and medium enterprises. Bowen (2014) study on management of business

challenges among small and micro enterprises in Nairobi Kenya found out that SMEs face the following challenges; competition among themselves and from large firms, lack of access to credit, cheap imports, insecurity, high interest rates and debt collection. However, the above study focused on the challenges faced by SMEs while the current study seeks to establish the challenges regarding credit access by small and medium enterprises. Kamau (2013) study sought to establish the constraints in credit access by SMEs in Kenya and found that collateral security was a major constraint to credit access. In addition, 92% of enterprises studied had applied for loans, and were rejected while others had decided not to apply since they knew they would not be granted collateral security. However, the above study did not focus on other constraints regarding credit access by SMEs.

Schiffer and Weder (2015) sampled firms in Europe and found that there was a negative relationship between the size of a business and the risk it might pose for a lender. However, this was a global study and the context of Europe is different from Kenya and it focused on why the lenders are reluctant to give firms loans which is different from the current study hence the need to fill the gap. Fatoki and Asah (2015) on the impact of firm and entrepreneurial characteristics on access to debt finance by SMEs in King Williams' town found that firm size impacts SMEs access to debt finance from commercial banks whereby small enterprises are less favoured to large firms. The above study was limited to entrepreneurial characteristics that limit SMEs access to credit and was also in the global context.

## **2.5 Conceptual Framework**

A conceptual framework expresses the researcher's perception of the link between the studied variables. This connection is diagrammatically depicted (Mugenda & Mugenda, 2008).



**Independent Variables**

**Dependent Variables**

**Figure 2.1: Conceptual Framework**

**Source: Author (2020)**

Every business needs financing, even though at first glance it might appear that funding is unnecessary (Gichuki et al., 2014). Fatoki and Asah (2015) noted that geographic proximity to banks and customers had a relationship on a firm's use of leverage. Banks that are geographically closer to their customer firms are better able to use soft qualitative information about their customers' credit quality. Kira and He (2016)

noted that the lenders who were geographically proximate to their customers were capable to utilize soft available qualitative information to establish the credibility of their customers for credit quality. Location of the firm had a noticeable relationship with access to the marketplace, supplies and to other resources such as capital, labor, and land.

Collateral refers to the extent to which assets are committed by borrowers to a lender as security for debt payment (Gitman, 2013). The security assets should be used to recover the principal in case of default. SMEs in particular provide security in form of properties in case of default on loans. Security for loans must actually be capable of being sold under the normal conditions of the market, at a fair market value and also with reasonable promptness. However, in most banks, in order to finance SMEs and to accept loan proposals, the collateral must be 100% or more, equal to the amount of credit extension or finance product which may limit credit access in the SMEs (Mullei&Bokea, 2016).

According to Sarapaivanich and Kotey (2016) asserts that lack of adequate information leads to information asymmetry and credit rationing. Since young and small firms will not likely have a well established record keeping system and readily available audited financial statements, they suffer more from the asymmetric information problem. According to Kimuyu and Omiti (2016) states that age is associated with access to credit. In most African states, most SMEs face growth barriers accompanied by a shortage of finance. Fatoki and Asah (2016) established that firm size influences SMEs access to debt investment from commercial banks whereby small institutions are less ideal in comparison to large ones.

Firm age in years is frequently used to control for the fact that older firm may have more experiences of applying for loans and have deeply long relationship with banks and therefore more probability to get bank loans. It seems that financial life cycle pattern is homogenous for different and consistent time (Kimuyu&Omiti, 2016). Lore (2017) also revealed that younger entrepreneurs are less likely to access loans from banks in Kenya. Age is an indicator of useful experience in self-selecting in the credit market. In addition, Lore (2017) asserted that older entrepreneurs also tend to have higher levels of work experience, wealth, social contacts education and education.

Firm size is one of the most important variables in literature related to access to credit. Numerous studies have discussed that small and medium-sized enterprises are financially more constrained than large firms (Carpenter & Petersen, 2014). Oketch, Abaga and Kulundu (2015) found out that size of a firm positively influences liquidity and that a unit increase in size shall increase liquidity by a considerable percentage which enhance the firm ability to access credit. Fatoki and Asah (2011) states that firm size influences SMEs access to credit from banks and other lending institutions whereby small SMEs are usually less favoured compared to large SMEs. According to Monteiro (2013) smaller SMEs have limited access to credit due to lack to creditworthiness in their information. Due to lack of creditworthiness, inadequate credit history, high transaction costs and lack of collateral small firms find it difficult to access credit from banks and other lending institutions (Kulundu, 2015).

## 2.4 Summary of the literature and research gaps

Study	Focus of the Study	Methodology	Main Findings	Knowledge Gap	Focus of the Proposed Study
Fatoki and Asah (2015)	Impact of firm and entrepreneurial characteristics on access to debt finance by SMEs in King Williams' Town, South Africa	Primary data was gathered from an aggregate of 28 key informants Pearson correlation and logistic regression	Geographical proximity to either critical buyers or suppliers produces a form of enhanced environmental scanning that enables smes to more easily identify and exploit growth opportunities in the market	While this study was conducted in south Africa a state with different policies, the current study will be conducted in study will small and medium enterprises in Kirinyaga County.	Effect of firm characteristics on credit access by small and medium enterprises in Kirinyaga County, Kenya
Kira and He (2016)	Impact of firm characteristics in the access of financing by small and medium-sized enterprises in tanzania	The study made use of the self-administered questionnaire where primary data was collected.	It was noted that the geographic closeness between lenders and customers had an association with a firm ability to access credit	Differ significantly and thus the need to come up with results that truly reflect the in Kirinyaga County.	Effect of firm characteristics on credit access by small and medium enterprises in Kirinyaga County, Kenya
Thuku (2017)	Factors affecting access to credit by small and medium enterprises in Kenya	The study utilized an analysis of structural equation modeling through a questionnaire survey	SME's located in urban areas are able to easily access debt financing as compared to those located in rural areas	The study only focused on case study of agriculture sector in Nyeri County, the current study focus both rural and urban Smes	Effect of firm characteristics on credit access by small and medium enterprises in Kirinyaga

Study	Focus of the Study	Methodology	Main Findings	Knowledge Gap	Focus of the Proposed Study
					a County, Kenya
Vuvor and Ackah (2015)	Challenges faced by small & medium enterprises (SMEs) in obtaining credit in Ghana	The study utilized an analysis of structural equation modeling through a questionnaire survey	The inability of SMEs to provide collateral needed by banks such as audited financial statements coupled with high cost of loan in terms of high interest rates make it extremely difficult to access bank loans	Ghana and Kenya differ significantly (SME policies) and thus the need to come up with results that truly reflect the in Kenya.	Effect of firm characteristics on credit access by small and medium enterprises in Kirinyaga County, Kenya
Ndungu (2016)	Effect of collateral requirement on credit access among small and medium enterprises in Murang'a county	The study used stratified random sampling and then applied the simple random sampling to select respondents from the selected strata out of which 102 respondents were selected	There is need to provide collateral security prior to lending as such to minimize the level of risk exposure there is need to evaluate credit rate on SMEs individualized cases so as to ensure there is optimal gain to both the lender and borrower	The study only limited its scope on collateral requirements, the current study will stretch further and explore on factors such as age of the firm, compliance to government and regulations, firm size and location of the firm,	Effect of firm characteristics on credit access by small and medium enterprises in Kirinyaga County, Kenya
Babu (2017)	Firm's characteristics that influence access to credit by formal finance by youth	Descriptive statistics was used to analyze data that was collected	There was a positive relationship between the age of the firm and	While this study was conducted in Kiambu county, the	Effect of firm characteristics on

Study	Focus of the Study	Methodology	Main Findings	Knowledge Gap	Focus of the Proposed Study
	owned SMEs in Kenya.		access to credit	current study will be conducted in Kirinyaga County.	credit access by small and medium enterprises in Kirinyaga County, Kenya
Berger and Udell (2014)	Small business credit availability and relationship lending	Descriptive statistics was used to analyze data that was collected. Pearson correlation and regression analysis were used to determine how independent variables influences dependent variable	Smaller firms have fewer assets to offer as collateral. In order to reduce the anticipated risk and moral hazard associated with lending, the banks use collateral as one of the instruments	The study was a global study and it focused on small business credit availability and relationship lending while the current study focuses on the link credit appraisal characteristics and credit access	Effect of firm characteristics on credit access by small and medium enterprises in Kirinyaga County, Kenya
Oliveira and Fortunato (2016)	Impact of firm and entrepreneurial characteristics on access to debt finance by SMEs	Descriptive statistics was used to analyze data that was collected	Since young companies have not accumulated sufficient cash flow and are unable to rely on bank financing, they have to depend on the original equity investment of their owners	The study only utilised descriptive statistics, however the current study explored both primary and secondary data to come up with conclusive results.	Effect of firm characteristics on credit access by small and medium enterprises in Kirinyaga County, Kenya

Study	Focus of the Study	Methodology	Main Findings	Knowledge Gap	Focus of the Proposed Study
Babu (2017)	Firm's characteristics that influence access to credit by formal finance by youth owned SMEs in Kenya	Descriptive statistics was used to analyze data that was collected. Pearson correlation and regression analysis were used to determine how independent variables influences dependent variable	There was a positive relationship between the age of the firm and access to credit.	The above study focused on firm's characteristics that influence access to credit by formal finance by youth owned SMEs while the current study focuses on the link credit appraisal characteristics and credit access	Effect of firm characteristics on credit access by small and medium enterprises in Kirinyaga County, Kenya
Schiffman and Wedderburn (2015)	Relationship between the size of a business and the risk it might pose for a lender	Pearson correlation analysis were used to determine how independent variables influences dependent variable	Sampled firms in Europe and found that there was a negative relationship between the size of a business and the risk it might pose for a lender	This was a global study and the context of Europe is different from Kenya and it focused on why the lenders are reluctant to give firms loans which is different from the current study hence the need to fill the gap	Effect of firm characteristics on credit access by small and medium enterprises in Kirinyaga County, Kenya

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter outlined the overall methodology that was used in the research. It encompasses the research design, population, methods of data collection, diagnostic tests and analysis that the researcher used in establishing firm's characteristics and credit access by small and medium enterprises in Kirinyaga County, Kenya.

#### **3.2 Research Design**

A research design as explained by Kothari (2014) is a state that is employed to provide the needed answers to the study research questions. The descriptive research technique was used for this study since it allows the researcher to obtain large amounts of data from a sizable population in a highly effective, easy and in an economical way using questionnaires (Saunders, Lewis & Thornhill, 2012). This method was preferred as it enables the researcher analyze various variables at the same time and the researcher through this method described the different study conditions and variables. The research design was used to come up with frequency distributions, tables, percentages among the various variables and also determine the degree to which such variables are associated.

#### **3.3 Target Population**

According to Kothari and Tromp (2014) a population is a well defined set of people, events and group of things or households that are being investigated. This definition ensures that population of interest is homogeneous. Target population on the other hand is the specific population about which information is desired (Kothari, 2014).The unit of

analysis was SMEs in Kirinyaga County, Kenya while the unit of observation was the 356 SMEs in Kirinyaga County (Kenya Bureau of Statistics, 2019).

### **3.4 Sample Size and Sampling Design**

A sample is a small group obtained from accessible population, (Mugenda & Mugenda, 2012). Sampling is that part of statistical practice which is concerned with the selecting of a subset of individual observations within a population with intention of yielding some knowledge about the population of concern, necessary for making predictions based on statistical inference (Mugenda & Mugenda, 2012). Sampling technique is the procedure a researcher uses to gather people, places or things to study, (Kombo & Tromp, 2013). The study selected 35% of the total population to come up with a total sample of 124 respondents which constituted the sample size for the study. According to Mugenda and Mugenda (2012) for descriptive studies above 10% of the total population is enough and a higher sample size gives more reliability.

The study adopted a simple random sampling to sample the owners of SMEs. Cooper, and Shindler (2011) notes that simple random sampling technique ensures that every individual in a population has an equal chance of being selected hence ensures that a more representative sample is obtained from a population. This strategy was utilized since it reduces chances of bias and all items have an equal chance of being chosen.

### **3.5 Data Collection Tools**

Questionnaires was used to obtain primary data. This research tool provides a quick and economical way of obtaining the needed data from a large population. Data is also quickly obtained as the researcher collects the research tool once the respondents complete it. This tool is the most ideal in cases where the population is large and it would be hard to conduct interviews (Kothari, 2014). The study used close-ended

questions in the questions so as to save time, they were made of likert scales and questions were based on numerical ranges. Cooper and Schindler (2011) point out such scales are used as a form of rating scale because they are reliable and give an acceptable data volume compared to other scales. They also help come up with a better normal response curve.

### **3.6 Data Collection Procedure**

After the research proposal was approved by the supervisors, the researcher sought permission from Ethics and Research Board from Kenyatta University in order to obtain a research permit from the National Council for Science and Technology (NACOSTI) before conducting the research. The researcher took a letter to the management at the SMEs for consent of administering questionnaires for purposes of facilitating collection of data. The researcher used a research assist to administer the questionnaires to the selected SMEs in Kirinyaga County. The researcher exercised control and care by ensuring every issued questionnaire is received. The drop and pick method was applied for collecting data. The respondents who were not able to fill the questionnaires on time were contacted through phones and emails.

### **3.7 Pilot Testing**

The pilot test was done to ensure that the research tool is reliable and valid; 12 owners of the SMEs were used for the pilot study. Kothari (2014) recommends that a pilot made-up of 10% of the study targeted sample should be used and the number used for this test is said to be representative of a pilot. The piloted 12 owners of SMEs who were not included in the actual study.

### **3.7.1 Reliability of Instruments**

Cronbach's alphas methodology, which is based on internal consistency was used to test reliability of the data. Cronbach's alpha measures the average of measurable items and its correlation. Overall scales' reliability of the present situation and the desirable situation used tested by Cronbach's alpha, which should be above the acceptable level of 0.70 which is the acceptable reliability (Bryman & Bell, 2013).

### **3.7.2 Validity of Instruments**

According to Gill and Johnson (2008) validity is the degree by which the sample of test items represents the content the test is designed to measure. Content validity which was employed by this study is a measure of the degree to which data collected using a particular instrument represents a specific domain or content of a particular concept. The pilot study enabled the study to be familiar with research and its administration procedure as well as identifying items that require modification. The result helped the study to correct inconsistencies arising from the instruments, which ensured that they measure what is intended.

## **3.8 Diagnostic Tests**

### **3.8.1 Heteroscedasticity**

The presence of heteroscedasticity doesn't have an impact on the unbiasedness and linearity of the regression coefficient. Heteroscedasticity only affects the best property of Ordinary Least Squares (OLS) which renders conclusion made when testing hypothesis invalid. The study therefore, carried out Breusch-Pagan test to check the presence of heteroscedasticity (Gujarati, 2014).

### **3.8.2 Multicollinearity**

Multicollinearity makes the regression coefficient indeterminate. Multicollinearity also makes the standard errors to be infinite. Multicollinearity may be common among variables, what matters is the degree (Gujarati, 2014). To check for the presence of multicollinearity, variance inflation factors (VIF) test was used.

### **3.8.3 Normality**

One of the assumptions of the classical linear regression model is that the error term must normally be distributed with zero mean and a constant variance denoted as  $\mu (0, \sigma^2)$ . The error term is used to capture all other factors which affect dependent variable but are not considered in the model. However, it is thought that the omitted factors have a small impact and at best random. For OLS to be applied, the error term must be normal (Gujarati, 2014). The Shapiro Wilsktest was used as the test for normality.

### 3.9 Operationalization of the Variables

Table 3.1: Operationalization and Measurement of Variables

Variable	Type	Operationalization	Scale	Formulae
Credit Access	Dependent	<ul style="list-style-type: none"> <li>• The number of SMEs that have access to credit</li> <li>• The amount of loan dispersed</li> <li>• The amount of loan outstanding</li> </ul>	Ratio	Number of SMEs having access to cred/Total number of SMEs
Location of the firm	Independent variable	<ul style="list-style-type: none"> <li>• Number of financial institutions</li> <li>• Distance to the financial institutions</li> <li>• Market value of collateral</li> </ul>	Ratio	Number of financial institutions/ Total number of SMEs
Collateral Requirement	Independent variable	<ul style="list-style-type: none"> <li>• Type of collateral</li> <li>• Value of collateral</li> <li>• Liquidity of the collateral</li> </ul>	Ratio	Value of collateral/ Value of loan dispersed
Age of the firm	Independent variable	<ul style="list-style-type: none"> <li>• Availability of record</li> <li>• Availability of audited financial statements</li> <li>• Experience of loan application</li> </ul>	Ratio	Number of years of the firm existence/ Value of loan dispersed
Firm Size	Independent variable	<ul style="list-style-type: none"> <li>• Asset Base</li> <li>• Number of employees</li> <li>• Income of the firm</li> </ul>	Ratio	Total assets/ Value of loan dispersed
Compliance to Government and Regulations	Mediating Variable	<ul style="list-style-type: none"> <li>• Business registration</li> <li>• Business license</li> <li>• Tax charges</li> </ul>	Ratio	Number of SMEs compliant/ Total number of SMEs

### 3.10 Data Analysis and Presentation

Data analysis is the process of evaluating data using analytical and logical reasoning to examine each component of the data provided which help in inspecting, cleaning, transforming and modeling data with the goal of discovering useful information and suggesting conclusions (Bryman& Bell, 2015). Analysis was done quantitatively by use of descriptive statistics, these include frequency, percentages, mean and standard deviations etc. In addition, inferential statistics was considered.

Data analysis was done with the use of SPSS Version 22 and STATA software and presented using percentages, frequencies, means and standard deviations. This generated quantitative reports through tabulations, percentages, and measures of central tendency. Tables were used to summarize responses for further analysis and facilitate comparison.

The researcher employed a multiple regression model to study the relationship between the factors studied here. The research deems regression method to be useful for its ability to test the nature of influence of independent variables on a dependent variable. Regression is able to estimate the coefficients of the linear equation, involving one or more independent variables, which best predicted the value of the dependent variable (Cooper & Schindler, 2011).

#### **Step One:** Regression analysis with X predicting Y

The regression model was as follows:  $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$

Where: Y = Credit Access

$\beta_0$  = Constant Term

$\beta_1, \beta_2, \beta_3$  and  $\beta_4$  = Beta coefficients

$X_1$  = Location of the firm

$X_2$  = Collateral requirement

$X_3$  = Age of the firm

$X_4$  = Firm size and  $\varepsilon$  = Error term

$\varepsilon$  = Error term

**Step Two:** Regression analysis with X predicting M

$$M = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Whereby M is the mediating variable = Compliance to Government Regulations

**Step Three:** Regression analysis with M predicting Y

$$Y = \beta_0 + \beta_1 M$$

**Step Four:** Regression analysis with X and M predicting Y

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 M + \varepsilon$$

### 3.11 Ethical Consideration

This study anticipates some ethical challenges, the researcher obtained permission from the Ministry of Education to collect data. The letter was specifically obtained from National Commission for Science, Technology & Innovation (NACOSTI) after approval from the Ethics and Research Board. The application was channeled through the Registrar, Kenyatta University. The researcher also employed the use of a research assistant to mitigate against biasness.

## CHAPTER FOUR

### DATA ANALYSIS, RESULTS AND DISCUSSION

#### 4.1 Introduction

This chapter addresses how to understand and present the results of the field research. The background information of the respondents is presented in this chapter, as well as the conclusions of the analysis based on the study's objectives.

##### 4.1.1 Response Rate

**Table 4.2: Response Rate**

	<b>Questionnaires Administered</b>	<b>Questionnaires filled &amp; returned</b>	<b>Percentage</b>
Respondents	124	115	92.7

**Source: Researcher(2021)**

A response rate of 50 percent is acceptable for analysis and reporting, according to Mugenda and Mugenda (2003); a rate of 60 percent is good, and a rate of 70 percent or more is outstanding. The response rate was excellent, according to the statement.

#### 4.2 Background Information

This section starts by analysing the participant's demographic information. Specifically, this study inquired information on respondent's gender, age, work experience and highest academic qualification.

##### 4.2.1 Distribution of Respondents by Gender

Participants had to specify their gender group in order to ensure that both genders were equally represented.

**Table 4.3: Distribution of Respondents by Gender**

<b>Respondents Gender</b>	<b>Frequency</b>	<b>Percentage</b>
Male	86	74.8
Female	29	25.2
Total	115	100.0

**Source: Researcher(2021)**

The bulk of the participants (74.8 percent) were males, while 25.2 percent were females, as shown in the table. Based on the data, this study finds that participants of both genders were fairly represented, suggesting that the study's conclusions were not gender biased.

#### **4.2.4 Highest Academic Qualification**

Participants were requested to state their highest educational credentials in order to assess their capacity to answer to the study questions.

**Table 4.4: Highest Academic Qualification**

<b>Highest Academic Qualification</b>	<b>Frequency</b>	<b>Percentage</b>
Secondary School	23	20.0
Diploma level	46	40.0
Degree level	28	24.3
Postgraduate	18	15.7
Total	115	100.0

**Source: Researcher(2021)**

According to the findings, the majority of respondents (40.0 percent) had a college diploma, 24.3 percent had a bachelor's degree, 20.0 percent had a secondary school level and 15.7 percent had a postgraduate degree. This shows that all of the respondents were literate, implying that they were able to provide the research with easily understandable information.

#### **4.2.2 Distribution of Respondents by Age**

Respondents were requested to specify their age category in order to know their representation in the study. Table 4.5 summarizes the findings.

**Table 4.5 Respondents by Age Group**

<b>Age Group</b>	<b>Frequency</b>	<b>Percentage</b>
20-30 years	29	25.2
31-40 years	26	22.6
41-50 years	40	34.8
51-60 years	20	17.4
<b>Total</b>	<b>115</b>	<b>100.0</b>

**Source: Researcher (2021)**

The data indicated that the majority of the respondents (34.8 percent) were between the ages of 41 and 50, 25.2 percent were between the ages of 20 and 30, 22.6 percent were between the ages of 31 and 40, and 17.4 percent were between the ages of 51 and 60. This means that the majority of those who took part in the survey were above the age of 30. As a result, the data demonstrate that respondents of all ages participated fairly.

#### **4.2.4 Period of Service**

Individual awareness of SMEs' external and internal processes is directly linked to the length of service. Respondents were asked to state their length of service in their respective SMEs based on this premise.

**Table 4.6: Period of Service**

<b>Period of Service</b>	<b>Frequency</b>	<b>Percentage</b>
0 to 5 years	14	12.2
6 to 10 years	43	37.4
Above 10 years	58	50.4
<b>Total</b>	<b>115</b>	<b>100.0</b>

The majority of respondents (50.4 percent) had served for more than 10 years, 37.4 percent had served for 6 to 10 years, and 12.2 percent had served for less than 5 years, according to the survey. This indicates that a large proportion of the respondents had served for a long time (5 years or more), implying that they had extensive expertise and

knowledge of SME operations. As a result, the respondents were able to reply to the survey questions on their SME's ability to obtain financing.

### 4.3 Location of the Firm and Credit Access

Participants were asked to assess how much they agreed with the following statements on the impact of interest rates on credit access.

**Table 4.7: Location of the Firm and Credit Access**

<b>Statement</b>	<b>N</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>StdDev</b>
SMEs in rural areas are deemed to have high default risk by lending institutions compared to those in urban areas	115	3.00	5.00	4.16	0.70
Most institutions don't like lending loans to SMEs in rural areas compared to those in urban areas	115	2.00	5.00	4.10	0.73
There are less institutions lending loans to SMEs in rural areas compared to those in urban areas	115	2.00	5.00	4.20	0.68
The distance to the financial institution is longer in rural areas compared to that in urban areas	115	3.00	5.00	4.30	0.56
The interest rates charged by financial institutions discourage me from borrowing because they are high	115	3.00	5.00	4.24	0.59
The market value of collateral is small in rural areas compared to that in urban areas	115	2.00	5.00	4.10	0.71
The chances of SMEs success and growth in rural areas is small compared to that in urban areas	115	3.00	5.00	4.15	0.58
There is delays in approving loans requested by firms in rural areas compared to that in urban areas	115	2.00	5.00	4.13	0.72

Statistical evidence presented above shows that majority of the respondents agreed that the distance to the financial institution is longer in rural areas compared to that in urban areas (M= 4.30 SD=0.56) and that the interest rates charged by financial institutions

discourage me from borrowing because they are high (M=4.24 SD=0.59). These findings concur with empirical findings by Fatoki and Asah (2015) that geographic closeness between lenders and customers had an association with a firm ability to access credit.

Results show that there are less institutions lending loans to SMEs in rural areas compared to those in urban areas (M= 4.20 SD=0.68) and that SMEs in rural areas are deemed to have high default risk by lending institutions compared to those in urban areas (M=4.16 SD=0.70). Similar conclusion by Katuka, Kagwaini and Waweru (2019) that there is a high likelihood for firms operating in rural areas to face the absence of financial institutions.

Also, the study established that the chances of SMEs success and growth in rural areas is small compared to that in urban areas (M= 4.15 SD=0.58) and that there is delays in approving loans requested by firms in rural areas compared to that in urban areas (M=4.13 SD=0.72) These findings support research studies by Kira and He (2016) finds that, firms located in metropolitan areas may therefore have higher chance of success than those located in rural areas.

Further, the study established that most institutions don't like lending loans to SMEs in rural areas compared to those in urban areas (M=4.10 SD=0.73) and that the market value of collateral is small in rural areas compared to that in urban areas (M=4.10 SD=0.71). These findings back up Thuku (2017)'s findings that SMEs in rural areas had lesser collateral and intangible assets than huge companies.

#### 4.4 Collateral Requirement and Credit Access

Participants were asked to indicate their level of agreement with the following statements that relate to effect of collateral requirement and credit access

**Table 4.8: Collateral Requirement and Credit Access**

Statement	N	Min	Max	Mean	StdDev
Collateral security is a major constraint to credit access in my SMEs	115	3.00	5.00	4.11	0.54
Banks have always adopted a risk adverse attitude towards small firms	115	3.00	5.00	4.32	0.52
Financial institutions insist on the provision of collateral security as a primary lending condition	115	3.00	5.00	4.23	0.53
Financial institutions focus more on potential to repay loan rather than on collateral security in our business	115	3.00	5.00	4.21	0.64
I have applied for a loan but financial institutions have declined because I lacked collateral security	115	3.00	5.00	4.35	0.53
SMEs face difficulties in providing collateral when providing the loan compared to those in formal employment	115	3.00	5.00	4.23	0.61
Financial institutions adopt a risk averse stance towards small firms instead of focusing on income generating potential of an entity	115	3.00	5.00	4.37	0.54
The banks insist that SME's collateral be equal to the amount of credit extension	115	4.00	5.00	4.37	0.49

Statistical evidence presented above shows that majority of the respondents agreed that banks insist that SME's collateral be equal to the amount of credit extension (M= 4.37SD=0.54) and that the banks insist that SME's collateral be equal to the amount of credit extension (M= 4.37 SD=0.49). These findings support Kamau's (2013) empirical findings that financial institutions should utilize alternative lending strategies based on the risk level and credit quality of borrowers.

Results show that most of the SME's owners had applied for a loan but financial institutions have declined because they lacked collateral security (M=4.35 SD=0.53) and that Banks have always adopted a risk adverse attitude towards small firms (M=4.32 SD=0.52). Vuvor and Ackah (2015) reached a similar conclusion, stating that SMEs' inability to provide collateral and other information required by banks, such as audited financial statements, combined with high loan costs in terms of high interest rates, make it much more difficult for SMEs to obtain bank loans.

Further, the study established that SMEs face difficulties in providing collateral when providing the loan compared to those in formal employment (M=4.23 SD=0.61) as well as the fact that financial institutions need collateral security as a major lending requirement (M=4.23 SD=0.53). These results supported research findings by Ndungu (2016), who conclusively proved that collateral security is required prior to lending in order to reduce risk exposure. Additionally, credit rates on SMEs should be evaluated on an individual basis in order to ensure the best possible outcome for both the borrower and the lender.

Financial institutions place a greater emphasis on potential to repay the loan than on collateral security (M=4.21 SD=0.64) and collateral security is a key barrier to credit availability in my SMEs (M=4.11 SD=0.54). These conclusions are consistent with Subeyr and Muturi's empirical findings (2017) When assessing the possibility of loan payback, banks have traditionally taken a risk-averse approach to small businesses, with an associated inability to focus on the venture's income-generating potential activities.

#### 4.5 Age of the Firm and Credit Access

Participants were asked to rate how much they agreed with the following statements about the firm's age and credit access.

**Table 4.9: Age of the Firm and Credit Access**

Statement	N	Min	Max	Mean	StdDev
Small firms size have problems in accessing loans than big firms	115	3.00	5.00	4.26	0.58
Older firm have more experiences of applying for loans than younger firms	115	4.00	5.00	4.35	0.48
Younger firms face challenge accessing loans as compared to older firms.	115	3.00	5.00	4.28	0.55
Older firms are charged less interest rates than younger firms	115	3.00	5.00	4.43	0.55
Older firms are required to have less collateral than younger firms	115	3.00	5.00	4.42	0.55
Banks are unwilling to lend to firms that have been in existence for less than 3 years	115	3.00	5.00	4.28	0.55

Statistical evidence presented above shows that majority of the respondents agreed that older firms are charged less interest rates than younger firms ( $M=4.43$   $SD=0.55$ ) and that older firms are required to have less collateral than younger firms ( $M=4.42$   $SD=0.55$ ). These findings are consistent with Babu (2017)'s empirical findings, which indicated a positive link between the age of the business and loan access.

In addition, older businesses have greater loan application experience than younger firms ( $M= 4.35$   $SD=0.48$ ), and younger firms have more difficulty getting loans than older firms ( $M=4.28$   $SD=0.55$ ). Lore (2017) came to the same result, claiming that younger Kenyan businesses are less likely to obtain bank loans.

Furthermore, the study discovered that banks are hesitant to lend to businesses that have been in operation for less than three years ( $M=4.28$   $SD=0.55$ ), and that small businesses have more difficulty obtaining loans than large businesses ( $M= 4.26$   $SD=0.56$ ). These

findings back with Thuku (2017)'s research, which found that older entrepreneurs had more job experience, education, income, and social connections.

#### 4.6 Firm Size and Credit Access

Participants were asked to rate how much they agreed with the following assertions about the impact of business size on loan availability.

**Table 4.10: Firm Size and Credit Access**

Statement	N	Min	Max	Mean	StdDev
Large SMEs are able to access loan facilities than the small SMEs	115	3.00	5.00	4.37	0.54
Small firms have high failure rate compared to large firms which limit their credit access	115	3.00	5.00	4.35	0.53
Younger firms are more likely to face higher cost of financing than older firms	115	3.00	5.00	4.28	0.51
Smaller firms have fewer assets to offer as collateral which limit their credit access	115	4.00	5.00	4.30	0.46
Small firms cannot exploit economies of scale in the same way as large firms can limiting their credit access	115	4.00	5.00	4.32	0.47
Banks are more reluctant to lend to small firms located in rural areas because most SME's have collateral that have less market value	115	3.00	5.00	4.25	0.49

Statistical evidence presented above shows that majority of the respondents agreed that large SMEs are able to access loan facilities than the small SMEs (M=4.37 SD=0.54) Small firms have high failure rate compared to large firms which limit their credit access (M=4.35 SD=0.53) and that large organizations tend to be sufficiently diversified thus influencing their stability (Honhyan, (2017).

Also, the study established that small firms cannot exploit economies of scale in the same way as large firms can limiting their credit access (M=4.32 SD=0.47) and that smaller firms have fewer assets to offer as collateral which limit their

credit access(M=4.30 SD=0.46).These conclusions support empirical results by Berger and Udell (2014), which show that smaller and younger businesses are more likely to incur higher financing costs while also being asked to provide collateral.

Statistical evidence also show that younger firms are more likely to face higher cost of financing than older firms (M=4.28 SD=0.51) and that banks are more reluctant to lend to small firms located in rural areas because most SME’s have collateral that have less market value (M= 4.25 SD=0.49). Similar conclusion by Fatoki and Asah (2015) also affirm that, since young companies have not accumulated sufficient cash flow and are unable to rely on bank financing, they have to depend on the original equity investment of their owners.

#### 4.7 Compliance to Government and Regulations

Participants were asked to rate how much they agreed with the following statements on SMEs' compliance with government and regulatory requirements.

**Table 4.11:Compliance to Government and Regulations**

<b>Statement</b>	<b>N</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>StdDev</b>
I have complied with requirements relating to business registration in my SME	115	1.00	5.00	2.16	1.41
I have complied with requirements relating to business licensing in my SME	115	1.00	5.00	1.97	1.23
I have complied with requirements relating to VAT in my SME	115	1.00	5.00	2.08	1.22
I have complied with requirements relating to corporate tax in my SME	115	1.00	5.00	2.35	1.40
I have complied with requirements relating to income tax in my SME	115	1.00	5.00	2.27	1.33
I have complied with requirements relating to county government licensing in my SME	115	1.00	5.00	1.99	1.13
I have updated financial records in my SME	115	1.00	5.00	2.50	1.44

Statistical evidence presented above shows that majority of the entrepreneurs in agreed that they have not complied with requirements relating to business licensing in the SME (M=1.97 SD=1.23) and that small and medium enterprises in Kirinyaga County, have not complied with requirements relating to county government licensing in my SME (M=1.99 SD=1.13). These findings concur with empirical findings byLadime et al (2013) informal SMEs face significant challenges that affect their growth.

Results show that most of the small and medium enterprises in Kirinyaga County have not complied with requirements relating to VAT in the SME (M=2.08 SD=1.22), similarly majority had not complied with requirements relating to business registration in the SME (M=2.16 SD=1.41). According to Eze and Okoye (2014), the majority of informal SMEs in Africa are involved in retail, trading, and manufacturing, with retail market and trading mostly occurring in urban and rural areas.

Further, the study established that most of the SMEs had not complied with requirements relating to income tax (M= 2.27 SD=1.33) and thatSMEs in Kirinyaga County had not complied with requirements relating to corporate tax in my SME (M=2.35 SD=1.40). These findings support research studies by Egbunike and Okerekeoti (2018) that the capacity of African governments to generate money through taxation is harmed by SMEs' informality, which leads to the exploitation of the various investment possibilities available.

## **4.8 Credit Access**

### **4.8.1Percentage of Total Capital Financed Through Bank Loan**

The goal of the study was to figure out what proportion of businesses are financed by bank loans; the results are shown in the table below.

**Table 4.12: Percentage of Total Capital Financed Through Bank Loan**

	<b>Frequency</b>	<b>Percentage</b>
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Up to twenty percent	34	29.6
Between twenty-one and forty percent	51	44.3
Between forty-one and sixty percent	12	10.4
Over sixty percent	18	15.7
<b>Total</b>	<b>115</b>	<b>100.0</b>

From the study findings most (44.3%) of the participants indicated that between twenty-one and forty percent of SMEs capital was financed by a bank loan, 29.6% of the participants indicated twenty percent, 15.7% of the participants indicated Over sixty percent while 10.4% of the participants indicated Between forty-one and sixty percent.

#### 4.8.2 Purpose for the Loan

The goal of the study was to figure out why the entrepreneur took out the loan, and the results are shown in Table 4.12.

**Table 4.13: Purpose for the Loan**

<b>Purpose for the Loan</b>	<b>Frequency</b>	<b>Percentage</b>
Business expansion	12	10.4
Equipment purchase	42	36.5
Working capital	61	53.0
Total	115	100.0

Results show that 53.0% of the participants sought loan to expend working capital base, 36.5% used the loan to buy equipment while 10.4% used the loan for Business expansion.

#### 4.8.3 Interest Rate Attached to The Business Loan Obtained

Respondents were asked to specify the interest rate on the business loan they had taken out.

**Table 4.14: Interest Rate Attached to The Business Loan Obtained**

<b>Interest Rate</b>	<b>Frequency</b>	<b>Percentage</b>
Less than ten percent	24	20.9
Between eleven and fifteen percent	58	50.4
Between sixteen and twenty percent	33	28.7
Total	115	100.0

From the study findings majority (50.4%) of the participants indicated between eleven and fifteen percent, 28.7% of the participants indicated between sixteen and twenty percent while 20.9% less than ten percent. This implies that despite of tough circumstances under which SMEs in rural Kenya operate, the lending rates were not favorable enough to promote their growth and development.

#### 4.8.4 Statement Regarding Credit Access

Respondents were asked to rate how much they agreed with the following statements on the impact of the following factors on credit access.

**Table 4.15: Statement Regarding Credit Access**

Statements	N	Min	Max	Mean	StdDev
The high interest rate limits my access credit	115	4.00	5.00	4.32	0.47
Lack of collateral has led to poor access of credit by SMEs	115	3.00	5.00	4.30	0.51
The cost associated with credit limit my credit access	115	3.00	5.00	4.24	0.54
The size of my business limits my credit access	115	3.00	5.00	4.34	0.53
It is very difficult accessing credit in my business	115	3.00	5.00	4.30	0.51
I have only received a loan from a bank where personal contacts existed	115	3.00	5.00	4.30	0.51
Lack of awareness on funding opportunities has led to poor access to credit by SMEs	115	4.00	5.00	4.34	0.48

Statistical evidence presented above shows that majority of the respondents agreed that lack of awareness on funding opportunities has led to poor access to credit by SMEs (M= 4.34 SD=0.48) and that the size of my business limits SMEs credit access (M=4.34 SD=0.53). These findings support Mwangangi's (2014) empirical findings that banks remain extremely liquid and hesitant to extend loans to anybody except for the most creditworthy borrowers, that in most cases excludes SMEs.

The study established that the high interest rate limits SMEs access to credit (M= 4.32 SD=0.47) and that lack of collateral has led to poor access of credit by SMEs (M=4.30 SD=0.51). Similar conclusion by Ngoc (2017) that young SMEs face more difficulty to access bank financing and incur higher costs, due to information asymmetry between the banks and the firms

Further, the study established that it is very difficult for most of the SMEs to access credit, most of the SMEs can only receive a loan from a bank where personal contacts existed (M=4.30 SD=0.51) and that the cost associated with credit limit my credit access (M=4.24 SD=0.54) These findings support research studies by Economic Survey, (2015) that SMEs generally tend to be confronted with higher interest rates, as well as credit rationing due to shortage of collateral.

#### 4.9 Diagnostic Test Results

The researcher used a variety of diagnostic tests to check that the classical linear regression model's (CLRM) assumptions were not violated.

##### 4.9.1 Heteroscedasticity

**Table 4.16: Test for Heteroscedasticity**

Breusch-Pagan / Cook-Weisberg test for	Heteroskedasticity
Ho: Constant variance	
Variables: fitted values of Y	
chi2(1) =	0.01
Prob> chi2 =	0.9060

**Source: Researcher (2021)**

To decide whether heteroscedasticity exists, the researchers used the Breusch-Pagan measure (Gujarati, 2004). The null hypothesis is dismissed when the chi value is greater than the critical value, indicating the existence of heteroscedasticity, or when the p-value

is less than 0.05, indicating that heteroscedasticity is present. The results indicate a chi value of 0.01, indicating that there is no proof of heteroscedasticity. Furthermore, the p value of 0.9060 was greater than 0.05, indicating that the analysis did not refute the null hypothesis of homoscedasticity and therefore no heteroscedasticity.

#### 4.9.2 Multicollinearity

**Table 4.17: Test for Multicollinearity**

<b>Variable</b>	<b>VIF</b>	<b>1/VIF</b>
Age of the firm	1.16	0.858792
Location of the firm	1.14	0.873801
Firm size	1.14	0.87601
Collateral requirement	1.07	0.935525
Compliance to government regulations	1.03	0.966582
Mean VIF	1.11	

**Source: Researcher (2021)**

Multicollinearity was evaluated with the data used in the study, and the degree is the most important factor to consider when calculating multicollinearity (Gujarati, 2014). The variance inflation factor (VIF) test was used by the researcher to determine whether there was appropriate and sufficient proof that multicollinearity existed and was a cause for concern. The findings revealed that the VIF factor was 1.11, and since it was less than 10, there was proof that multicollinearity was not a problem because the recommended tolerance or reasonable value was met.

#### 4.9.3 Normality

**Table 4.18: Shapiro-Wilk test for Normal Data**

<b>Variable</b>	<b>obs</b>	<b>W</b>	<b>V</b>	<b>Z</b>	<b>Prob&gt; Z</b>
Credit access	115	0.90431	8.883	4.882	0
Location of the firm	115	0.89389	9.851	5.113	0
Collateral requirement	115	0.84812	14.099	5.915	0
Age of the firm	115	0.92866	6.623	4.226	0.00001
Firm size	115	0.93893	5.669	3.878	0.00005

Compliance to government regulations	115	0.94443	5.159	3.668	0.00012
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**Source: Researcher (2021)**

In the case that the p-value is less than 0.05, the null hypothesis is discarded, and sufficient proof exists to conclude that the results analyzed did not come from a normally distributed population. Credit access had a p-value=0, location of the firm had a p value=0, collateral requirement had a p value=0, age of the firm had a p value=0.00001, firm size had a p-value=0.00005 while compliance to government regulations had a p-value=0.00012. This was an indication that the data did not come from a normally distributed population.

#### **4.9 Regression Analysis**

A multiple regression analysis was used in this study to see how the variables interacted.

##### **4.9.1 Regression Analysis with Independent Variables and Dependent Variable**

The researchers used regression analysis to figure out what the connection between the independent and dependent variables was.

##### **4.9.1.2 Model Summary Between Independent Variables and Dependent Variable**

Table 4.19 shows the model summary for independent variables and dependent variables.

**Table 4.19: Model Summary Between Independent Variables and Dependent Variable**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.684 <sup>a</sup>	.467	.448	.55450

The R of 0.684 at the 5% significance level revealed a strong positive connection between the studied variables. The R<sup>2</sup> known as the coefficient of determinations was 0.488 and which implied that 48.8% of the variations on credit access by small and medium enterprises in Kirinyaga County are explained by the independent variables.

#### 4.9.1.2 ANOVA Analysis Between Independent Variables and Dependent Variable

The study used the ANOVA approach to further assess the model's significance. Table 4.20 summarizes the findings.

**Table 4.20: Summary of One-Way ANOVA results**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	29.656	4	7.414	24.112	.000 <sup>b</sup>
Residual	33.822	110	.307		
Total	63.478	114			

Critical value is 2.45

The regression model had a significance level of 0.000 percent, indicating that the data was perfect for reaching a judgment on the population parameters because the value of significance was less than 5%, according to the ANOVA statistics. The calculated value was higher than the critical value (27.999 > 2.45), indicating that the firm's location, collateral requirements, age, and size all have an impact on loan availability for small and medium businesses in Kirinyaga County. The model was significant since the significance value was less than 0.05.

#### 4.9.1.3 Coefficients of Independent Variables and Dependent Variable

In addition, the study used the coefficient table to determine the study model. The findings are presented in the Table 4.21.

**Table 4.21: Coefficients**

Model	Unstandardized		Standardized		Sig.
	B	Std. Error	Beta	t	
1 (Constant)	1.098	.478		2.297	.024
Location of the firm X1	-.483	.145	-.246	-3.322	.001
Collateral requirement X2	-.549	.131	-.301	-4.190	.000
Age of the firm X3	.495	.142	.262	3.495	.001
Firm size X4	.593	.170	.256	3.486	.001

$$Y = 1.098 + 0.483X_1 + 0.549X_2 + 0.495X_3 + 0.593X_4$$

According to the regression model, changing the location of a firm by one unit while keeping other parameters constant will increase loan access for small and medium sized enterprises in Kirinyaga County by a factor of 0.483. These findings support Fatoki and Asah's (2015) findings that geographic proximity between lenders and consumers was associated with a strong capacity to acquire loans.

The results suggest that changing the collateral requirement by one unit while keeping the other parameters fixed will increase lending availability by 0.549 for small and medium businesses in Kirinyaga County. These findings support Kamau's (2013) conclusions that financial institutions should utilize alternative lending techniques based on the risk level and credit quality of borrowers.

The test regression findings suggest that increasing the firm's age by a factor of 0.495 while keeping the other components fixed will improve loan availability for small and medium companies in Kirinyaga County. These findings are consistent with Babu (2017)'s empirical findings, which indicated a positive link between the age of the business and loan access.

Test regression findings suggest that a unit increase in firm size, while holding all other variables constant, will increase loan availability for small and medium companies in Kirinyaga County by a factor of 0.593. These findings are consistent with Honhyan's (2017) conclusions that big organizations are adequately diverse, which influences their stability.

#### **4.9.2 Regression Analysis with Independent Variables and Moderating Variable**

The section presents results of regression analysis with independent variables and moderating variable.

##### **4.9.2.1 Model Summary of Independent Variables and Moderating Variable**

Table 4.22 shows the model summary for independent variables and moderating factor.

**Table 4.22: Model Summary of Independent Variables and Moderating Variable**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.183 <sup>a</sup>	.033	-.002	.44135

The R 0.183 at the 5% significance level revealed a modest positive connection between the studied variables. The R<sup>2</sup>, known as the coefficient of determinations was 0.033 and which implied that only 3.3% of the variations on compliance to government regulations by small and medium enterprises in Kirinyaga County are explained by the independent variables.

#### 4.9.2.2 ANOVA Analysis Between Independent Variables and Moderating Variable

The study used the ANOVA approach to further assess the model's significance. Table 4.23 summarizes the findings.

**Table 4.23: ANOVA Analysis of Independent Variables and Moderating Variable**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	.741	4	.185	.951	.438a
Residual	21.427	110	.195		
Total	22.168	114			

Critical value = 2.45

According to the ANOVA statistics, the regression model had an insignificant level of 0.438, indicating that the data was not suitable for drawing conclusions about the population parameters since the p-value was less than 0.05. The computed result (0.951 > 4.90) was less than the crucial limit, indicating that location of the firm, collateral requirement, age of the firm and firm size all have an insignificant effect on compliance to government regulations by SMEs in Kirinyaga County.

#### 4.9.2.3 Coefficients of Independent Variables and Moderating Variable

In addition, the study model was determined using the coefficient table. The results are listed in Table 4.24.

**Table 4.24: Coefficients of Independent Variables and Moderating Variable**

Model	Unstandardized		Standardized		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	1.710	.380		4.494	.000
Location of the firm X1	-.106	.116	-.091	-.913	.363
Collateral requirement X2	-.075	.104	-.070	-.720	.473
Age of the firm X3	.049	.113	.044	.433	.666
Firm size X4	.221	.135	.161	1.632	.106

$$M = 1.71 - 0.106X_1 - 0.075X_2 + 0.049X_3 + 0.221X_4$$

According to the regression model, a unit change in the firm's location, while keeping all other parameters equal, would have a negative impact on small and medium company compliance with government laws in Kirinyaga County by a factor of -0.106. The findings support Fatoki and Asah's (2015) discovery that geographic proximity between lenders and consumers was associated with adherence to government rules.

The results suggest that an unit change in collateral requirement, while holding all other parameters constant, has a negative impact on small and medium company compliance with government laws in Kirinyaga County by a factor of -0.075. These findings support Kamau's (2013) conclusions that financial institutions should utilize alternative lending techniques based on the risk level and credit quality of borrowers.

The findings of the test regression demonstrate that changing the firm's age by a factor of 0.049 while keeping the other parameters constant improves compliance with government rules by small and medium companies in Kirinyaga County. These findings are consistent

with Babu (2017)'s empirical findings, which indicated a favourable link between the firm's age and compliance with government laws.

Finally, test regression findings suggest that a unit change in firm size, while holding all other variables constant, will increase small and medium company compliance to government rules in Kirinyaga County by a factor of 0.221. These findings support Honhyan's (2017) conclusions that large firms are more likely to follow government rules.

### 4.9.3 Regression Analysis with Moderating Variable and Dependent Variables

#### 4.9.3.1 Model Summary Between Moderating Variable and Dependent Variable

Table 4.25 summarizes the relationship between the moderating variable and the dependent variable.

**Table 4.25: Model Summary Between Moderating Variable and Dependent Variable**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.658 <sup>a</sup>	.0433	.307	.0628

R 0.658 at a 5% significance level revealed a moderately favourable connection between the studied variables. The R<sup>2</sup>, known as the coefficient of determinations was 0.433 and which implied that only 43.3% of the variations on credit access by small and medium enterprises in Kirinyaga County were explained by compliance to government regulations.

#### 4.9.3.2 ANOVA Analysis Between Moderating Variable and Dependent Variable

The study used the ANOVA approach to further assess the model's significance. Table 4.26 summarizes the findings.

**Table 4.26: ANOVA Analysis Between Moderating Variable and Dependent Variable**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	8.146	1	8.146	14.495	.000a
Residual	63.478	113	0.562		

Total	71.624	114
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Critical value is 3.93

The regression model had a significant level of 0 in the ANOVA statistics, indicating that the data was appropriate for drawing conclusions about the population parameters since the value of significance (p-value) was less than 0.05. The estimated value was higher than the critical threshold (14.495 > 3.93), indicating that government regulations had a considerable impact on small and medium enterprise loan availability in Kirinyaga County.

#### 4.9.3.3 Coefficients of Independent Variables and Moderating Variable

In addition, the study model was determined using the coefficient table. The results are listed in Table 4.27.

**Table 4.27: Coefficients of Independent Variables and Moderating Variable**

Model	Unstandardized		Standardized		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	5.714	.313		18.278	.000
Compliance to government regulations M	.682	.082	.509	8.317	.000

$$Y = 5.714 + 0.682M$$

According to the regression model, a unit change in government regulatory compliance, while holding other factors constant, would have a factor of 0.682 positive impacts on loan availability for small and medium companies in Kirinyaga County. These findings support La Rocca's (2017) observation that compliance with government rules improved small and medium-sized businesses' access to financing.

#### **4.9.4 Regression Analysis with Independent, Moderating and Dependent Variable**

A regression analysis was used to assess the connection between the independent, moderating, and dependent variables in the research.

#### 4.9.4.1 Model Summary with Independent, Moderating and Dependent Variable

The model summary with independent, moderating and dependent variable is presented in Table 4.28.

**Table 4.28: Model Summary with Independent, Moderating and Dependent Variable**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.684 <sup>a</sup>	.468	.443	.55683

R is the correlation coefficient that depicts the link between the research variables; as seen in the table above, there was a significant positive association between the study variables, as indicated by R 0.684 at the 5% significance level. The R<sup>2</sup> known as the coefficient of determinations was 0.468 and which implied that 46.8% of the variations on credit access and by small and medium enterprises in Kirinyaga County are explained by the independent variables.

#### 4.9.1.2 ANOVA Analysis of Independent, Moderating and Dependent Variable

The study used the ANOVA approach to further assess the model's relevance. Table 4.29 summarizes the findings.

**Table 4.29: ANOVA Analysis of Independent, Moderating and Dependent Variable**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	29.682	5	5.936	19.146	.000a
Residual	33.796	109	.310		
Total	63.478	114			

Critical value is 2.297

The regression model had a significance level of 0.000 percent, indicating that the data was perfect for reaching a judgment on the population parameters because the value of significance (p-value) was less than 5%, according to the ANOVA statistics. The calculated value was higher than the critical threshold ( $19.146 > 2.297$ ), indicating that the firm's location, collateral requirements, age, size, and compliance with government

regulations all have an impact on loan availability for small and medium businesses in Kirinyaga County. The model was significant since the significance value was smaller than 0.00.

#### 4.9.1.3 Coefficients of Independent Variables and Dependent Variable

In addition, the study model was determined using the coefficient table. The results are listed in Table 4.30 below.

**Table 4.30: Coefficients of Independent Variables and Dependent Variable**

Model	Unstandardized		Standardized		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	1.157	.522		2.216	.029
Location of the firm X1	.479	.147	.244	3.270	.001
Collateral requirement X2	.546	.132	.299	4.143	.000
Age of the firm X3	.497	.142	.263	3.489	.001
Firm size X4	.601	.173	.259	3.475	.001
Compliance to government regulations M	.350	.120	-.218	2.880	.031

$$Y = 1.157 + 0.479X_1 + 0.546X_2 + 0.497X_3 + 0.601X_4 + 0.35M$$

According to the regression model, a unit change in the firm's location, while holding all other variables constant, would increase loan availability for small and medium companies in Kirinyaga County by a factor of 0.479. These findings support Fatoki and Asah's (2015) findings that geographic proximity between lenders and consumers was associated with a strong capacity to acquire loans.

The results suggest that changing the collateral requirement by one unit while keeping the other parameters fixed will increase credit access by 0.546 for small and medium businesses in Kirinyaga County. These findings support Kamau's (2013) conclusions that

financial institutions should utilize alternative lending techniques based on the risk level and credit quality of borrowers.

The test regression findings suggest that increasing the firm's age by a factor of 0.497 while keeping the other components constant will improve credit access for small and medium companies in Kirinyaga County. These findings are consistent with Babu (2017)'s empirical findings, which indicated a positive link between the age of the business and loan access.

The findings suggest that a 0.601 increase in credit access for small and medium companies in Kirinyaga County may be achieved by changing the unit size of the firm while keeping the other parameters constant. These findings are consistent with Honhyan's (2017) conclusions that big organizations are adequately diverse, which influences their stability.

Finally, test regression findings suggest that a unit change in government regulatory compliance, while holding all other variables constant, will increase credit access by 0.350 for small and medium companies in Kirinyaga County. These findings support La Rocca's (2017) observation that compliance with government rules improved small and medium-sized businesses' access to financing.

#### **4.10 Discussion**

In line with first objective, the study established that location has significant impact on credit access by small and medium enterprises in Kirinyaga County (beta coefficient = 0.483 P-value = .001). Descriptive evidence presented also shows that distance to the financial institution is longer in rural areas compared to that in urban areas (M= 4.30 SD=0.56) and that the interest rates charged by financial institutions discourage me from borrowing because they are high (M=4.24 SD=0.59). These findings concur with

empirical findings by Fatoki and Asah (2015) that geographic closeness between lenders and customers had an association with a firm ability to access credit.

Statistical results disclose that, in Kirinyaga county there are less institutions lending loans to SMEs compared to those in urban areas (M= 4.20 SD=0.68) also SMEs in rural areas are deemed to have high default risk by lending institutions compared to those in urban areas (M=4.16 SD=0.70). Similar conclusion by Katuka, Kagwaini and Waweru (2019) affirm that there is a high likelihood for firms operating in rural areas to face the absence of financial institutions.

The chances of SMEs success and growth in Kirinyaga is small compared to that in urban areas (M= 4.15 SD=0.58) and that there is delays in approving loans requested by firms in rural areas compared to that in urban areas (M=4.13 SD=0.72). These findings support empirical evidence by Kira and He (2016) both concur that firms located in metropolitan areas have higher chance of success than those located in rural areas.

Further, results show that most institutions don't like lending loans to SMEs in rural areas compared to those in urban areas (M=4.10 SD=0.73) and that the market value of collateral is small in rural areas compared to that in urban areas (M=4.10 SD=0.71). These findings support research studies by Thuku (2017) that in rural area SMEs have fewer collateral and intangible assets than large firms.

Results show that a unit change in collateral requirement while holding the other factors constant would negatively change credit access by small and medium enterprises in Kirinyaga County (beta coefficient = 0.549 P-value = 0.000). Statistical evidence discloses that banks insist that SME's collateral be equal to the amount of credit extension (M=

4.37SD=0.54) and that banks insist that SME's collateral be equal to the amount of credit extension (M= 4.37 SD=0.49). These findings concur with empirical findings by Kamau (2013) that financial institutions ought to use alternative lending methods according to borrowers' risk level and credit worthiness.

Descriptive results show that most of the SME's owners had applied for a loan but financial institutions have declined because they lacked collateral security (M=4.35 SD=0.53) and that Banks have always adopted a risk adverse attitude towards small firms (M=4.32SD=0.52). Vuvor and Ackah (2015) reached a similar conclusion, stating that SMEs' inability to provide collateral and other information required by banks, such as audited financial statements, combined with high loan costs in terms of high interest rates, make it extremely difficult for SMEs to obtain bank loans.

Further, the study established that SMEs face difficulties in providing collateral when providing the loan compared to those in formal employment (M=4.23 SD=0.61) and that financial organizations require collateral security as a major lending requirement (M=4.23 SD=0.53). These results supported research findings by Ndungu (2016), who conclusively proved that collateral security is required prior to lending in order to reduce risk exposure. Additionally, credit rates on SMEs should be evaluated on an individual basis in order to ensure the best possible outcome for both the lender and the borrower.

Financial institutions place a greater emphasis on the capability to repay the loan than on collateral security (M=4.21 SD=0.64) and collateral security is a key barrier to credit availability in my SMEs (M=4.11 SD=0.54). These conclusions are consistent with Subeyr and Muturi's empirical findings (2017) When assessing the possibility of loan payback, banks have traditionally taken a risk-averse approach to small businesses, with an associated inability to focus on the venture's income-generating potential.

The findings of the test regression suggest that increasing the firm's age by one unit while keeping the other parameters constant will improve loan availability for small and medium businesses in Kirinyaga County (beta coefficient = 0.495 P-value = .001). Descriptive statistics show that older firms are charged less interest rates than younger firms (M=4.43 SD=0.55) and that older firms are required to have less collateral than younger firms (M=4.42 SD=0.55). These findings are consistent with Babu (2017) empirical findings, which indicated a positive link between the age of the business and loan access.

In addition, older businesses have greater loan application experience than younger firms (M= 4.35 SD=0.48), and new firms have more difficulty getting loans than older firms (M=4.28 SD=0.55). Lore (2017) came to the same result, claiming that younger Kenyan businesses are less likely to obtain bank loans.

Further, the study established that Banks are unwilling to lend to firms that have been in existence for less than 3 years (M=4.28 SD=0.55) and that small firms size have problems in accessing loans than big firms (M= 4.26 SD=0.56) these findings support research studies by Thuku (2017) that older entrepreneurs also tend to have higher levels of work experience, education, wealth and social contacts.

Inferential statistics show that a unit change in firm size while holding the other factors constant would enhance credit access by small and medium enterprises in Kirinyaga County (beta coefficient = 0.593 P-value = .001). Descriptive statistical evidence presented that show that large SMEs are able to access loan facilities than the small SMEs (M=4.37 SD=0.54), small firms have high failure rate compared to large firms which limit their credit access (M=4.35 SD=0.53) and that Honhyan, (2017). Large organizations tend to be sufficiently diversified thus influencing their stability.

Also, the study established that small firms cannot exploit economies of scale in the same way as large firms can limiting their credit access (M=4.32 SD=0.47) and that smaller firms have fewer assets to offer as collateral which limit their credit access (M=4.30 SD=0.46) These findings concur with empirical findings by Berger and Udell (2014) that smaller and younger firms are more likely to face higher cost of financing and at the same time they are required to offer collateral.

Statistical evidence also show that younger firms are more likely to face higher cost of financing than older firms (M=4.28 SD=0.51) and that banks are more reluctant to lend to small firms located in rural areas because most SME's have collateral that have less market value (M= 4.25 SD=0.49). Similar conclusion by Fatoki and Asah (2015) also affirm that, since young companies have not accumulated sufficient cash flow and are unable to rely on bank financing, they have to depend on the original equity investment of their owners.

Statistical evidence presented above shows that majority of the entrepreneurs in agreed that they have not complied with requirements relating to business licensing in the SME (M=1.97 SD=1.23) and that small and medium enterprises in Kirinyaga County, have not complied with requirements relating to county government licensing in my SME (M=1.99 SD=1.13). These findings concur with empirical findings byLadime et al (2013) informal SMEs face significant challenges that affect their growth.

Results show that most of the small and medium enterprises in Kirinyaga County have not complied with requirements relating to VAT in my SME (M=2.08 SD=1.22), similarly majority had not complied with requirements relating to business registration in the SME (M=2.16 SD=1.41). Similar conclusion by EzeandOkoye (2014) also

affirmed that most informal SMEs in Africa are engaged in retailing, trading and manufacturing, with retailing and trading mostly being found in urban and rural regions.

Further, the study established that most of the SMEs had not complied with requirements relating to income tax ( $M= 2.27$   $SD=1.33$ ) and that SMEs in Kirinyaga County had not complied with requirements relating to corporate tax in my SME ( $M=2.35$   $SD=1.40$ ).

These findings support research studies by Egbunike and Okerekeoti (2018) that the SMEs informality undermines the ability of the African governments to raise revenue through taxation and leads to exploitation of the many investment opportunities available.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

The researcher offers a comprehensive summary of the study in this chapter, as well as a discussion of the research findings in comparison to the findings in the literature review. In Kirinyaga County, Kenya, the conclusions were based on company characteristics and credit access by small and medium companies. Identification of the actions to be done on organizational change management resulted in recommendations for future improvement.

#### **5.2 Summary of Findings**

##### **5.1.1 Location of the Firm and Credit Access**

Descriptive results show that of the most banking institutions don't like lending loans to SMEs in rural areas compared to those in urban areas and that the market value of collateral is small in rural areas compared to that in urban areas. These findings support research studies by Thuku (2017) that in rural area SMEs have fewer collateral and intangible assets than large firms.

Also results show that there are less institutions lending loans to SMEs in rural areas compared to those in urban areas and that SMEs in rural areas are deemed to have high default risk by lending institutions compared to those in urban areas. Similar conclusion by Katuka, Kagwaini and Waweru (2019) that there is a high likelihood for firms operating in rural areas to face the absence of financial institutions.

Statistical evidence presented above shows that majority of the respondents agreed that the distance to the financial institution is longer in rural areas compared to that in urban areas and that the interest rates charged by financial institutions discourage me from borrowing because they are high. These findings concur with empirical findings by

Fatokiand Asah(2015) that geographic closeness between lenders and customers had an association with a firm ability to access credit.

Further the study established that the chances of SMEs success and growth in rural areas is small compared to that in urban areas and that there is delays in approving loans requested by firms in rural areas compared to that in urban areas. These findings support research studies by Kira and He (2016) finds that, firms located in metropolitan areas may therefore have higher chance of success than those located in rural areas.

### **5.1.2 Collateral Requirement and Credit Access**

Descriptive findings suggest that financial institutions place a greater emphasis on the borrower's ability to repay the loan than on the business's collateral security, and that collateral security is a key barrier to credit availability in my SMEs. These conclusions are consistent with Subeyr and Muturi's empirical findings (2017) when assessing the possibility of loan payback, banks have traditionally taken a risk-averse approach to small businesses, with an associated inability to focus on the venture's income-generating potential.

Also, evidence gathered show that most of the SME's owners had applied for a loan but financial institutions have declined because they lacked collateral security and that Banks have always adopted a risk adverse attitude towards small firms. Similar conclusion by Vuvor and Ackah (2015) also affirm that the inability of SMEs to provide collateral and other information needed by banks such as audited financial statement couple with high cost of loan in terms of high interest rates make it extremely difficult to access bank loans.

Further, the study established that SMEs face difficulties in providing collateral when providing the loan compared to those in formal employment and those financial institutions insist on the provision of collateral security as a primary lending condition. These results supported research findings by Ndungu (2016), who concluded that collateral security is required prior to lending in order to reduce risk exposure. Additionally, credit rates on SMEs should be evaluated on individual basis in order to ensure the best possible outcome for both the lender and the borrower.

Statistical evidence presented above shows that majority of the respondents agreed that banks insist that SME's collateral be equal to the amount of credit extension and that banks insist that SME's collateral be equal to the amount of credit extension. These findings concur with empirical findings by Kamau (2013) that financial institutions ought to use alternative lending methods according to borrowers' risk level and credit worthiness.

### **5.1.3 Age of the Firm and Credit Access**

Evidence presented shows that older firms are charged less interest rate than younger firms and that older firms are required to have less collateral than younger firms. These findings concur with empirical findings by Babu (2017) who revealed that there was a positive relationship between the age of the firm and access to credit.

Also, results showed that older firm have more experiences of applying for loans than younger firms and that younger firm's face challenge accessing loans as compared to older firms. Similar conclusion by Lore (2017) that younger entrepreneurs are less likely to access loans from banks in Kenya.

Further, the study established that Banks are unwilling to lend to firms that have been in existence for less than 3 years and that small firms size have problems in accessing loans than big firms) these findings support research studies byThuku (2017) that older entrepreneurs also tend to have higher levels of work experience, education, wealth and social contacts.

#### **5.1.4 Firm Size and Credit Access**

Statistical evidence also show that younger firms are more likely to face higher cost of financing than older firms and that banks are more reluctant to lend to small firms located in rural areas because most SME's have collateral that have less market value. Similar conclusion by Fatoki and Asah (2015) also affirm that, since young companies have not accumulated sufficient cash flow and are unable to rely on bank financing, they have to depend on the original equity investment of their owners.

Also, the study established that small firms cannot exploit economies of scale in the same way as large firms can limiting their credit access and that smaller firms have fewer assets to offer as collateral which limit their credit access. These findings concurs with empirical findings by Berger and Udell (2014) that smaller and younger firms are more likely to face higher cost of financing and at the same time they are required to offer collateral.

Statistical evidence presented above shows that majority of the respondents agreed that large SMEs are able to access loan facilities than the small SMEs. Small firms have high failure rate compared to large firms which limit their credit access. According to Honhyan, (2017) large organizations tend to be sufficiently diversified thus influencing their stability.

### **5.1.5 Compliance to Government and Regulations**

Statistical evidence presented above shows that majority of the entrepreneurs in Kirinyaga County have not complied with requirements relating to business licensing in the SME in Kirinyaga County, have not complied with requirements relating to county government licensing in my SME. These findings concur with empirical findings by Ladime et al (2013) informal SMEs face significant challenges that affect their growth.

Also the study established that most of the SMEs had not complied with requirements relating to income tax and that SMEs in Kirinyaga County had not complied with requirements relating to corporate tax in my SME. These findings support research studies by Egbunike and Okerekeoti (2018) The SMEs informality undermines the ability of the African governments to raise revenue through taxation and leads to exploitation of the many investment opportunities available

Further, results show that most of the small and medium enterprises in Kirinyaga County have not complied with requirements relating to VAT in my SME; similarly, majority had not complied with requirements relating to business registration in the SME. Similar conclusion by Eze&Okoye, (2014) also affirm that most informal SMEs in Africa are engaged in retailing, trading and manufacturing, with retailing and trading mostly being found in urban and rural regions.

### **5.3 Conclusion**

Based on the research findings, this study concludes that location of the firm has significant impact on credit access by SMEs in Kirinyaga County,

that geographic closeness between lenders and customers had an association with a firm ability to access credit, SMEs in rural areas are deemed to have high default risk by lending institutions compared to those in urban areas and that firms located in metropolitan areas have higher chance of success than those located in rural areas.

This study concludes that firm's collateral significantly influenced ease of credit access by small and medium enterprises in Kirinyaga County. Inability of SMEs to provide collateral and other information required by banks, such as audited financial statements, combined with high loan costs in terms of high interest rates make it extremely difficult to access bank loans, according to this study's findings. Financial institutions should use alternative lending methods based on borrowers' risk levels.

This study concludes that age of the firm has a significant influence on credit access by small and medium enterprises in Kirinyaga County. Older firms have more experiences of applying for loans than younger firms, Banks are unwilling to lend to firms that have been in existence for less than 3 years and that older firms are required to have less collateral than younger firms.

This study concludes that firm size has a significant influence on credit access by small and medium enterprises in Kirinyaga County. Small firms have high failure rate compared to large firms which limit their credit access, small firms cannot exploit economies of scale in the same way as large firms can limiting their credit access and younger firms are more likely to face higher cost of financing and at the same time they are required to offer collateral.

This study confirms that compliance to government regulations has moderating effect macroeconomic factors and performance of NSE. Small and medium enterprises in

Kirinyaga County have not complied with requirements relating to VAT in and that informal SMEs face significant challenges that negatively affect their growth.

#### **5.4 Recommendations**

Although location of business was found to significantly affect SME credit in rural Kenya, Financial intuitions were found to be concentrated on urban places and only a few which had branches in rural area. Consequently, this limits financial access by SMEs in rural Kenya. To mitigate these factor, the management of financial intuitions should come up with innovative ways of reaching out SMEs located within rural Kenya. Such measures could include ICT adoption which could enhance credit product sensitisation and awareness. The government should also design and implement policies that are meant to enhance access to credit by SMEs as they contribute significantly to growth and development of the country's economy.

Unfortunately most of the SMEs were found to lack adequate collateral required by the bank as loan security. To mitigate this factor, the management of financial institutions through their credit department should develop a separate credit policy that accommodates circumstances that SMEs located in rural Kenya face.

The age of the firm was too found to significantly influence the credit of access given that banks factored in firm's operational period while in evaluating credit worthiness. In order to level the playground and make it fair for all SMEs to access credit, the management of banks should introduce coaching programs that focus on sensitising young and old entrepreneurs on credit management, banks can also introduce SME mentorship and offer loan based on SME performance rather than operation period.

Small firm were found to be disadvantaged as they sought credit from financial institutions. To mitigate this aspect,the management of banks and other stake holders that

offer business management education should provide business development skill to upcoming SMEs as this plays a key role in fostering business growth.

### **5.5 Ares for Further Research**

The general objective of this study is to establish the effect of firm characteristics on credit access by small and medium enterprises in Kirinyaga County, Kenya. The study variables understudy (location of the firm, collateral requirement, age of the firm and firm size) Accounted for 42.2% of the variations on credit access by small and medium enterprises in Kirinyaga County. Other factor accounting for 57.8% should be established and their effect investigated.

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## APPENDICES

### Appendix I: Introduction Letter

Dear participant,

RE: Research Project

I am a postgraduate student at Kenyatta University carrying out a research project aimed at determining the **FIRM CHARACTERISTICS AND CREDIT ACCESS BY SMALL AND MEDIUM ENTERPRISES IN KIRINYAGA COUNTY, KENYA**. I hereby request for your cooperation to help me complete the research successfully. Kindly give your honest answers on the provided questionnaire.

The questionnaire data is to be used for research and academic purposes only and any information you give will be treated with confidentiality. Since no personal details are required on the questionnaire your identity will not be revealed.

Thanking you for your cooperation

Yours sincerely,

Margaret NjeriMaina

## Appendix II: Questionnaire

Kindly show by a tick the correct answer and elaborate your answer where required.

1. What is your gender?
  - Male
  - Female
  
2. What is your education level?
  - None  Primary School
  - Secondary School  Certificate level
  - Diploma level  Degree level
  - Postgraduate
  - Other.....
  
3. What is your age bracket in years?
  - Below 20 years  20-30
  - 31-40  41-50
  - 51-60  60 and above
  
4. How long have you worked in your SME?
  - 6 to 10 years
  - 11 to 15 years  Above 10 years

### Part B: Location of the Firm and Credit Access

5. What's your agreement when it comes to statements that relate to effect of interest rate on credit access? Where Strongly Agree (5) Agree (4) Neutral (3) Disagree (2) Strongly Disagree (1)

Statement	1	2	3	4	5
SMEs in rural areas are deemed to have high default risk by lending institutions compared to those in urban areas					
Most institutions don't like lending loans to SMEs in rural areas compared to those in urban areas					
There are less institutions lending loans to SMEs in rural areas compared to those in urban areas					
The distance to the financial institution is longer in rural areas compared to that in urban areas					

The interest rates charged by financial institutions discourage me from borrowing because they are high					
The market value of collateral is small in rural areas compared to that in urban areas					
The chances of SMEs success and growth in rural areas is small compared to that in urban areas					
There is delays in approving loans requested by firms in rural areas compared to that in urban areas					

**Part C: Collateral Requirement and Credit Access**

6. What's your agreement level when it comes to the below statements that relate to the effect of collateral requirement and credit access? Where Strongly Agree (5) Agree (4) Neutral (3) Disagree (2) Strongly Disagree (1)

<b>Statement</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Collateral security is a major constraint to credit access in my SMEs					
Banks have always adopted a risk adverse attitude towards small firms					
Financial institutions insist on the provision of collateral security as a primary lending condition					
Financial institutions focus more on potential to repay loan rather than on collateral security in our business					
I have applied for a loan but financial institutions have declined because I lacked collateral security					
SMEs face difficulties in providing collateral when providing the loan compared to those in formal employment					
Financial institutions adopt a risk averse stance towards small firms instead of focusing on income generating potential of an entity					

The banks insist that SME's collateral be equal to the amount of credit extension					
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**Part D: Age of the Firm and Credit Access**

7. What's your agreement level when it comes to the below statements that relate to effect of cost of credit and credit access? Where Strongly Agree (5) Agree (4) Neutral (3) Disagree (2) Strongly Disagree (1)

Statement	1	2	3	4	5
Small firms size have problems in accessing loans than big firms					
Older firm have more experiences of applying for loans than younger firms					
Younger firms face challenge accessing loans as compared to older firms.					
Older firms are charged less interest rates than younger firms					
Older firms are required to have less collateral than younger firms					
Banks are unwilling to lend to firms that have been in existence for less than 3 years					

**Part E: Firm Size and Credit Access**

8. What's your agreement level when it comes to the below statements that relate to the effect of firm size and credit access? Where Strongly Agree (5) Agree (4) Neutral (3) Disagree (2) Strongly Disagree (1)

Statement	1	2	3	4	5
Large SMEs are able to access loan facilities than the small SMEs					
Small firms have high failure rate compared to large firms which limit their credit access					
Younger firms are more likely to face higher cost of financing than older firms					
Smaller firms have fewer assets to offer as collateral					

which limit their credit access					
Small firms cannot exploit economies of scale in the same way as large firms can limiting their credit access					
Banks are more reluctant to lend to small firms located in rural areas because most SME's have collateral that have less market value					

**Part F: Compliance to Government and Regulations**

9. What's your agreement level when it comes to the below statements that relate to compliance to government and regulations in SMEs? Where Strongly Agree (5) Agree (4) Neutral (3) Disagree (2) Strongly Disagree (1)

<b>Statement</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
I have complied with requirements relating to business registration in my SME					
I have complied with requirements relating to business licensing in my SME					
I have complied with requirements relating to VAT in my SME					
I have complied with requirements relating to corporate tax in my SME					
I have complied with requirements relating to income tax in my SME					
I have complied with requirements relating to county government licensing in my SME					
I have updated financial records in my SME					

**PART G: Credit Access**

10. What percentage of your business is financed by a bank loan?

Up to twenty percent [ ]

Between twenty-one and forty percent [ ]

Between forty-one and sixty percent [ ]

Over sixty percent [ ]

11. What was the purpose for the loan?

- Business expansion [ ]
- Equipment purchase [ ]
- Working capital [ ]
- Other purpose [ ]

12. At what interest rate, did you take loan for your business?

- Less than ten percent [ ]
- Between eleven and fifteen percent [ ]
- Between sixteen and twenty percent [ ]
- Above twenty one percent [ ]

13. To what extent does the following aspect of credit access? Where Strongly Agree

(5) Agree (4) Neutral (3) Disagree (2) Strongly Disagree (1)

<b>Statements</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
The high interest rate limits my access credit					
Lack of collateral has led to poor access of credit by SMEs					
The cost associated with credit limit my credit access					
The size of my business limits my credit access					
It is very difficult accessing credit in my business					
I have only received a loan from a bank where personal contacts existed					
Lack of awareness on funding opportunities has led to poor access to credit by SMEs					

**THANK YOU**