DETERMINANTS OF LOAN REPAYMENT BY SMALL AND MEDIUM ENTERPRISES IN NAIROBI COUNTY, KENYA

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DECLARATION

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

Signature…… Date……

Ann Mukono

D63/72581/2014

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

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DEDICATION

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ABBREVIATIONS

AFC - Agricultural Finance Corporation

GDP – Gross Domestic Product

MFIs – Micro Finance Institutions

NGOs - Non-Governmental Organizations

OLS - Ordinary Least Square

SACCOs - Savings and Credit Cooperative Societies

SMEs - Small and Medium Enterprises

SSEs – Small Scale Enterprise

ABSTRACT

Credit is the most common source of external finance for many SMEs and entrepreneurs, which are often heavily reliant on traditional debt to fulfill their start-up, cash flow and investment needs. Potential sources of finance for the small scale enterprises include commercial banks, nonbank financial institutions, non-governmental organizations, multilateral organizations, business associations, and rotating savings and credit associations. 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. The critical problem most public credit-lending agencies face is poor loan repayment from small and medium enterprises. Thus, this study sought to investigate the determinants of loan repayment by Small and Medium Enterprises (SMEs) in Nairobi County, Kenya. The study employed a descriptive research design and a sample of 160 respondents was used. The sample was 2% of the total population and the study target SME owners and managers and focused on SMEs that have obtained a loan facility with any financial institution in Kenya. Simple random and stratified sampling methods were used to select the respondents and a questionnaire was used to collect data for the study. The data collected was classified, summarized analyzed using the descriptive statistical tools and inferential statistics using Gretel. The study used the logit regression to model the determinants of loan repayment by SMEs in Nairobi County. The study findings established that loan, borrower, firm and lender characteristics are major determinants of loan repayment by small and medium enterprises in Nairobi County, Kenya. The study concluded that loan, borrower, firm and lender characteristics influence loan repayment by SMEs. The study recommended that financial institutions should revise their lending policies so that they can reduce loan repayment problems arising from loan

and lender characteristics while SMEs owners and managers should develop effective policies to ensure they reduce loan repayment problems arising from firm and borrower characteristics.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Smaller businesses are one of the developing world's most powerful economic forces, comprising the lion's share of employment and GDP. Small and Medium Enterprises (SMEs) are key parts of thriving, globally competitive industries, creating the large numbers of jobs needed to reduce poverty (International Finance Corporation, 2011).SMEs are becoming increasingly important for the creation and development of a modern, dynamic and knowledge-based economy. This is because of their capacity to promote entrepreneurship and entrepreneurial skills, and because of their ability to be flexible and adapt quickly to a changing market, and to generate new jobs (Govori, 2013). SMEs allow the marginalized and vulnerable groups to diversify their incomes, create new sources of economic growth and generate additional employment, especially in rural areas (Nyamboga et al., 2014). SMEs have been increasingly seen as playing an important role in the economies of many countries (Olawale and Garwe, 2010).

Small and medium enterprises in developed and developing countries have been identified as the foundations through which the rapid industrialization and other developmental goals of the developing countries can be realized (Alhassan and Sakara, 2014). The vast majority of firms around the world fall into the category of micro, small- or medium-sized enterprises (SMEs). In terms of enterprises, more than 95 percent fall into this category, but even in terms of employment in low- and lower-middle-income countries, more than 50 percent of employees work in companies with fewer than 100 employees (Ayyagari et al., 2011). SMEs are businesses

that are basically privately owned and operated, with a small number of personnel, and a relatively low volume of sales. In addition, SMEs are an essential part of the economic structure in developed countries and developing countries, and play an important role in bringing the innovation, economic growth and prosperity (Govori, 2013).

SMES have advantages over their big size competitors in that they are able to adapt more easily to market conditions and they are able to withstand hostile economic conditions because of their flexible nature. They are labour intensive and more likely to succeed in smaller urban centers and rural areas where they contribute to a more equitable distribution in the regional wealth thus slowing down the flow of migration from rural to urban areas (Kayanula and Quartey, 2000). Thus, in the right business environment, SMEs can grow into large firms, changing the game locally, carving their niche globally. In addition, SMEs can create significant income opportunities for their workers and generate new tax revenues for government services. SMEs are part of dynamic and growing value chains whose job opportunities raise incomes, increase living standards, and improve lives (International Finance Corporation, 2011).

In comparison with large enterprises and microenterprises, SMEs have traditionally been underserved in terms of access to credit. However, more recently collateral-free loans through bank lending have become available to SMEs with most commercial bank's growing focus on SME financing (Shah, 2014). Nowadays, SMEs are considered a profitable business prospect and provide an important opportunity for cross selling. Banks consider that the SME lending market is large, not saturated and with a very positive outlook. Banks consider the SME segment strategically important, have adapted to their environment, and developed mechanisms to cope with SMEs through innovation and differentiation (Calice et al., 2012).A study by Beck et al (2010) established that banks perceive the SME segment to be highly profitable and serve it

through a number of lending technologies and organizational setups. Access to financing is an important aspect in the business operation of micro enterprises. However, repayment problem is one the major obstacles to financial institutions posed by small and medium enterprises.

1.1.1 Loan Repayment

Repayment performance is the ability of a borrower to service his loan effectively as to and when loan installments fall due. Imbuga (2014) posits that repayment performance refers to the total loans paid on time as stated in the loan agreement contract and repayment performance measures are based on the degree of arrears. Godquin (2004) also point out that repayment performance is usually measured in term of in terms of binary variable based on an arbitrary definition of what constitutes repaying on time. Borrowers are typically required to repay their loans in regular installments, soon after loan disbursements (Sungwacha et al., 2014).A delayed installment is said to be delinquent and a repayment that has not been made is said to be in default. Default on borrowed funds could arise from unfavorable circumstances that may affect the ability of the borrower to repay (Stigliz and Weiss, 1981). Delays of repayment lead to two ominous effects for financial institutions, which include non-refinancing of a large number of safe borrowers and the collection of late installments by the loan officer driving to an increase of its loads without compensations in resources. In addition, because of the delay of a member, other members will be incited then to delay their repayment and even to negotiate with the institution the possibility to abandon the last part of the loan (Revan & Nelly, 2002).

The willingness to repay in the financial market is crucial to the existence of a healthy financial system. Since repayments are not third party enforceable, many borrowers default and lenders cannot profitably offer credit contracts (Brown et al., 2004).Repayment problems weaken the financial health of financial institutions since they handicap their missions while putting in

danger their capitals. In addition, weak repayment rates affect negatively SMEs relations with the financial institutions and make them disinterested to engage in other financial transactions (Bassem, 2008).To mitigate the loan repayment problem financial institutions initiate loan recovery strategies. Loan recovery is one of the key objectives of financial institutions as it enables them to refinance and to reach more people. To have a positive impact on the economy of a country, the institutions must be able to loan out funds and recover the same to remain relevant in the finance industry. Loan recovery is a strategic activity for financial institution (Kiliswa & Bayat, 2014). Financial institutions also monitor the borrowers will aid in making sure that they are using the loans for the right purposes meaning that they can pay back their loans.

1.1.2 Factors Influencing Loan Repayment by SMEs

Various scholars have examined loan repayment and non-repayment (default) and their determinants in the past. Several factors have been identified in different studies as having an impact on loan repayment. Numerous factors such as interest rates, age, marital status, location, high interest rate, inadequate loan sizes, poor appraisal, lack of monitoring, and improper client selection are said to impact on the likelihood of default. However, according to Atsmegiorgis (2013) the factors affecting repayment performance can be grouped into four factors namely individual/borrowers factors, firm factors, loan factors and institutional/lender factors. Nawai and Shariff (2010) also posited that the underlying repayment factors can be basically classified under four headings, namely, individual/borrower, firm, institutional/lender, and loan characteristics affecting repayment performance. Conversely, an alternative classification by Roslan and Karim (2009) identified three broad categories as characteristics of the borrower, characteristics of the firm, and attributes of the loan.

Individual/borrower's characteristics include the age of borrower, gender, level of education, business experience, household size, credit use experience, household income, non- business income, type of business activity, and amount of business investment (Nawai and Shariff, 2010). Several studies have established the impact of individual factors on loan repayment. For instance, Nawai and Shariff (2013) established that the factors affecting the ability of the borrowers to repay their loans are business factors, borrower's attitude towards their loans, other debt burden, amount of loan received, business experience, business formality and family background. A study by Ochung (2013) established that there was a significant relationship between individual borrowers' factors and the loan repayment among customers of commercial banks in Kenya. Further, Njangiru, Maingi and Muathe (2014) also revealed statistically significant results, for borrowers' characteristics effect to loan repayment and sustainability. As such, the study established that due to problems of high risk and high cost of borrowing, uncertainty of repayment capacity on the rural borrower has been reported high due to irregular income streams.

Loan characteristics include the loan size, repayment period, collateral value, number of installments, and application costs among others. Past studies have established the influence of loan factors on loan repayment (Nawai and Shariff, 2010). Atsmegiorgis (2013) revealed that the loan repayment rate was significantly related with loan size, loan type, and previous loan experience, purpose of loan, educational level and type of collateral offered. The study recommended that commercial banks should design loan strategies giving particular emphasis on these factors while they are giving loans to their customers. In addition, Kibosia (2012) established that loan defaults by SMEs has significantly been increasing and a number of

determinants affected the loan defaults key among them interest rates, type of loan, repayment period and economic conditions have also contributed to loan defaults by SMEs.

Firm/Enterprise characteristics are the firm specific factors that influence loan repayment by small and medium enterprises. Some of the characteristics of the firm/project include ownership structure, type of firm, and distance between firm location and the lending bank (Nawai and Shariff, 2010). Kohansal and Manosoori, (2009) established that the amount of loan approved or received, that is loan size, could have a positive effect on repayment performance. A study by Ochung (2013) established a significant relationship between firm/group factors and the loan repayment among customers of commercial banks in Kenya.

Lender/Institutional characteristics are the factors within the financial institution that may influence loan repayment. Institutional/lender factors include the time lag between loan application and disbursement, interest rate, access to business information, access to training on loan use, cooperative membership and penalty for lateness to group meetings (Nawai and Shariff, 2010).A study by Kibosia (2012) established that poor credit analysis and monitoring and economic conditions also contributed to loan defaults by SMEs hence banks should put more emphasis on credit risk management, training of staff and adopt credit scoring in vetting of SME customers loan requests. Korankye (2014) also established that the causes of loan default to included inadequate loan sizes, poor appraisal, lack of monitoring, and improper client selection and recommended that financial institutions should have clear and effective credit policies and procedures and must be regularly reviewed.

1.1.3 SMEs in Kenya

In Kenya, the Sessional Paper No 2 of 2005 defines small and medium enterprises (SMEs) as those enterprises employing 10-49 for small enterprises and 50-99 for medium enterprises. Small and Medium Enterprises (SMEs) is an important sub sector for the Kenyan economy like many other developing countries, since it employs about 85 percent of the Kenyan workforce. Due to the importance of the SME sector in Kenya, the Kenyan constitution provides a new window of opportunity to address SMEs related issues through regulatory and institutional reforms under a new, devolved governance system as well as the Micro and Small Enterprises Act 2012 (Ong'olo and Odhiambo, 2013). Small and medium enterprises (SMEs) play a major role in economic development in every country, including in African countries particularly in Kenya.

Despite the critical role that small and medium sized enterprises play to most economies in the world, provision and delivery of credit and other financial services to the SME sector by financial institutions has not been as expected (Chepkorir, 2013). Regrettably, one of the most crucial and leading factors constraining Small Scale Enterprises development in developing countries like Kenya is limited access to financial capital and credit. This is because on one hand, these enterprises could not fulfill the bans lending requirements and on the other, financial institutions mostly commercial banks considers these enterprises as involving high credit risk (Kiliswa, 2012). According to Nene (2014) the main reason for failure of credit repayment by small and medium enterprises in Kenya is due to loans given out without any form of security to clients and lack of structure where funds are well projected over the period of repayment and portion money for such repayments.

1.2 Statement of the Problem

Credit is the most common source of external finance for many SMEs and entrepreneurs, which are often heavily reliant on traditional debt to fulfill their start-up, cash flow and investment needs (Nawai and Shariff, 2013). Potential sources of finance for the small scale enterprises include commercial banks, nonbank financial institutions, non-governmental organizations (NGOs), multilateral organizations, business associations, and rotating savings and credit associations (Kiliswa and Bayat, 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, 2012). The critical problem most public credit-lending agencies face is poor loan repayment from small and medium enterprises. Statistics show that loan default by SMEs has been a tragedy and loan repayment problem is an unsolved issue faced by the majority of financial institutions that offer credit to the micro enterprises and SMEs (Nawai and Shariff, 2013).

In Kenya, despite the continued increase in financial support to SMEs by the government and other development agents, there is still a chronic failure and collapse rate of Small and Medium enterprises in Kenya. Most of SME entrepreneurs are not able to expand businesses due to their meager incomes. Provision of credit has been cited as one of the major strategies being used to speed up business expansion and development in Kenya's small-scale business sector. However, the major setbacks of the small and medium enterprises credit programs has been poor loan repayment (Ochillo, 2009). According to Muturi (1991), while small-scale enterprises in Kenya have continued to appreciate loan facilities, repayment in most cases has been a problem and thus the aim of investigating the determinants of loan repayment by SMEs in Nairobi County.

Numerous studies have been carried out globally and locally on the factors that influence loan repayment in various business sectors. Internationally, studies by Bassem (2008), Al-Sharafat et al (2013) and Mensah et al. (2013) examined the determinants of loan repayment to other sectors like the agriculture and the farming sectors and most of their emphasis was on group lending as opposed to individual lending. A study by Makorere (2014) examined the factors affecting loan repayment behaviour in Tanzania and established that many financial institutions still face a problem of an increase in an outstanding balance withheld by defaulters because not all loans disbursed are repaid on the due date. In Kenya, a study by Kibosia (2012) examined the relationship between non-performing Loans associated with SME sector and its determinants among commercial banks in Kenya. Njangiru et al. (2014) also analyzed the loan repayment and sustainability issues of government micro-credit initiatives in Murang'a County. In addition, Kulundu (1990) examined the factors affecting loan repayment performance by smallholder farmers with a major aim of proposing measures that can help in improving the smallholder credit repayment performance. Further, Matheka (2013) also investigated the causes of the high rates of default in the repayment of Constituency youth enterprise funded loans among youth groups in Kitui central constituency and established various factors, which influence loan repayment.

Most the above studies focus on different sectors like the small-scale farming and agricultural sectors, group lending which is carried out by MFIs as opposed to individual lending by all financial institutions like commercial banks and government funds whose repayment terms are lenient compared to those of financial institutions. Most of the available literature is based on other sectors other than the SMEs and thus few studies exist on the determinants of loan repayment by SMEs in Kenya. This has opened a gap which this study intents to fill by

answering the question, what are the determinants of loan repayment by small and medium enterprises in Kenya?

1.3 Objectives of the Study

1.3.1 Main Objective

To investigate the determinants of loan repayment by Small and Medium Enterprises (SMEs) in Nairobi County, Kenya

1.3.1 Specific Objectives

i) To examine the effects of loan characteristics on loan repayment by SMEs in Nairobi County, Kenya
ii) To examine the effects of borrower characteristics on loan repayment by SMEs in Nairobi County, Kenya
iii) To examine the effects of firm characteristics on loan repayment by SMEs in Nairobi County, Kenya
iv) To examine the effects of lender characteristics on loan repayment by SMEs in Nairobi County, Kenya

1.4 Significance of the Study

This study will be of importance to

Small and medium enterprises – this study aims at establishing the determinants of loan repayment thus it findings will be of benefits to SMEs to establish the factors that influence their ability to repay loans.

Financial institutions – financial institutions including commercial banks, microfinance institutions, SACCOs and others will benefit from the study since the study will establish the major determinants of loan repayment

Policy makers – policy makers like the government and the relevant ministries may sue the study findings to formulate policies on loan repayment by small and medium enterprises.

Future researchers and scholars – This study will add on to the existing knowledge on loan repayment and SMEs. In addition, prospective scholars may use the study as part of their empirical studies

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the theoretical literature review, the empirical literature review and the chapter conclusion.

2.2 Theoretical Literature Review

This study will examine the information asymmetry information theory, the moral hazards theory, the adverse selection theory and information sharing theory to explain the concepts of loan repayment

2.2.1 Information Asymmetry Theory

The concept of asymmetric information theory was first introduced in Akerlof's (1970) paper "The Market for "Lemons": Quality Uncertainty and the Market Mechanism. According to Stiglitz (2000), the asymmetric information perspective highlights that information is imperfect, obtaining information can be costly, and there are important asymmetries of information. Imperfect credit markets characterized by information asymmetry make it too costly for banks to obtain accurate information on the borrowers and to monitor the actions of the borrowers. Information asymmetry occurs when the knowledge of one contracting party is inferior to that of the other party regarding the counterparty's true intentions and planned activities. In addition, information asymmetry arises when one group of participants has better or timelier information than other groups. Asymmetric information makes it difficult for a would-be creditor or insurer

to be sure whether the expected probability distribution over state-contingent payoffs associated with a contract promise is the one being represented by the seller or not (Berhanu, 2005).

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. 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. Reliable borrowers have the reason for signing credit agreement with the bank on different terms (Slazak, 2011). SMEs are high risk and suffer from a high mortality rate this is largely as a result of low capitalization and asset base. In addition, 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.

2.2.2 Information Sharing Theory

Information sharing is an important mechanism to mitigate both adverse selection and moral hazard. According to Pagano and Jappelli (1993) as cited in Fuentes and Maquieira (2000), information sharing can be used as a prescreening element by the financial market, so as to partially solve the adverse selection problem. This institutional arrangement is more likely to arise when borrowers are heterogeneous, the credit market is large and the cost of sharing information is low. Information sharing reduces the moral hazard problem, since it increases the borrower's willingness to repay the loan. Thus, financial institutions provide incentives to the borrower to do his or her best effort to repay the loan since the debtor knows that the bank is

going to share default information with other lenders in the future, and therefore reveal the borrower's quality to the market. This mechanism ensures a lower default rate and interest rate.

According to Stiglitz and Weiss (1981) when lenders know more about borrowers, their credit history, or other lenders to the firm, they are not as concerned about the problem of financing non-viable projects, and therefore extend more credit. Thus, the information that each party has to a credit transaction brings to the replace will have important implications for the nature of credit contracts; the ability of credit markets to match borrowers and lenders efficiently and the role-played by the rate of interest in allocating credit among borrowers. The nature of credit markets can lead to distinct roles for different types of lenders and different types of borrowers.

2.2.3 The Moral Hazards Theory

Moral hazard refers to the inability of the lender to ascertain whether the loan granted to borrowers are used for its intended purpose, or that the borrower applies the expected amounts of complementary inputs, especially effort and entrepreneurial skill, that are the basis for the agreement in order to get the loan provided. The borrower may then be less able to repay if these inputs are less than expected (Ghatak & Guinnane, 1999).The moral hazard also describes the inability of banks to supervise borrower's behaviors become more pronounced in the case of poor borrowers. As such, moral hazard emerges when borrowers never fulfill their part of the agreement between the beneficiaries and the financial institutions. Most business loans are given for the sake of business growth only and to improve the business enterprise's working capital. However, sometimes it happens that some of the loan borrowers are not trustworthy in honoring the agreement made with the financial institutions (Makorere, 2014). Loan diversion leads to moral hazards, which may in turn, affect loan repayment by small and medium enterprises since the loan was diverted from its intended business purpose.

2.2.4 The Adverse Selection Theory

The adverse selection theory of credit markets emanated from Stiglitz and Weiss (1981). Karlan and Zinman, (2004) notes that the adverse selection arises when borrowers have characteristics that are unobservable to the lender but affect the probability of being able to repay the loan. The theory rests on two main assumptions: That lenders cannot distinguish between borrowers of different degrees of risk and that loan contracts are subject to limited liability (i.e., if project returns are less than debt obligations, the borrower bears no responsibility to pay out of pocket (Berhanu, 2005).

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. 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, 2010). 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.

This section has explored various theories on loan repayment. First, the information asymmetry theory has explained that banks know the credit risk level among their clients and are not able to identify individual amounts of default costs for particular borrowers. Moral hazard theory indicates the inability of banks to monitor borrower's behaviors thus explored to higher default risk in the case of poor borrowers. Also owing to the fact that most small and medium business

loans are given for business growth and working capital needs, where most borrowers do not honor the stipulated agreement. Lastly, the adverse selection theory describes that banks cannot distinguish the safe borrowers from risky ones.

2.3 Empirical Literature Review

Several studies have been carried out internationally and locally on the various determinants of loan repayment. For instance, Gebeyehu (2002) examined the major factors behind the loan default problem of SSEs with particular reference to Development Bank of Ethiopia. The study analyzed the determinants of loan repayment status of borrowers. The estimation results employing two-bit model revealed that having other source of income, education, work experience in related economic activity before the loan and engaging on economic activities other than agriculture are enhancing while loan diversion, being male borrower and giving extended loan repayment period are undermining factors of the loan recovery performance of projects. Concerning the loan rationing mechanism, the study established that borrowers who secured high value of collateral and those with relatively longer repayment period were favored although they tend to be more risky while those with higher equity share and extensive experience in related activity were disfavored.

Kapsalis (2006) examined the factors affecting the repayment of student loans in Canada. The study used data from the Canada Student Loans Program database and administrative records with the Statistics from Canada Longitudinal Administrative Database. The key variables in the analysis are the current status of the loan, the annual income of the borrowers, and the total amount of the loan (indebtedness) at consolidation. The study findings established that the ability of students to repay their loans depended primarily on their future earnings rather than on the size of debt incurred. The amount of debt did not appear to have much of an effect, except when

high loan amounts are combined with low incomes. The relationship between income and default was found to emerge soon after graduation and is a strong predictor of the final repayment outcome. Future earnings, as well as the probability of loan repayment, were found to be strongly correlated with the type of education (type of degree, field of study, and type of institution.

Bassem (2008) examined the main factors vulnerable to affect the repayment performance of group lending. The study used a Logit model the internal and external delinquency of a self-designed survey of 286 groups of credit. The results of the estimation showed that the repayment is influenced positively by the internal rule of conduct, the same business, the knowledge of the other members of the group before his formation, the peer pressure, the self-selection, the sex, the education, and the non-financial services. However, the study found that the homogeneity and the marital status are among the main factors acting negatively on the repayment. The study concluded that the tie with the loan officer is able to improve positively the repayment performance of credit groups.

Sileshi, Nyikal and Wangia (2012) examined the determinants of loan repayment performance among smallholder farmers in East Hararghe zone, Ethiopia specifically Kombolcha and Babile districts. A structured questionnaire was used to gather information from 140 smallholder farmers from two districts, using the multistage sampling technique. The study revealed that of the total sample households 71.4 percent and 28.6 percent households were partial loan defaulters and complete non-defaulters, respectively. A two-limit Tobit regression model was applied to identify factors that influenced loan repayment. The results indicate that agro ecological zone, off-farm activity and technical assistance from extension agents positively influenced the loan repayment performance of smallholder farmers, while production loss,

informal credit, social festival and loan-to-income ratio negatively influenced the loan repayment of smallholder farmers.

Mensah et al. (2013) examined the relationship between loan default and repayment schedule in microfinance institutions in Ghana with specific case study of Sinapi Aba Trust. Questionnaires were administered to some customers of the Tema and Lapaz branch of Sinapi Aba Trust and were analyzed by means of Ordinary Least Square (OLS) Regression. The study findings indicated that, there was no significant relationship between loan default and repayment schedule in Microfinance institutions. However, the study established a significant relationship between interest charged on loans, moral hazard and over-borrowing by customers. In addition, the inability of loan officers to visit borrowers regularly, loans not being backed by collateral were also found to have contributed significantly to loan default among customers.

Al-Sharafat, Qtaishat and Majdalawi (2013) studied the loan-repayment performance of public agricultural credit agencies. The Agricultural Credit Cooperation in Jordan was chosen to be investigated. Data from Agricultural Credit Cooperation sources for the period of financial year 1960 to financial year 2011 (52 years) were analyzed. Simple descriptive statistics tests and regression techniques were conducted. The study findings revealed that the repayment rate of the investigated public credit agency was 0.92, indicating a high level of repayment performance and a low default rate. The study further established that the positive effects of the volume of loans borrowed, volume of loans repaid number of borrowers, number of credit agency staff, and borrower experience were the most important factors related to this result. The study recommended that sufficient and strict controls as well as monitoring are required and outreach to beneficiaries should be improved to enhance repayment performance.

Ibeleme, Okpara and Odionye (2013) investigated the loan size and repayment performance of smallholder oil palm producers and processors in Nigeria using Abia State as a case study. Ninety respondents, comprising 54 producers and 36 processors, were randomly selected and interviewed. Ordinary Least Square technique was used in analyzing the data and drawing conclusions. The analysis of data revealed that loan size by oil palm processors was significantly determined by processing experience, gross annual income and interest rate. For the farmer-borrowers, the major determinants of loan size were educational level and interest rate all of which fell in line with a priori expectations as indicated by the signs of the coefficients of relevant variables. On loan repayment rate and credit worthiness rating, results of data analysis showed that loan-asset ratio and distance between home and source of loan were significant determinants of loan repayment rate.

Ezihe, Oboh and Hyande (2014) examined the loan repayment performance of smallholder maize farmers in Kanke Local Government Area of Plateau State in Nigeria. A sample of 90 farmers was randomly selected and analyzed using percentages, means, and multiple regressions. The study findings established that farmers received on average of 75,000 as loan. A large proportion of the farmers adopted mixed varieties of maize. Untimely loan disbursement, low market price of farm produce, and high interest rate were the major constraints militating against loan repayment. The study recommended that more credit from formal sources should be made available in large loan size to farmers. In addition, the study recommended that loan disbursement should be timely to avoid diversion while successful applicants should be trained on proper loan management.

Ojiako, Idowu and Ogbukwa (2014) examined the loan repayment performances of smallholder farmers along with their determinants using data from selected cooperative members in Yewa

area of Ogun State, Nigeria. A multistage random sampling technique guided the selection of 110 respondents on whom data was collected using structured questionnaire. Data was analyzed using descriptive statistics, correlation, and multivariate regression analytical techniques. The study findings revealed that loan distribution showed that 67.3% of respondents received cooperative credit while the remainder received loan from other sources. Only 74.0% of all loans was fully repaid at due dates. Further, a negative association was found between age and repayment performance, suggesting that younger farmers were better performers. From regression results, repayment performances were positively influenced by non-farm income but negatively affected by loan size. The rates of response were found inelastic for all variables: a 100% increase in loan size caused a 27.7% decrease while corresponding increase in non-farm income resulted to a 14.5% increase in repayment performance. Decomposed elasticity revealed that a small change in each variable resulted to a relatively higher change in the elasticity of repayment intensity than it had in elasticity of probability to repay by borrowers that have started repaying.

Kiros (2014) investigated the factors affecting loan repayment performance of the group owned MSEs taking borrower characteristics in to consideration. Primary data was collected by distributing semi-structured questionnaire and interviewing 62 groups owned MSEs located in Mekelle city, Tigray Regional state of Ethiopia financed by DECSI by using census method, of which 13 group owned MSEs were found to be defaulters and the remaining, 49 MSEs were non-defaulters. An econometrics model (Binary Logistic Regression) was used to analyze the effect of the literature driven variables have on loan repayment (dependent variable). The binary logistic regression result shows among the variables hypothesized to affect loan repayment, initiation and sector have statistically significant effect on loan repayment. Whereas like group

composition and group size has statistically insignificant effect on loan repayment. Therefore, to improve the loan repayment performance of the group owned MSEs and increase the potential contribution of MSEs to the economic growth of the country, all concerned stakeholders must to play their role.

Makorere (2014) examined the factors affecting loan repayment behaviour in Tanzania because experiences show that many financial institutions still are facing poor loan recovery. Convenience sampling technique was used in the selection of 100-sample size. Data was collected using questionnaires. Descriptive statistics was used to analyze the data collected. The study findings established that the uttermost factors like interest rate, grace period, profitability, moral hazard, electricity rationing, and economic stability have strong effects in stimulating loan repayment behaviour in Tanzania. The study thus concluded that government intervention is important and financial institutions should assess credit risk management adequately using collateral, condition, characters, capacity and capital measurement to control delinquency rate.

This section has explored various studies on loan repayment in the global scene and African view. Globally, studies by Kapsalis (2006), Bassem (2008) and Al-Sharafat et al. (2013) examined various factors that influence loan repayment it there localities and established different factors ranging from annual income, the education, volume of loans borrowed and borrowers experience respectively. In Africa studies by Gebeyehu (2002), Sileshi, et al (2012), Mensah et al. (2013), Ibeleme et al (2013), Ojiako et al (2014), and Makorere (2014) were also review and found to have revealed several factors which influenced loan repayment on the respective investigative sectors.

2.4 Local Studies

Kulundu (1990) examined the factors affecting loan repayment performance by smallholder farmers with a major aim of proposing measures that can help in improving the smallholder credit repayment performance. Primary cross-section data collected from a rural area in Kenya was analyzed by ordinary least square (OLS) regression method. The study findings established that loan diversion, use of purchased farm inputs, farm income (ratio of farm income to loan advanced to farmers), sources of income from farming activities and farmers attitude towards loan repayment have a significant influence on loan repayment. The study further found that late loan issue and inadequate supervision and technical advice on improved farming methods have statistically significant influence on loan diversion.

Muturi (1991) investigated the factors explaining Agricultural Credit default among small-scale farmers in Kenya. A study area (Kangema Division) was identified where it was possible to locate small scale farmers who had borrowed for a variety of activities and also from different financial institutions. Study instruments which consisted of a formal interview schedule, informal interview schedule, informal group discussion guide and observation checklist were designed. The study findings indicated that there exists a meaningful relationship between institutional procedures of loan administration and loan repayment. However, there exists no meaningful relationship between loan expenditure pattern, amount of farm output, loanee social economic status and loan repayment. It was also observed that there exists no meaningful relationship between centre of household decision making process and loan expenditure pattern. The most crucial aspects of loan administration which were found to influence loan repayment were procedures relating to loan use and procedures relating to loan repayment. The study

concluded that institutions which put emphasis on the two determinants experienced better repayment pattern.

Nene (2014) investigated the factors hindering SMEs from committed and consistent credit repayments by focusing on SMES in Nairobi County. The specific objectives were to: identify conditions put by banks in offering loans to SMEs; assess whether or not SMEs are able to meet loan conditions put by banks; and establish the impact of loan conditions put by banks on growth and sustainability of SMEs. The study adopted a survey design method in determining the factors that affect SMEs in credit repayment. The target population comprised SMEs operating within Nairobi County and sampled 100 SMEs within Nairobi County. The study found that independent variable (Character, Capacity, Conditions, Security, Common Sense and Contribution) explains 63.3 percent change of credit repayment.

Nyamboga et al. (2014) investigated the influence of financial literacy on SMEs loan repayment. The specific objectives the study were to establish the impact of book keeping skills, credit management and budgeting skills influence loan repayment by the beneficiaries. The study was conducted among the beneficiaries of Equity Group Foundation Training Program on SMEs in Ngara, Nairobi County. A sample of 30 SMEs was selected for the study using stratified random sampling technique. The study used a descriptive survey research to investigate the factors influencing loan repayment among the beneficiaries. Questionnaires were used to collect primary data from a sample of selected beneficiaries and data was analyzed using descriptive and inferential statistics. The study established that bookkeeping; credit management and budgeting skills significantly influenced the ability of SMEs to repay loans and recommends that the SMEs should enroll in financial related programs to enhance their capacities. The study recommended

that there is need to initiate more financial literacy programs to reach to many SMEs for proper credit management skills hence improvement of loans repayment.

Nguta and Huka (2013) examined the factors influencing loan repayment default in micro-finance institutions: the experience of Imenti north district, Kenya. Using a descriptive survey design individual microfinance loan beneficiaries and microfinance institution officials were studied. A representative random sample of 400 respondents was selected from the study population using census and cluster sampling procedures for micro finance institutions officers and loan beneficiaries respectively. Data collected using both structured and unstructured questionnaires were analyzed using descriptive and inferential statistics. The study findings revealed that there was significant relationship between the type of business, age of the business number of employees, business profits and loan repayment default. The study further indicated a strong link between technical training for loan beneficiaries and the performance of entrepreneurial businesses among the remote communities. The study recommended that the stakeholders in the microfinance sector should ensure that the loan borrowers have access to adequate relevant technical training in entrepreneurial microfinance businesses.

Ochillo (2009) analyzed the factors affecting loan repayment performance by small scale entrepreneurs with the aim of proposing measures that can help in improving small scale business credit repayment performance. Cross section data collected from an urban area in Kenya was analyzed by probit regression, a method that uses Maximum Likelihood estimation to compute values of model parameters. Loan repayment default was the dependent variable while the independent variables include age, education, loan diversion, number of dependants, business diversification, loan administration, attitude of the entrepreneurs towards loan repayment and business performance. The main findings of the study are that the ages of the entrepreneurs, loan

administration, attitude of the entrepreneurs towards loan repayment and business performance have statistically significant influence on loan repayment. The study further found that lateness in issuing loans and inadequate supervision and technical advice on good business practice affect loan repayment.

Sungwacha, Wanyama and Kirathi (2014) examined the factors influencing loan repayment performance among group borrowers in Bungoma West District, Bungoma County. A survey questionnaire was used to collect data from 20 randomly selected groups from the population.The study findings established various environments in which loan repayment performance may be retarded. Proximity of borrowers to an MFI was not significant on repayment given that banking strategies like mobile services and electronic money transfer technologies adapted by MFIs mitigate travelling challenges. Consequently, to increase accessibility MFIs should increase these services. Group meetings prior to loan disbursement was found to be important for members as such forums enhance discipline in members. The study recommended that MFIs should schedule group meetings and utilize them to enlighten borrowers on sound financial practices. Politics pose a risk as it discourages loan repayment as some members influence peers not to repay. Influential group members who heed politicians' advice create a domino effect among others who model their behavior.

Mwangangi (2014) investigated the relationship between the borrower credit score and its credit repayment performance. The study adopted a co relational research design and the target population consisted of all 100 corporate clients who had been given loans by the Agricultural Finance Corporation (AFC) over a period of 5 years. Data was captured and analyzed using regression analysis to determine the relationship between credit scoring and repayment performance of a borrower. The study revealed that the use of credit scoring of a particular

borrower positively and significantly influenced the repayment performance in AFC as it facilitates quick loan turnaround, consistency in lending, and basis for risk pricing. The study recommended that AFC should cooperate with other credit institutions to ensure that they get in depth information on clients before advancing loan to them.

This section has reviewed the local studies on loan repayment. Studies by Kulundu (1990), Muturi (1991) examined loan repayment behavior among small scale farmers in various localities in Kenya. Further, Ochillo (2009) factors affecting loan repayment performance by small scale entrepreneurs. In addition, Nyamboga et al. (2014), Nguta and Huka (2013), Sungwacha et al. (2014), Mwangangi (2014) and Nene (2014) also examined the various factors that influence loan repayment among SMEs in Kenya. However, the studies obtained varied mixed and where carried out in different entities and obtained mixed results which could not be generalized to the study topic.

2.5 Summary from Literature Review

From the available literature, most of the studies were carried out in different economic sectors like the agricultural sector, micro credit and microfinance sectors, cooperative societies and student loan repayment programs. Most of the studies reviewed established that there are different factors influencing loan repayment some of which are significant based on the context of study while other are insignificant on a different perspective.

The reviewed studies have established that loan default is catastrophic in most sectors whether agricultural, government funded programs and in the small-scale sector but obtained varied results. In addition, most of the studies have concentrated on different sectors other that the SME sector and thus there results cannot be generalized to the SME context. This opens up a gap in

literature, which is worthy filling by investigating the determinants of loan prepayment among SMEs in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methods and procedures that will follow in conducting the research with the aim of examining determinants of loan repayment by small and medium enterprises in Nairobi County, Kenya. This chapter presents the research design, the study population, sample design, data collection, validity and reliability and finally the data analysis procedure.

3.2 Research Design

A research design is a blueprint for conducting the research that specifies the procedures necessary to obtain the information needed to structure and solve the research problems (Cooper &Schindler, 2008). Orodho (2006) defines a research design as the arrangement of conditions for collections and analysis of data in a manner that aims to combine relevance to the research purpose with economy in the procedure According to Kothari (2004), a research design is the conceptual structure within which research is conducted; it constitutes the blueprint for the collection, measurement and analysis of data.

This study employed a descriptive research design. Descriptive research involves the collection of information from all the sampled individuals through their responses to questions (Mugenda and Mugenda, 2006). According to Cooper &Schindler (2008), a descriptive design ensures complete description of the situation, making sure that there is minimum bias in the collection of data and allowed data collection from sizeable population in an economical way. Descriptive research also involves a field survey where the study examines the population of interest to

inquire certain issues concerning the planned study. Thus, a descriptive research design was helpful in collecting data from the small and medium scale enterprises using questionnaires in an economical way.

3.3 Population of the study

A population is a well-defined set of people, services, elements, events, and group of things or households that are being investigated (Mugenda and Mugenda, 2003). Population refers to the entire group of individuals or objects of which the researcher is interested in generalizing the conclusions.

For this study the population of interest comprised of all the SMEs in Nairobi County. According to the Nairobi Town County, records there are over 80000 registered SMEs within Nairobi County. The owners and managers of these businesses formed the population elements of the study.

3.4 Sample Design

A sample design is a definite plan for obtaining a sample from a given population. It refers to the technique or the procedure the researcher would adopt in selecting items for the sample (Kothari, 2004). A sample of 160 respondents was used for the study. The sample was 2% of the total population and the study target SME owners and managers and focused on SMEs that have obtained a loan facility with any financial institution (i.e. Commercial banks, SACCOs, MFIs and Cooperative Societies) in Kenya.

Simple random and stratified sampling methods were used to select the respondents. Stratified sampling method ensured that certain sub-groups in the population were represented in the sample in proportion to their numbers in the population itself (Orodho, 2005). Thus, stratified

sampling was used to divide the SMEs firms into different subgroups (strata's). Once the SMEs had been categorized simple random sampling was used to select the owners and managers of the enterprises. Simple random sampling gave each element in the population an equal probability of getting into the sample and all choices are independent of one another (Kothari, 2004).

3.5 Data Collection

The study employed both primary and secondary. A questionnaire was used to collect the primary data. A questionnaire is a form, which is prepared and distributed for the purpose of securing responses (Mugenda and Mugenda, 2003). The questionnaire contained both structured and unstructured questions. The questionnaires were designed such that the respondents could easily comprehend the questions there in. Structured questionnaires are those questions in which there are definite, concrete and pre-determined questions while unstructured questions contains questions which do not require specific answers (Kothari, 2004).

The questionnaires were self-administered to the sampled respondents. The self-administering procedure was preferred since was simpler and the respondents read the questions and filled in the answers by themselves. In addition, the self-administration technique was appropriate since the researcher was able to rectify any questions at the ground and make sure all the questions had been responded to. Secondary on the other hand was obtained from books, journals, newspapers, magazines and the internet.

3.6 Validity and Reliability

Validity is the degree to which sample of test items represent the content that is designed to measure while reliability refers to the degree to which the instrument gives/yields consistent or the same results on data when repeatedly administered (Mugenda and Mugenda, 2003). Validity

measures the extent to which a score truthfully represents a concept while reliability represents how consistent a measure is, in that the different attempts at measuring the same thing converge on the same point (Kothari, 2004).

To establish the instruments validity a panel of experts including the project supervisor were consulted. In addition, a pretest was carried out to test the validity of the data-collection instrument and procedures, as well as the sampling procedures. On the other hand, reliability was established using the Cronbach alpha coefficient. The coefficient alpha is the most commonly applied estimate of a multiple-item scale's reliability. The Cronbach alpha value of 0.7 or more is always considered as an indication of reliability.

3.7 Data Analysis

The data collected was classified, summarized analyzed using the descriptive statistical tools and inferential statistics using Gretel. Descriptive statistics included measures of central tendency like the arithmetic mean, frequencies, percentages and the standard deviation. Descriptive statistics summarized and described the data in a simple and understandable manner.

Inferential statistics was also used to draw conclusions. According to Kothari (2004) inferential analysis (sampling statistics) is concerned with the various tests of significance for testing hypotheses in order to determine with what validity data can be said to indicate some conclusion or conclusions. Additionally, inferential statistics was concerned with the process of generalization and was used to estimate the study parameters and the testing of statistical hypotheses.

3.7.1 Econometric Model

According to Berhanu (2005), most of the studies conducted in modeling the determinants of loan repayment use dichotomous discrete choice models (Logit and Probit) where the dependent variable (loan repayment) is a dummy that takes a value of zero or one depending on whether or not a borrower has defaulted. There is no much difference between logit and probit model since they yield the same results. Thus, this study used the Logit model.

The logit model was specified as follows

$$\Pr(Y_i) = \propto + \sum \beta_i X_i + \mu_i$$

Where;

Y_i = Loan Repayment (1 for Loan repaid within the specified loan period, otherwise 0)

X_i = A vector of loan characteristics and firm characteristics.

β_i= Parameters to be estimated.

$\propto$ = Constant

μ_i= disturbance term

The study used a significance level of 5%. This means the test value were considered significant if a p-value smaller than 0.05 was determined. Thus, for this study a p-value lesser than 0.05 was considered to be of significance.

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND INTERPRETATION

4.1 Introduction

This chapter presents the descriptive statistics which entails the response rate, data reliability and summary descriptive statistics. The chapter also presents correlation analysis, logit regression analysis and a summary and the interpretation of the study findings.

4.2 Descriptive Statistics

This section presents the response rate, data reliability and summary descriptive statistics. The results were as follows

4.2.1 Response Rate

A total of 160 questionnaires were administered to the sampled SMEs but only 122 questionnaires were returned fully responded to. This represents a response rate of 76.25% which was deemed adequate for the study. Table 4.1 shows the results obtained

Table 4.1 Response Rate

	Frequency	Percent
Questionnaires returned	122	76.25
Unreturned questionnaires	38	23.75
Total	160	100.00

Source: Research Data

4.2.2 Data Reliability

The study used the Cronbach alpha coefficient to determine the instruments reliability. Table 4.2 shows the results obtained.

Table 4.2 Data Reliability

Variable	Cronbach's Alpha	No. of Items
Firm characteristics	.740	9
Borrower characteristics	.848	10
Loan characteristics	.897	10
Lender characteristics	.769	6

Source: Research Data

The results on table 4.2 show that firm characteristics, borrower characteristics, loan characteristics and lender characteristics yielded Cronbach alpha coefficients of 0.740, 0.848, 0.897 and 0.769 respectively. These results indicate that the study instrument was reliable since all the alpha coefficients were beyond 0.7 which is the accepted benchmark for reliability.

4.2.3 Summary Statistics

Table 4.3 shows the summary descriptive statistics which entails the number of respondents, the respondent's average response and the standard deviation.

Table 4.3 Summary Statistics

	N	Mean	Std. Deviation
Loan repayment status	122	.25	.437
Firm characteristics	122	3.85	.390
Borrower characteristics	122	3.95	.321
Loan characteristics	122	3.92	.313
Lender characteristics	122	3.87	.412

Source: Research Data

The results on table 4.3 show that the average response for loan repayment status was 0.25 with a standard deviation of 0.437 respectively. The results also show that firm characteristics had a mean response of 3.85 and standard deviation 0.390 while borrower characteristics had an average response of 3.95 and standard deviation of 0.321 respectively. In addition, the results also show that loan characteristics had a mean response of 3.92 and standard deviation of 0.313 whereas lender characteristics had a mean response of 3.87 and a standard deviation of 0.412 respectively. These results show that borrower characteristics are the major characteristics that influence loan repayment followed by loan, firm and lender characteristics.

4.3 Correlation Analysis

The study also undertook a correlation analysis to establish the correlation that exists between the study variables. Table 4.4 shows the results obtained

Table 4.4 Correlation Matrix

	Loan Repayment status	Firm characteristics	Borrower characteristics	Loan characteristics	Lender characteristics
Loan Repayment status	1				
Firm characteristics	.002	1			
Borrower characteristics	.047	.204*	1		
Loan characteristics	-.076	.213*	.124	1	
Lender characteristics	-.024	.045	.142	.121	1

*. Correlation is significant at the 0.05 level (2-tailed).

Source: Research Data

The results on table 4.4 show that loan repayment status has a weak positive correlation with firm and borrower characteristics as indicated by correlation coefficients of 0.002 and 0.47 respectively. The results also show that loan and lender characteristics have a weak negative correlation with loan repayment status by small and medium enterprises as indicated by the

correlation coefficients of -0.076 and -0.024 respectively. These results indicate that there is a weak correlation between loan repayment status and the study variables.

4.4 Logit Regression Analysis

The logit regression was used to model the determinants of loan repayment using dichotomous discrete choice models where the dependent variable (loan repayment) was a dummy that took a value of zero or one depending on whether or not a borrower had repaid their loan on time or not. Table 4.5 shows the results obtained.

Table 4.5 Logit Regression Analysis

	coefficient	**std. error**	**z**	**p-value**
const	-0.0625804	3.87112	-0.01617	0.9871
Firm characteristics	0.0478086	0.513978	0.09302	0.9259
Borrower characteristics	0.421486	0.647383	0.6511	0.515
Loan characteristics	-0.605899	0.651778	-0.9296	0.3526
Lender characteristics	-0.129123	0.444635	-0.2904	0.7715
Mean dependent var	0.254098	S.D. dependent var		0.437148
McFadden R-squared	0.8452	Adjusted R-squared		-0.6386
Log-likelihood	68.56433*	Akaike criterion		147.1287
Schwarz criterion	161.1488	Hannan-Quinn		152.8232

Number of cases 'correctly predicted' = 91 (74.6%)

f(beta's) at mean of independent vars = 0.188

Source: Research Data

The logit regression model used for the study was

$$\Pr(Y_i) = \propto + \sum \beta_i X_i + \mu_i$$

Thus, the equation can be rewritten as follows

$$\Pr(Y_i) = -0.0626 + 0.0478\mathrm{X}_1 + 0.4214X_2 - 0.6058X_3 - 0.1291\mathrm{X}_4 + \mu_i$$

The results on table 4.5 indicate that the McFadden R – squared value is 0.84 and the log-likelihood is significant at 5% significance level which indicates that the model is reliable in estimating the probability of loan repayment by small and medium enterprises in Nairobi County. The results indicate that 74.6% of the respondents had not repaid their loan within the specified time. The results also show that the coefficient for firm characteristics is positive and statistically insignificant at 5% level of significance which indicates that firm characteristics positively influence loan repayment by SMEs.

The coefficient for borrower characteristics was also positive and statistically insignificant with loan repayment which indicates that borrower characteristics also influence loan repayment by SMEs in Nairobi County. These findings also indicate that firm and borrower characteristics have a positive effect on loan repayment by SMEs in Nairobi County. The results also show that the coefficients of loan and lender characteristics are negative and statistically insignificant which indicates that loan and lender characteristics have a negative effect on loan repayment by

SMEs in Nairobi County. This also indicates that loan and lender characteristics inversely influence loan repayment by SMEs in Nairobi County.

4.5 Summary and Interpretation of Findings

This chapter presents the study findings as per the study objectives. From the study findings only 122 questionnaires out of the 160 questionnaires administered to the sampled SMEs were returned fully respondent to hence a response rate of 76.25% which was deemed adequate for the study. In addition, Cronbach alpha coefficient established that the instrument was reliable since all the alpha coefficients were beyond 0.7 which is the accepted benchmark for reliability. Correlation analysis was also undertaken to establish the strength of a linear association between the dependent and the independent variables and established that there was a weak correlation between loan repayment status and the study variables.

The logit regression model was used to model the determinants of loan repayment using dichotomous discrete choice models where the dependent variable (loan repayment) was a dummy that took a value of zero or one depending on whether or not a borrower had repaid their loan on time or not. The study findings established that McFadden R – squared value is 0.84 and the log-likelihood is significant at 5% significance level which indicates that the model is reliable in estimating the probability of loan repayment by SMEs in Nairobi County.

The logit regression coefficients established that that firm characteristics had a positive and statistically insignificant coefficient with loan repayment status of SMEs in Nairobi County. Borrower characteristics coefficient was also positive and statistically insignificant which indicates that borrower characteristics have a positive effect on loan repayment status by SMEs in Nairobi County. The study findings also established that the coefficients of loan and lender

characteristics were negative and statistically insignificant with loan repayment status of SMES in Nairobi County which is an indication that loan and lender characteristics have a negative effect and inversely influences loan repayment by SMEs in Nairobi County, Kenya.

The results are similar to those of Kohansal and Manosoori, (2009) who established that the amount of loan approved or received, that is loan size, could have a positive effect on repayment performance. Korankye (2014) also established that the causes of loan default to included inadequate loan sizes, poor appraisal, lack of monitoring, and improper client selection and recommended that financial institutions should have clear and effective credit policies and procedures and must be regularly reviewed. Bassem (2008) also established that repayment is influenced positively by the internal rule of conduct, the same business, the knowledge of the other members of the group before his formation, the peer pressure, the self-selection, the sex, the education, and the non-financial services. In addition, Makorere (2014) established that that the uttermost factors like interest rate, grace period, profitability, moral hazard, electricity rationing, and economic stability have strong effects in stimulating loan repayment behavior in Tanzania.

Further, the study findings are similar to those of Ochung (2013) who established a significant relationship between firm/group factors and the loan repayment among customers of commercial banks in Kenya. Ochillo (2009) also established that various borrower, firm and loan characteristics like the ages of the entrepreneurs, loan administration, attitude of the entrepreneurs towards loan repayment and business performance have statistically significant influence on loan repayment. Muturi (1991) also established that there exists no meaningful relationship between loan expenditure pattern, amount of farm output, loanee social economic status and loan repayment. Additionally, Atsmegiorgis (2013) also revealed that the loan

repayment rate was significantly related with loan size, loan type, and previous loan experience, purpose of loan, educational level and type of collateral offered.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the study findings, the study conclusions and recommendations. In addition the study presents the limitations and suggestion for additional research.

5.2 Summary

This study sought to investigate the determinants of loan repayment by Small and Medium Enterprises (SMEs) in Nairobi County, Kenya. The dependent variable for the study was loan repayment by SMEs in Nairobi County while the independent variables included loan characteristics, borrower characteristics, firm characteristics and lender characteristics. The study was carried out in Nairobi County and questionnaires were administered to 160 but only 122 of the respondents returned their questionnaires. In addition, the study established that the questionnaire was reliable to investigate the determinants of loan repayment by SMEs.

The study findings established that the average response for loan repayment status was 0.25 whereas firm characteristics had a mean response of 3.85 while borrower and loan characteristics had an average response of 3.95 and 3.92 respectively. The findings also found that borrower characteristics are the major characteristics that influence loan repayment followed by loan, firm and lender characteristics. The findings also revealed that that loan repayment status had a weak positive correlation with firm and borrower characteristics while loan and lender characteristics

have a weak negative correlation with loan repayment status by small and medium enterprises in Nairobi County.

The logistic regression results model the determinants of loan repayment using dichotomous discrete choice models where the dependent variable (loan repayment) was a dummy that took a value of zero or one depending on whether or not a borrower had repaid their loan on time or not. The findings established that the McFadden R – squared value was 0.84 and the log-likelihood was significant at 5% significance level an indication that the model is reliable in estimating the probability of loan repayment by small and medium enterprises in Nairobi County. The study findings established that the coefficient of firm characteristics was positive and statistically insignificant at 5% level of significance. The results also established that the coefficient for borrower characteristics was also positive and statistically insignificant with loan repayment. In addition, the results also established that the coefficients of firm and borrower characteristics were positive and statistically insignificant at 5% level of significance.

5.3 Conclusions

The study established that firm characteristics has a positive coefficient with loan repayment which is an indication that firm characteristics positively influence loan repayment by small and medium enterprises in Nairobi County. Thus, this study concludes that firm characteristics affect loan repayment hence a major determinant of loan repayment behavior by small and medium enterprises in Nairobi County, Kenya.

In addition, the study findings established that borrower characteristics have a positive coefficient with loan repayment which is an indication that borrower characteristics positively influence loan repayment by small and medium enterprises in Nairobi County. Therefore, this

study concludes that firm characteristics affect loan repayment hence a determinant of loan repayment by small and medium enterprises in Nairobi County, Kenya.

Additionally, the study revealed that the coefficient of loan characteristics is negative hence an indication that loan characteristics negatively affects loan repayment by small and medium enterprises in Nairobi County. Thus, the study concludes that loan characteristics inversely influence loan repayment hence a major determinant of loan repayment behavior by small and medium enterprises in Nairobi County, Kenya.

Further, the study established that the coefficient of lender characteristics is negative hence an indication that lender characteristics negatively effects loan repayment by SMEs in Nairobi County. Thus, the study concludes that lender characteristics inversely affect loan repayment by small and medium enterprises in Nairobi County, Kenya. Finally the study concludes that firm, loan, borrower and lender characteristics are major determinants of loan repayment by Small and medium enterprises in Nairobi County, Kenya.

5.4Recommendations for Policy and Practice

The study findings have established that borrower and firm characteristics are major determinants of loan repayment by SMEs in Nairobi County. Therefore, the study recommends that small and medium enterprises should develop appropriate mechanisms to ensure that they repay their loans within the specified time period. This is because poor loan repayment can affect the future access to finances from financial institutions.

The study findings have established that lender characteristics are one of the major determinants of loan repayment by SMEs in Nairobi County. Thus, the study also recommends that financial

institutions should revise their lending policies so that they can reduce loan repayment problems arising from lender characteristics.

In addition, the study findings have revealed that loan characteristics influence loan repayment by small and medium enterprises in Nairobi County. Thus, this study recommends that financial institutions should revise the term and conditions attached to loan so that they can reduce the loan repayment problems associated with loan characteristics.

Further, the study recommends that the government in conjunction with the central bank and financial institutions should develop effective policies aimed at advancing credit to SMEs. This is because SMEs are important for economic growth and development.

5.5 Limitations of the Study

This study investigated the determinants of loan repayment by small and medium enterprises in Nairobi County Kenya hence its findings are limited to small and medium enterprises within Nairobi County. Therefore, the study findings may not be applicable to SMEs outside Nairobi County.

In addition, the scope of the study was small and medium enterprises thus the study findings are limited to small and medium enterprises and may not be applicable to other large business organizations.

The study focused on employees and owner of the sampled small and medium enterprises in Nairobi County thus the views of employees of financial institutions were not incorporated to establish the determinants of loan repayment on the supply side.

5.6 Suggestions for Further Research

This study investigated the determinants of loan repayment by small and medium enterprises in Nairobi County, Kenya hence a limitation in its scope. Therefore, an additional study on the determinants of loan repayment by small and medium enterprises in rural areas is highly recommended. This is because SMEs in rural areas operate under different circumstances compare to SMEs in urban areas.

The study also sought the views of the owners and employees of the sampled SMEs to investigate the factors that influence loan repayment by SMEs. Thus an additional study on the determinants of loan repayment by SMEs from the supply side (financial institutions) is highly recommended.

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APPENDICES

Appendix I: Questionnaire

I am student at the University of Nairobi pursuing a Degree of Masters of Science in Finance carrying out a research on the **determinants of loan repayment by small and medium enterprises in Nairobi County, Kenya**. The research is purely academic in nature and any information obtained will be kept confidential. Your cooperation and support will be highly regarded.

Please **tick** and **fill** where appropriate

Section A: Background Information

1. Indicate your gender

   Male ☐

   Female ☐

2. Indicate the period of your business operation

   Less than 1 year ☐

   2 – 5 years ☐

   6- 10 years ☐

   Over 11 years ☐

3. Indicate the type of Business

   ☐

Sole proprietor

Partnership ☐

Company ☐

Section B: Loan Characteristics

4. Evaluate the extent to which following loan characteristics influence loan repayment by SMEs in Nairobi County, Kenya? Use the following scale as appropriate:

1-Not at all; **2**- Minimal extent; **3**- Moderate extent; **4**- Large extent; **5**- Very large extent

Loan characteristics	**1**	**2**	**3**	**4**	**5**
Loan size/amount					
Loan repayment period					
Collateral value					
Number of installments					
Loan application costs					
Loan type					
Purpose of loan					
Previous loan repayment mode					
Length of time before repayment					

Others (Specify)

……

……

……

……

Section C: Borrower Characteristics

5. Evaluate the extent to which following borrower characteristics influence loan repayment by SMEs in Nairobi County, Kenya? Use the following scale as appropriate:

1-not at all; **2**- minimal extent; **3**- moderate extent; **4**- large extent; **5**- very large extent

Borrower characteristics	**1**	**2**	**3**	**4**	**5**
Age of borrower					
Gender of the borrower					
Level of education					
Business experience					
Household size					
Credit use experience					
Household income					
Non- business income					
Type of business activity					

Amount of business investment					
Borrower's attitude					
Family background					

Others (Specify)

……

……

……

……

Section D: Firm Characteristics

6. Evaluate the extent to which the following firm characteristics influence loan repayment by SMEs in Nairobi County, Kenya? Use the following scale as appropriate:

1-Not at all; **2**- Minimal extent; **3**- Moderate extent; **4**- Large extent; **5**- Very large extent

Firm characteristics	**1**	**2**	**3**	**4**	**5**
Ownership structure					
Type of firm					
Firm location					
Firm size					

Age of the business					
Registration status					
Profitability					
Asset ownership					
Type of business e.g. partnership, sole proprietor etc.					
Type of business activity					

Others (Specify)

……

……

……

……

Section E: Lender Characteristics

7. Evaluate the extent to which the following lender characteristics influence loan repayment by SMEs in Nairobi County, Kenya? Use the following scale as appropriate:

1-Not at all; **2**- Minimal extent; **3**- Moderate extent; **4**- Large extent; **5**- Very large extent

Lender characteristics	**1**	**2**	**3**	**4**	**5**
Interest rate					

Penalty for lateness					
Credit analysis procedure					
Lending policies					
Time lag between loan application and disbursement					
Stringent loan procedures					

Others (Specify)

……

……

……

……

Section F: Loan Repayment

8. Have you obtained a loan from any institution or person to finance your business?

Yes ☐ No ☐

9. Did you repay the loan within the specified time period?

Yes ☐ No ☐

10. What actions did the bank take against you for the poor loan repayment?

……

……

……

11. Apart from loan, borrower, form and lender characteristics what other factors do you think influences loan repayment by SMEs

……

……

……

Thank you for your time

Appendix II: Logit Regression Data

(Averages of the responses from the 122 respondents on the variables)

Respondent No.	Loan Repayment status	Firm characteristics	Borrower characteristics	Loan characteristics	Lender characteristics
1	0	3.78	4.10	4.10	3.83
2	0	4.00	3.40	4.10	4.17
3	1	3.78	4.60	4.10	4.00
4	0	3.22	4.20	3.70	4.00
5	0	2.44	3.50	3.30	4.33
6	0	3.56	4.20	3.60	4.00
7	0	4.44	4.60	4.10	3.83
8	1	4.11	3.90	3.30	3.33
9	0	3.78	4.10	4.10	3.83
10	0	3.56	3.80	4.00	4.33
11	0	3.11	4.40	3.90	3.83
12	0	3.67	4.40	3.70	4.33
13	1	3.89	4.10	3.30	3.50
14	0	3.67	3.20	3.80	3.67
15	0	4.11	4.60	3.70	3.67
16	0	4.11	4.10	3.10	4.67
17	0	4.33	3.80	3.80	3.83
18	0	4.00	4.80	3.70	3.50
19	0	4.33	4.70	3.40	4.83
20	0	3.44	3.80	4.50	3.67

21	0	3.00	4.10	3.70	3.83
22	0	4.33	3.70	4.20	3.50
23	0	4.22	3.70	4.10	3.83
24	1	4.22	3.80	4.30	3.83
25	1	4.33	3.90	3.80	4.33
26	1	3.11	3.50	3.90	4.17
27	0	3.22	4.00	3.80	4.17
28	1	4.33	4.50	4.40	4.17
29	0	3.67	3.90	3.70	4.00
30	1	3.56	4.10	4.10	4.33
31	0	4.00	3.50	4.10	4.50
32	0	2.89	4.00	4.00	3.83
33	0	3.89	4.10	3.60	3.83
34	1	3.56	3.80	3.90	3.67
35	0	3.56	3.70	3.60	4.50
36	0	3.78	3.80	4.20	3.67
37	0	4.11	3.50	3.30	3.50
38	0	3.67	4.10	3.20	3.67
39	0	3.78	3.60	4.00	3.67
40	0	4.00	3.70	3.80	2.50
41	0	3.44	3.40	4.20	4.00
42	0	3.11	4.20	3.90	3.00
43	0	2.67	3.80	3.70	3.33
44	0	4.11	3.70	3.90	3.17
45	0	4.00	3.70	3.40	3.00

46	1	4.44	3.60	4.10	4.17
47	1	3.89	4.10	3.60	3.17
48	1	3.67	3.50	3.50	3.83
49	0	3.67	3.30	3.80	2.67
50	1	2.89	3.60	3.10	3.33
51	0	4.11	3.80	3.70	4.17
52	0	3.67	4.00	4.20	3.67
53	0	3.33	4.00	4.00	4.17
54	0	4.11	4.00	4.10	4.17
55	0	4.22	3.60	3.50	3.50
56	0	4.11	3.90	3.60	3.50
57	1	3.89	3.80	4.00	3.17
58	1	3.89	4.10	3.80	4.00
59	0	3.56	3.90	4.00	3.17
60	0	3.89	4.00	3.50	4.33
61	0	3.33	4.10	4.20	4.00
62	0	4.00	4.10	3.80	4.33
63	0	4.22	3.70	4.40	3.83
64	0	4.11	4.10	4.20	3.67
65	0	3.78	3.80	4.10	4.33
66	1	4.00	4.30	3.60	4.33
67	0	4.22	4.10	4.10	3.67
68	1	3.56	3.40	4.00	4.50
69	1	3.78	4.30	4.10	4.00
70	0	4.33	4.10	3.90	3.83

71	0	3.89	4.20	4.00	4.17
72	0	4.00	3.60	4.50	3.50
73	0	3.89	3.90	4.10	4.67
74	0	4.11	4.10	4.00	4.00
75	0	3.78	4.00	4.00	3.67
76	1	4.00	4.10	4.40	3.83
77	1	3.89	3.60	3.90	3.67
78	1	3.89	4.00	4.00	3.83
79	0	3.78	4.20	4.00	4.50
80	0	4.33	3.70	4.30	3.83
81	0	4.00	4.10	4.40	3.83
82	0	4.33	3.60	3.70	4.00
83	0	4.44	3.80	4.00	3.33
84	1	3.56	4.00	4.30	4.00
85	0	3.89	3.90	4.60	4.17
86	0	3.78	3.60	3.80	4.33
87	0	3.78	3.80	4.10	4.00
88	0	4.11	4.00	4.60	4.00
89	0	4.00	4.00	4.20	4.33
90	0	3.89	4.00	3.90	4.33
91	1	4.33	4.40	4.20	3.83
92	0	4.56	4.30	4.10	4.33
93	0	4.11	4.20	4.00	3.50
94	0	4.11	4.80	4.30	3.67
95	1	4.11	4.20	3.80	4.00

96	0	3.89	4.20	3.90	4.33
97	1	4.56	4.40	3.80	3.67
98	0	3.89	3.50	3.70	4.00
99	0	4.33	4.40	4.40	4.00
100	0	4.11	4.10	3.90	4.17
101	0	4.22	4.00	3.90	3.50
102	1	3.67	3.80	3.90	3.83
103	0	4.00	4.10	3.70	3.50
104	0	3.78	4.00	3.90	4.00
105	0	3.78	3.70	4.10	4.33
106	1	3.89	3.80	3.60	3.67
107	1	3.44	3.90	3.80	4.00
108	0	4.11	4.10	4.30	4.17
109	0	3.89	3.70	3.70	3.17
110	0	4.11	4.00	4.10	3.67
111	0	4.33	4.00	4.60	4.00
112	0	3.78	4.00	4.20	4.33
113	0	3.56	3.30	3.80	4.33
114	1	4.11	4.20	3.80	3.83
115	0	4.33	3.90	3.60	4.33
116	0	3.67	3.30	3.70	3.50
117	0	3.67	4.50	4.10	3.67
118	1	3.56	4.20	4.00	3.83
119	0	3.44	4.10	4.10	3.83
120	1	3.67	3.90	4.00	3.67

121	0	3.33	3.70	3.60	3.00
122	0	4.11	4.30	4.40	4.00