Addis Ababa University

College of Business and Economics

Department of Accounting and Finance

Determinants of Loan Repayment Performance in Small and Medium Sized Enterprise: The case of Addis Ketema Sub-city, Addis Ababa, Ethiopia.

By

Temesgen Wubetu

JUNE 2023

ADDIS ABABA ETHIOPIA

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Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Masters of Science (MSC) in Accounting and Finance

Advisor: Dr. Habtamu Berhanu (PhD)

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ADDIS ABABA ETHIOPIA

DECLARATIONS

I hereby declare that the study entitled "Determinants of Loan Repayment Performance in Small and Medium Sized Enterprise: The case of Addis Ketema sub-city, Addis Ababa, Ethiopia" is my original work and submitted for the award of the Degree of Masters of Science in Accounting and Finance from Addis Ababa University College of Business and Economics at Addis Ababa.

I also confirm that it has not been presented for the award of any other Degree of any other

University or institution and that all sources of material used for the study have been duly acknowledged.

Student's Name: Temesgen Wubetu Signature…….

June, 2023

CERTIFICATION

This is to certify that the project made by Temesgen Wubetu entitled " Determinants of Loan Repayment Performance in Small and Medium Sized Enterprise: The case of Addis Ketema sub-city, Addis Ababa, Ethiopia" submitted to partial fulfillment of the requirement of the award of Masters of Science Degree in Accounting and Finance with regulation of the University and meets the accepted standards with respect to its originality and quality.

Advisor: Dr. Habtamu Berhanu (PhD.) Signature……. Date.....

ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF ACCOUNTING AND FINANCE

This is to certify that the thesis prepared by Temesgen Wubetu, entitled: "Determinants of Loan Repayment Performance in Small and Medium Sized Enterprise: The case of Addis Ketema sub-city, Addis Ababa, Ethiopia", is submitted in partial fulfillment for the Degree of Masters of Business Administration in Finance complies with the regulations of the University and meets the expected standard for originality and quality.

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GDP	Gross domestic product
ITC	International Trade Centre
MOTI	Ministry of Trade and Industry
SMEs	Small and Medium Enterprises
SPSS	Statistical Package for Social Sciences

ABSTRACT

The loan repayment performance of Small and medium-sized enterprises (SMEs) is influenced by various factors such as borrower and loan characteristics. Hence, this study aims to examine the determinants of loan repayment performance of small and medium sized enterprise in Addis Ketema sub-city, Ethiopia. The research used both primary and secondary data types. The primary data was collected through questionnaires from SMEs owners operating in Addis Ketema Sub-city. The study determined the sample using Taro Yamane formula, and a sample size of 258 SMEs was selected from the total population of 726 with 95% confidence level and 5% sample error. Simple random sampling methods were used to select the respondents. Data is collected through a questionnaire survey, with the dependent variable being loan repayment and the independent variables being borrower and loan characteristics. The study applied a quantitative approach and uses descriptive and inferential statistics. Binary Logistic regression analysis was used to model the relationship between the loan repayment and independent variables. The study finds that gender, age and business experience of the borrower do not significantly affect loan repayment of SMEs, while short-term loan has a significant effect. Loan size and interest rate negatively affect loan repayment, with high loan size having a significant impact. The study conclude that loan size, interest rate, and repayment period were significant predictors of loan repayment status for SMEs. The study recommended that SMEs with larger loans, shorter repayment periods, and higher interest rates need additional support to ensure successful loan repayment.

KEYWORDS: Loan Repayment, Small and Medium Enterprises, Binary logistic regression, Borrower characteristics, Loan characteristics

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Small and medium size enterprises (SMEs) are a crucial part of the economy, especially in developing countries like Ethiopia, where they contribute significantly to job creation, income generation, and poverty reduction. The International Trade Centre (ITC) reports that SMEs employ a significant portion of the workforce in many countries, ranging from 60% to 70% (ITC, 2019).

Despite their contribution, SMEs face numerous challenges in loan repayment, which can negatively affect their growth and sustainability. SMEs need access to appropriate sources of financing for their creation, survival and growth. However, SMEs frequently encounter difficulties obtaining financing due to repayment issues, which lead financial institutions to view them as high-risky businesses. Thus, repayment problem is one of the major obstacles of small and medium size enterprises in accessing funds from financial institutions to facilitate their businesses (Amadasun and Mutezo, 2022; Girma, 2018). The inability to repay loans is one of the significant issues that SMEs face, which limits their growth and sustainability.

Previous research has explored the factors influencing loan repayment and default on SMEs. Various studies identifying factors such as high interest rates, inadequate loan sizes, and poor monitoring as contributing to default. Atsmegiorgis (2013) classified these factors into four categories: individual borrower factors, firm factors, loan factors, and institutional/lender factors. Similarly, Nawai and Shariff (2010) grouped repayment factors into four categories: individual borrower, firm, institutional/lender, and loan characteristics. Roslan and Karim (2009) proposed a different categorization, identifying three categories as borrower characteristics, firm characteristics, and loan attributes (Mukono, 2015).

Small and medium-sized enterprises (SMEs) face challenges in repaying loans borrowed from financial institutions. Various factors affect the loan repayment performance of SMEs. For instance, Salifu et al. (2018) found that the borrower's education level, loan amount, loan purpose, and collateral significantly affect loan repayment performance. Similarly, Girma (2018)

identified that the borrower's age, loan size, interest rate, and savings habit have a significant impact on loan repayment performance.

Additionally, Khan and Riath (2021) examined women-owned SMEs in Bangladesh and found that the borrower's age, education level, family size, collateral, and relationship with the lender are significant determinants of loan repayment performance. Furthermore, external factors such as economic conditions and government policies can impact SMEs' loan repayment, as macroeconomic factors like inflation and exchange rates have been found to affect SMEs' loan repayment performance (Salifu et al., 2018; Girma, 2018; Adegbite & Ayoola, 2019).

Therefore, the aim of this study is to examine the factors that challenge SMEs' loan repayment in Ethiopia, Addis Ketema sub-city. Specifically, the study identified the borrower and loan characteristics that affect loan repayment performance. Thus including, Borrower characteristics such as gender, age, business experience, and knowledge of SME business owners. Loan characteristics, such as interest rates, loan size, and repayment period, examined. By focusing on these specific factors, the study aims to provide detailed insights into the relationship between borrower and loan characteristics of loan repayment behavior among SMEs. Finally, the study seeks to provide solutions that can make loan repayment more effectively, avoid loan defaults, and develop appropriate systems to manage and repay loans without defaulting within the agreed-upon period (Salifu et al., 2018; Girma, 2018).

1.2 Statement of the Problem

According to the International Trade Centre (2019), Small and Medium Enterprises (SMEs) in developing countries play a significant role in the economy and society by contributing to job creation and income generation. However, they face several challenges, with access to finance being one of the most significant constraints to their growth. Some financial institutions assumed that SMEs are risky business and, therefore, do not easily provide credit to them in order to avoid the risks (Ayalneh, 2018). Loan repayment problem is an unsolved issue faced by the majority of financial institutions that offer credit to them.

Even though, Small and medium enterprises (SMEs) borrow money to facilitate their businesses. However, they have challenges to repay their loans. Loan repayment problems have identified as a major obstacle to the growth of SMEs (Girma, 2018). Due to non-payment of loans on time,

SMEs are facing various problems. Their businesses are going bankrupt. They incur different costs. These costs are not only financial, but include social and emotional costs of the borrower even the country. Such defaults also will have implications for financial institutions, which may struggle efficiently allocate financial resources if the borrowers do not repay their loans. Unpaid loans can thus hinder the growth of SMEs and affecting the country's economic growth.

In a recent study conducted in Bangladesh by Khan and Riath (2021) on women-owned SMEs, several factors were identified that influenced loan repayment behavior, including the borrower's age, educational level, business experience, loan amount, loan term, and interest rate. Access to credit and support from family members were also found to positively influence loan repayment behavior. Several factors found to influence loan repayment behavior, such as the borrower's age, marital status, business location, high-interest rates, loan size, repayment period, loan appraisal, insufficient control, credit history, collateral, cash flow, industry sector, and loan officer relationship and client selection, according to various studies (Salifu et al., 2018; Girma, 2018; Roslan & Karim, 2009; Khan & Riath, 2021; Adegbite & Ayoola, 2019).

Different studies have examined the factors influencing loan repayment, and their findings vary among researchers. For instance, Bhatta and Tang (as cited in Girma, 2018) found that borrower gender has a significant impact on the repayment rate, with women being more likely to repay loans than men borrowers. Conversely, Abdulahi, Charkos, and Haji (2022) found that male clients are more likely to have better loan repayment capacity than female clients. Other studies suggest that male borrowers, older borrowers, and borrowers with higher levels of education and business experience are more likely to repay their loans (Tesfahun et al., 2016; Girma, 2018). However, borrower education, age, and gender do not significantly affect loan default, according to Yeboah and Oduro (2018).

Moreover, Salifu et al. (2018) showed that the age of the owner, the size of the loan, the interest rate, and the collateral provided were significant factors that affect the loan repayment performance of SMEs. Specifically, Younger owners and those with smaller loans were found to have a higher likelihood of defaulting on their loans, while larger loans were found to have a positive influence on loan repayment performance (Roslan & Karim, as cited in Salifu et al., 2018). Roslan & Karim (2009) argue that larger loans provide more resources for investment, which can increase borrowers' income and enable them to repay the loan. Girma (2018) found

that older borrowers, borrowers with higher education levels, and those with more business experience were more likely to repay loans. However, Abdulahi et al. (2022) found that clients who receive larger loans and have longer loan repayment periods are more likely to have lower loan repayment capacity, as they may have difficulty repaying the loans due to higher monthly payments. A larger loan size and higher interest rate lead to a lower probability of loan repayment performance, while access to market information positively affects loan repayment performance (Adugna, 2022).

According to Khan and Riath (2021) Inadequate loan sizes, and poor business practices negatively affect the loan repayment performance of SMEs. The size of the loan and repayment period have a negative effect on loan repayment behavior, while the interest rate has no significant effect on repayment behavior, according to their study. However, Girma (2018) found that the size of the loan had a negative effect on loan repayment, and interest rate had a negative effect on loan repayment, contradicting Khan and Riath (2021).

Small and medium enterprises (SMEs) face numerous challenges when it comes to loan repayment. However, the existing research on this topic has yielded inconsistent results, indicating a need for further investigation. Therefore, the purpose of this study is to investigate the factors that influence the loan repayment behavior of SMEs, with a specific focus on borrower and loan characteristics. As stated the above previous research has shown that borrower characteristics as well as loan characteristics can significantly affect loan repayment behavior (Khan & Riath, 2021; Tijani et al., 2020). Therefore, this study concentrate on a limited number of borrower characteristics such as gender, age, business experience, and knowledge of SMEs owners, in addition loan characteristics, such as interest rate, loan size, and loan repayment period that are most likely to have a significant impact on loan repayment behavior among SMEs. By doing so, the study aims to provide detailed insights into the relationship between borrower and loan characteristics and loan repayment behavior on SMEs. Additionally, existing literature on the factor that challenge loan repayment by SMEs focused on financial sectors side other than SMEs.

1.3 Research Objectives

1.3.1 General Objective

The general objective of the study is to examine the determinants of loan repayment performance of small and medium sized enterprise in Addis Ketema sub-city.

1.3.2 Specific Objectives

The Specific objectives of this research mentioned below:

1. To identify the factors that influence SMEs on loan repayment.

2. To assess the effects of borrower characteristics, such as gender, age, business experience, and knowledge of borrowers on loan repayment by SMEs in Addis Ketema Sub-city.

3. To assess the effects of loan characteristics, such as interest rate, loan size, and loan repayment period on loan repayment by SMEs in Addis Ketema Sub-city.

1.4 Hypothesis

To examine the determinants of loan repayment performance of SMEs in Ethiopia, Addis Ketema sub-city, this study developed hypothesis. Therefore, the following hypothesis formulated for the study.

H1: There is a statistically significant relationship between being a female borrower and loan repayment performance of SMEs.

H2: There is a statistically significant relationship between age of the borrower and loan repayment performance of SMEs.

H3: There is a statistically significant relationship between levels of education of the borrower and the loan repayment performance of SMEs.

H4: There is a statistically significant relationship between borrower business experiences and loan repayment performance of SMEs.

H5: There is a statistically significant relationship between interest rates and loan repayment performance of SMEs.

H6: There is a statistically significant relationship between loan size and loan repayment performance of SMEs.

H7: There is a statistically significant relationship between loan repayment period and loan repayment performance of SMEs.

1.5 Significance of the Study

This study contributes to a better understanding onto the factors that challenge of loan repayment by SMEs, and provide valuable insights into the impact of the borrower's characteristics and loan characteristics on loan repayment. Therefore, SMEs benefit from the findings by knowing the factors that influence their ability to repay loans.

In addition, the findings of this study provide information for government officials and policy makers to formulate policies and strategies aimed at promoting the growth and sustainability of SMEs. For financial institutions, the study provide a better understanding of the factors that influence SMEs' loan repayment behavior and help them to design appropriate loan products that considering these factors.

1.6 Scope of the Study

The scope of this study dealt with factors that determined the loan repayment performance of small and medium size enterprises operating in Addis Ababa, in Addis Ketema Sub-city. Therefore, the study focused only on Addis Ababa specifically in Addis Ketema. Even though there are different types of business classifications, based on their size, the focus of this study was on small and medium-sized enterprises. The primary data for this study has been obtained from the "Administration Work Enterprise and Industry Development Office" in the Addis Ketema Sub-city, specifically from the year 2023. This study encompasses an in-depth investigation into the determinants of loan repayment performance within the SMEs sector. The research aims to identify the factors that impact the ability of SMEs in the Addis Ketema Sub-city to repay their loans effectively.

1.7 Limitation of the Study

The research focused solely on the problem of loan repayment performance that SMEs faced. There may have been other problems that SMEs faced that were not addressed in this study. The literature suggests that loan repayment performance of small and medium-sized enterprises (SMEs) is influenced by various factors. However, this study only examined the impact of personal characteristics of borrowers and loan characteristics on loan repayment performance. Although there may be other factors affecting loan repayment behavior of SMEs, this study was limited by its focus on only a few factors. The study was limited by a small sample size that did not represent the entire population. These limitations underscore the need for future research to address these gaps and provide a more comprehensive understanding of the challenges faced by SMEs when it comes to loan repayment.

1.8 Organization of the Study Thesis

The study organized into five chapters. The first chapter introduces the study, which includes the background, statement of the problem, objectives, significance, scope, and limitations of the study. Chapter two consists of a review of relevant literature, which includes empirical review on loan repayment behavior and the factors that influence on it. The third chapter describes the research methodology, including the study design, population, sample, data collection, and analysis methods. Chapter four presents the findings of the study and provides presentation and an analysis of the data. The final chapter concludes the thesis by summarizing the main findings of the study and providing recommendations.

CHAPTER TWO: LITERATURE REVIEW

2. Introduction

Small and Medium Enterprises (SMEs) play a crucial role in the development of many economies. One of the most important factors that determine the success of SMEs is access to finance. However, obtaining finance is not the end of the story. Repaying the loan is equally important for the sustainability and growth of SMEs. Thus, the repayment behavior of SMEs is an important factor that affects their survival and growth. This literature review aims to explore the theoretical foundations and empirical review regarding the effects of borrower characteristics and loan characteristics on loan repayment of SMEs.

This chapter covers the literature related to this study. It reviews both theoretical and empirical literature. The chapter is divided into four sections. Section one presents definition of the concepts. Section two reviews theoretical literature by providing description on theories concerning loan repayment of SMEs. Section three reviews empirical literature and research gap finally, section four presents the conceptual framework for the study.

2.1 Definition of the Concepts

2.1.1 Small and Medium Enterprises (SMEs)

Small- and medium-sized enterprises (SMEs) are considered as the engine of economic growth in both developed and developing countries. They play an important role in economic development of the countries via employment generation. According to International Trade Centre [ITC] (2019) outlook, SMEs employ about 60%-70% of the workforce in many countries. Micro, small and medium-sized enterprises (MSMEs) are a major source of growth, innovation and jobs and their potential impact on achieving many of the sustainable development goals is much greater than their size (ITC, 2019).

Different countries use different criteria to define micro, small, and medium-sized enterprises. The categorization of SMEs depends on the total assets, the level of turnover and the number of employees have the firm. According to Joshua (2017), the Bolton Committee using both a statistical and an economic model defined SMEs. The economic definition of SMEs, as

explained by Joshua, includes the following characteristics: a relatively small market, personal management by owners or part owners, and independence from larger enterprises. On the other hand, the statistical definition presented by the Bolton Committee focuses on the small firm sector's size and its contributions to GDP, employment, and exports, as well as changes in these economic contributions over time and in various countries (Joshua, 2017, p.8).

According to the Ethiopian Ministry of Trade and Industry (MoTI), SMEs are defined based on the number of employees and capital invested (Hagos, 2012). Micro enterprises, the smallest category of SMEs, are businesses with a total capital investment not exceeding Birr 20,000, which excludes those with high technical consultancy and other high-tech establishments. Small enterprises are those with a total investment between Birr 20,000 and Birr 500,000, which do not include enterprises with advanced technology and high technical consultancy. Finally, medium enterprises are businesses with a total investment between Birr 500,000 and Birr 1million, including those with high technical consultancy and excluding other high-tech establishments.

2.1.2 Loan Repayment

Loan repayment can be defined as having repaid of 100% principal + loan interest. In other word, a loan is the money someone or legal entity receive from a bank or financial institution in exchange for a commitment to pay the principal amount with interest. In other hand, loan repayment is the act of paying back the borrowed money to the lender. It is the distinctive way of paying off the debt balance on a loan over a period of time with interest. Megersa (2022) explained that the term of loan repayment refers to an arrangement in which a lender gives money to borrower and the borrower agrees to return or repay the money, usually along with interest, at some future (s) in time. Usually, there is a predetermined time for repaying a loan and generally, the lender has to bear the risk that the borrower may not repay a loan (Megersa, 2022).

Borrower must pay the borrowed money upon the agreed time frame. The loan can be repaid in two different ways, as follows: in the case of equal monthly loan installments with monthly interest payments, or a single payment at maturity with interest repayable. As Khan & Riath (2021) said that after the loan has been disbursed, the borrower is usually required to pay back the loan in monthly installments or with one payment at maturity. But, according to various

researchers, loan repayment performances of the SMEs can be influenced by a number of factors identified as borrower's characteristics, loan characteristic and lender's lending characteristics.

2.1.3 Borrower Characteristics

Several borrower characteristics identified as predictors of loan repayment behavior among SMEs. According to Salifu et al. (2018) gender, age, education level, and business experience are some of the borrower characteristics that have been identified in they study. One of the borrower characteristics identified by the studies is gender of the borrower, For instance, female borrowers have been found to have a higher probability of loan repayment than male borrowers (Abor & Quartey, 2010).The reason for this could be that female borrowers tend to have higher levels of risk aversion and a stronger commitment to social responsibility. Another borrower characteristic that has been studied is age. Older borrowers are believed to be more likely to repay their loans on time due to their more stable financial situations (Girma, 2018). Additionally, they may have more experience in managing their finances and running a business.

Education level is also believed to be a predictor of loan repayment behavior, as borrowers with higher education levels are more likely to have better financial management skills. Therefore, more likely to repay their loans on time. (Amadasun & Mutezo, 2022). Business experience is another borrower characteristic that has been studied. Borrowers with more business experience are believed to have a better understanding of business operations and are more likely to generate profits, which can be used to repay loans (Girma, 2018).

Further, Khan & Riath (2021) stated that borrower's marital status, profit margin, business location, household size, moral hazard, sort of business, and economic stability can all have an impact on their behavior. In most situations, these parameters are used by financial institutions to decide the amount of loan that will be disbursed to the borrower.

2.1.4 Loan Characteristics

Loan is defined as a type of debt and like all debt instruments which entails the redistribution of financial assets over time between the lender and the borrower. It is also typically, the money which is expected to be paid back in regular instalments or partial repayments periodically that each instalment being of the same amount.

Apart from borrower characteristics, loan characteristics have also been identified as predictors of loan repayment behavior among SMEs. One of the loan characteristics is the interest rate. It is an important element in the demand and supply of loan and credit. Joshua defined that "The interest rate is the price paid on the funds borrowed for a given period of time, and the amount borrowed is the principal. The interest rate is usually expressed as a percentage of the principal or the remaining balance of the loan "(Joshua, 2017, p.81). According to Salifu et al. (2018) Higher interest rates are believed to increase the cost of borrowing and reduce the probability of loan repayment (Ayalneh, 2018). Additionally, high-interest rates may lead to a decrease in the demand for loans, leading to a reduction in business growth and development.

Another loan characteristic is the size of the loan. As Salifu et al. (2018) defined that "Loan size is the amount of loan approved by a financial institution for its borrower." The study showed that amount of loan obtained by SMEs was the major factors that significantly influenced loan repayment. Large loans are believed to increase the probability of loan default as they may impose a significant financial burden on borrowers (Abor & Quartey, 2010). Additionally, large loans may increase the risk of moral hazard, where borrowers may take unnecessary risks as they may feel that they have nothing to lose.

The repayment period of the loan is another loan characteristic that has been studied. Loan repayment period is the duration within which the loan is supposed to be paid off. It is the time that loan will last until it is fully paid off with regular payments. In other word, it is a period from the date of disbursement of loan to the last payment or closure of loan. The amount of money that must be paid every month, week or lump sum as per agreement made in order to satisfy the terms of the loan. Longer repayment periods are believed to increase the probability of loan default as they may lead to a lack of urgency in repaying the loan (Abor & Quartey, 2010). Additionally, longer repayment periods may lead to an increase in the cost of borrowing, as borrowers may have to pay more in interest.

2.2 Theoretical Literature Review

This section presents the theoretical foundations that support the study. This study focused on investigating the determinants of loan repayment performance in small and medium sized Enterprise. Understanding the determinants of loan repayment performance in SMEs is crucial

for ensuring the stability and growth of this sector. Below are some theories that used to support this study.

2.2.1 Human Capital Theory

Human capital theory underscores the role of education and skills in shaping economic behavior. In the context of SME loan repayment, borrowers with higher levels of education might exhibit better financial management skills. Becker (1964) argues that education contributes to an individual's overall productivity, which can positively impact their ability to manage business finances and meet loan repayment obligations.

2.2.2 Credit Default Theory

Credit Default Theory, often referred to as the default risk theory, suggests that the probability of loan default is a function of borrower-specific and macroeconomic factors. This theory suggests that SMEs loan repayment performance can be influenced by variables such as the financial health of the SME, the interest rate on the loan, the collateral provided, and the economic conditions prevailing during the loan term (Altman, 2005). Credit default theory is a branch of finance that studies the causes and consequences of borrowers failing to repay their loans. Credit default can have negative impacts on both lenders and borrowers, such as loss of income, reputation, collateral, and access to future credit (Nguyen and Canh 2021).

2.2.3 Gender Role Theory

Gender role theory focuses on the influence of gender-related factors on loan repayment performance. In SMEs, gender dynamics play a significant role, as both male and female entrepreneurs are involved in business activities. Gender role theory suggests that societal expectations, access to resources, and cultural factors can affect loan repayment behavior differently among male and female entrepreneurs (Coleman, 1999). Gender roles are the socially constructed roles, responsibilities, and expectations that are associated with being male or female in a given society or culture. Gender roles can influence various aspects of human life, such as education, occupation, income, family, health, and entrepreneurship (Cai et al. 2005).

According to gender role theory, female entrepreneurs may face more barriers and challenges than male entrepreneurs in obtaining external financing due to various factors, such as gender

stereotypes, discrimination, social norms, family responsibilities, or self-perceptions (Wang et al. 2022). On the other hand, female entrepreneurs may also have some advantages over male entrepreneurs in terms of their social capital, network ties, or willingness to cooperate with lenders (Cai et al. 2005).

2.2.4 Trade-off Theory

Trade-off Theory provides insights into the relationship between the capital structure of SMEs and their loan repayment performance. This theory suggests that SMEs make trade-offs between using equity and debt to finance their operations. The level of debt taken on by SMEs can influence their financial stability and, consequently, their ability to meet loan obligations. Trade-off Theory highlights the importance of finding the right balance between debt and equity to optimize loan repayment performance (Myers, 1984). The trade-off theory can help explain how small business owners decide whether to use external financing or not. Small businesses may face different trade-offs than large corporations due to their size, nature, and environment (Nguyen and Canh 20211). This theory suggests that small businesses' willingness to choose external financing may depend on their specific characteristics and circumstances.

2.2.5 Information Asymmetry Theory

Information asymmetry theory emphasizes the unequal distribution of information between lenders and borrowers. It is a framework that explains how different levels of information between two parties can affect their decisions and outcomes. In the context of SMEs, information asymmetry can arise due to the lack of transparency in financial reporting and the limited access to reliable financial data. This theory suggests that lenders' inability to accurately assess the creditworthiness of SMEs may lead to adverse selection and moral hazard problems, impacting loan repayment performance (Wang et al. 2022).

2.2.6 Financial Distress Theory

Financial distress theory underscores the correlation between financial difficulties and borrowing behavior. High interest rates can create financial stress for SMEs, potentially affecting loan repayment capacity. Recent research by Berger and Udell (2002) examines the impact of interest rates on small business credit availability and behavior, confirming the relevance of interest rates

in influencing loan repayment patterns. They found that when interest rates rise, small businesses are less likely to be able to obtain credit, and those that do obtain credit are more likely to have difficulty repaying their loans.

2.2.7 Economic Conditions and Macroeconomic Theories

Macroeconomic conditions significantly impact SME loan repayment performance. Downturns in the economy can lead to reduced business cash flows and higher default rates. The business cycle theories, such as the Keynesian and Monetarist perspectives, offer insights into how fluctuations in economic activity affect SME credit default (Keynes, 1936; Friedman, 1968).

2.3 Empirical Review

Small and medium-sized enterprises (SMEs) are vital for developing countries as they create jobs, support poverty reduction efforts, and contribute to GDP growth. However, loan repayment is a significant challenge that SMEs face, affecting their ability to access future financing. This empirical review aims to identify the factors that affect loan repayment performance of small and medium enterprises (SMEs).

Several researchers have explored the determinants of loan repayment performance in the context of different countries and financial institutions. Salifu et al. (2018) conducted a study titled "Determinants of loan repayment performance of small and medium enterprises (SMEs) in Ghana: The case of Asante Akyem Rural Bank" aimed to investigate the factors that affect the loan repayment performance of small and medium enterprises (SMEs) in Ghana, using the Asante Akyem Rural Bank as a case study. They found that factors such as business size, financial literacy, and collateral significantly impact loan repayment. Moreover, economic conditions and business management practices also play crucial roles. The results of the study showed that the age of the owner, the size of the loan, the interest rate, and the collateral provided were significant factors that affect the loan repayment performance of SMEs. Specifically, younger owners and those with smaller loans were found to have a higher likelihood of defaulting on their loans. In contrast, SMEs that provided collateral and faced lower interest rates were more likely to repay their loans on time. This study provides valuable insights into the specific characteristics of SMEs that impact their repayment performance within the Ghanaian context (Salifu et al., 2018).

Further, the study conducted by Yeboah and Oduro (2018) investigated the determinants of loan defaults in selected credit unions in Kumasi Metropolis of Ghana. The research utilized a mixed-method approach that involved both quantitative and qualitative data collection methods. The results of the study indicated that the loan repayment period, borrower's age, education level, and income level were significant determinants of loan defaults in the selected credit unions. Specifically, the findings revealed that longer loan repayment periods were associated with higher default rates. Borrowers who were younger, had lower levels of education, and lower incomes were also found to be more likely to default on their loans.

Moreover, the study, Yeboah and Oduro (2018) found that the loan appraisal process and the monitoring mechanisms employed by credit unions were inadequate in identifying high-risk borrowers. The authors recommended that credit unions should improve their loan appraisal process by conducting a comprehensive creditworthiness assessment of borrowers before approving loans. Additionally, the study suggested that credit unions should implement effective monitoring mechanisms, such as regular loan reviews and follow-ups with borrowers, to reduce default rates.

Khan and Riath (2021) conducted a review of empirical studies on microcredit and loan repayment behavior of women-owned SMEs in Bangladesh and identify the factors that influence their repayment behavior. Their analysis emphasized the significance of borrower characteristics, loan terms, and socio-economic factors in influencing loan repayment behavior. They found that borrower education, experience, and income level are pivotal in determining loan repayment performance. The study found that older borrowers and those with higher education levels and more business experience are more likely to repay their loans on time. The study also found that the size of the loan and the repayment period have a negative effect on loan repayment behavior, while the interest rate has no significant effect on repayment behavior. The study concludes that women-owned SMEs in Bangladesh have good loan repayment behavior, and several factors influence their repayment behavior. Their review underscores the need for tailored approaches that consider the unique attributes of SMEs when designing credit programs (Khan & Riath, 2021).

Girma (2018) examined the determinants of loan repayment of microfinance institutions (MFIs) in Gedeo Zone, SNNPRS, Ethiopia. The study utilized a cross-sectional survey design and

collected data from loan borrowers of MFIs. The study used both descriptive and inferential statistics to analyze the data. The research identified loan size, interest rate, and savings history as important determinants of loan repayment performance. Moreover, borrower training and financial literacy were found to positively impact repayment behavior among microfinance clients. The study found that male borrowers were more likely to repay loans compared to female borrowers. Similarly, older borrowers, borrowers with higher education levels, and those with more business experience were more likely to repay loans. Furthermore, the study found that the size of the loan and interest rate had a negative effect on loan repayment. This study revealed that factors such as borrower education, loan purpose, and family size exerted substantial influence on repayment behavior (Girma, 2018).

Similarly, Tesfahun et al. (2016) investigated the repayment performance of small-scale enterprises financed by microfinance institutions in Wolaita and Dawuro Zone, Ethiopia. The study employed a quantitative research method, and data were collected through a structured questionnaire. The study used a cross-sectional design, and the sample size was 384 private borrowers from microfinance institutions in the study area. The data were analyzed using descriptive statistics, correlation analysis, and multiple linear regression analysis. The research revealed that borrower gender, age, education, training, business experience and loan size significantly impact repayment behavior. Additionally, loan utilization and business performance were identified as critical factors. Specifically, male borrowers, older borrowers, and borrowers with higher levels of education and business experience were more likely to repay their loans. On the other hand, larger loan sizes and longer repayment periods were negatively associated with loan repayment performance. Their findings emphasized the importance of collateral, loan size, and interest rates in shaping repayment outcomes (Tesfahun et al., 2016).

Roslan & Karim (2009) studied microcredit repayment determinants in Malaysia's Agrobank. The study highlighted that borrower characteristics, loan terms, and socioeconomic factors significantly influence microcredit repayment. It also revealed that group lending mechanisms can positively impact repayment behavior. These findings suggest that a combination of borrower-specific and structural factors contribute to microcredit repayment success. The study highlighted borrower income stability, loan size, and interest rates as significant determinants of loan repayment performance. The findings underscored the importance of aligning loan terms

with borrower income streams. In addition Alemu's (2018) study in Ethiopia examined the loan repayment performance of micro and small-scale enterprises. The research emphasized the importance of borrower education, business profitability, and loan size in determining loan repayment behavior. Additionally, the study highlighted the role of borrower characteristics and loan terms.

Gender dynamics also play a role in loan repayment performance. Santandreu et al. (2020) conducted a study in the USA and examined repayment behavior based on gender. . Their research emphasized that repayment behavior varies between male and female microcredit clients. The study found that women's repayment behavior is influenced by factors such as marital status, household size, and business sector. They found that the perceptions of microcredit managers regarding factors like borrower commitment and business profitability varied between male and female clients, affecting their repayment performance differently (Santandreu et al., 2020).

Local economic conditions and regulatory environments are additional determinants influencing loan repayment. Kiros (2022) explored loan repayment performance in the Somali Regional State of Ethiopia and identified factors such as loan terms, interest rates, and business experience as key predictors. This study sheds light on how regional disparities can impact the repayment behavior of SMEs (Kiros, 2022).

In conclusion, the reviewed empirical studies collectively underscore the multifaceted nature of determinants influencing loan repayment performance in Small and Medium-Sized Enterprises (SMEs). These determinants encompass factors related to borrower characteristics including socio-economic, business profitability, loan terms, collateral, financial literacy, institutional characteristics of the MFIs, borrower attitudes towards repayment and access to finance. Based on these findings, this study hypothesize that gender, age, education level, business experience have a positive effect on loan repayment performance of SMEs, whereas interest rate, loan size, and repayment period have a negative effect.

2.4 Research Gap

The existing empirical literature on the determinants of loan repayment performance in Small and Medium-Sized Enterprises (SMEs) has provided valuable insights but exhibits considerable

variations in findings among different studies. Some studies suggest that borrower characteristics, such as gender, age, and education level, significantly impact loan repayment, with conflicting results regarding the influence of these factors (Bhatta & Tang, as cited in Girma, 2018; Abdulahi, Charkos, & Haji, 2022; Tesfahun et al., 2016; Yeboah & Oduro, 2018). Additionally, the effects of loan characteristics, including size, interest rates, and repayment periods, on loan repayment behavior vary across studies, creating inconsistencies in findings (Salifu et al., 2018; Roslan & Karim, as cited in Salifu et al., 2018; Girma, 2018; Khan & Riath, 2021).

Furthermore, specific determinants like borrower characteristics (e.g., gender, age), education level, and business experience have not been broadly examined within the SMEs context (Santandreu et al., 2020; Khan & Riath, 2021; Tamirat Ertiro, 2019; Tesfahun Tegegn Sorsa et al., 2016). This research gap underscores the need for a further study that considers these determinants. Therefore, this research aims to address this gap by investigating the combined influence of factors such as gender, age, education level, business experience, interest rates, loan sizes, and repayment periods on SMEs' loan repayment performance, seeking to provide a more detailed understanding of the determinants influencing SMEs' commitment to loan repayment.

2.5 Conceptual Model

The conceptual model for the study is to identifying and analyzing factors that can influence the loan repayment performance of SMEs. This study adopt the conceptual framework as shown below in figure 1, which shows the conceptual framework of the relationship between the dependent variable loan repayment and the independent variables borrower and loan characteristics. Therefore, in this study adapt conceptual model from Girma (2018).

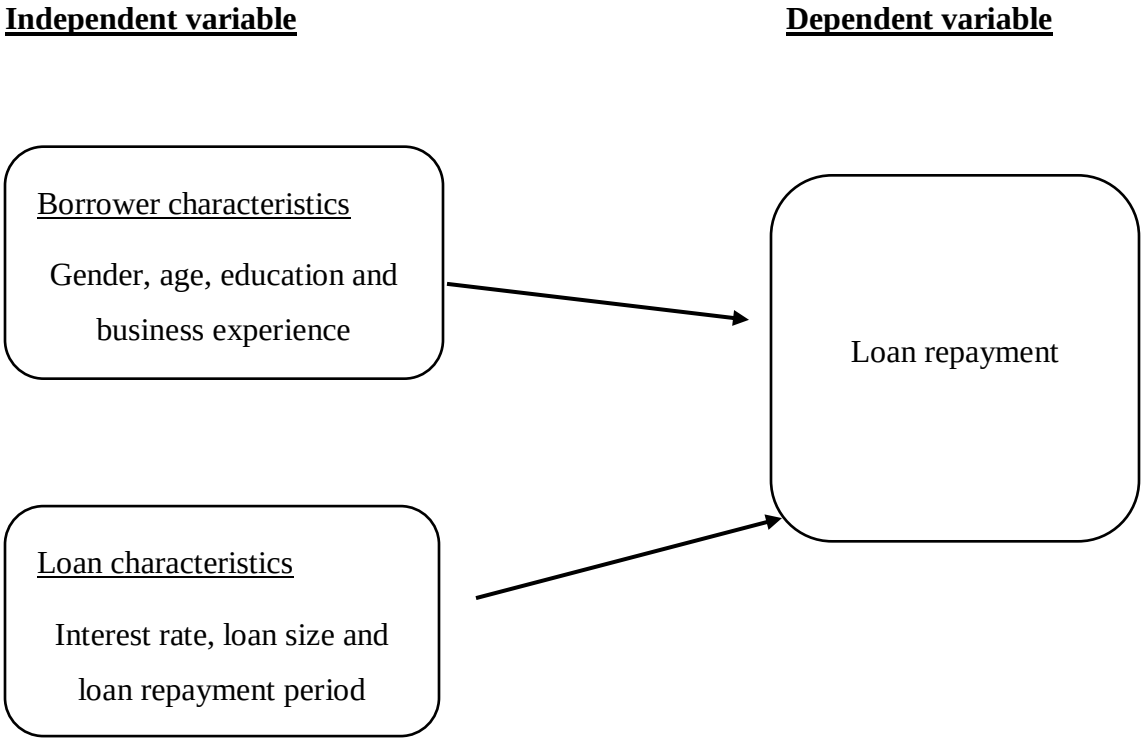

Figure 1: Conceptual Framework (Adapted from Girma, 2018)

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Research Design

The objective of this study is to examine the determinants of loan repayment performance of small and medium sized enterprise in Addis Ketema sub-city. A research design is a blueprint or plan for the procedures collection, analysis, interpretation, and reporting of data in research studies. In order to meet the objectives of the study, descriptive with inferential research design were employed to explain the effect of independent variables on dependent variable in the study area.

The descriptive research design used to employ the overall primary data collected from the respondents using questionnaires. Whereas inferential research design were employed to test hypotheses and draw conclusions based on data collected from a sample. According to Bhattacherjee (2012), inferential research design is a type of research design that aims to test a hypothesis or theory by using empirical evidence from a sample of a population.

3.2 Research Approach

According to Creswell (2009), there are three basic research approach: quantitative, qualitative and mixed approach. In order to achieve the objective of this study, quantitative research approach was employed. Creswell (2009) explained that quantitative research approach is used to test hypotheses or to measure the relationship between variables.

3.3 Data Type, Source of Data and Collection Methods

The study used quantitative data types. It used both primary and secondary data. For primary data collection, this study gathered information directly from SMEs owners operating in Addis Ketema Sub-city. The study administered structured questionnaires to collect primary data. The questionnaire consisted of two sections. Section one focused on capturing personal details of the respondents, while Section two contained questions relevant to the study. The study gathered primary data by distributing questionnaires to SMEs owners in Addis Ketema Sub-city.

Secondary data, as opposed to primary data, are those collected by entities other than the researcher themselves. In this study, secondary sources were contributory in providing a broader

context and supporting the findings. Thus, the secondary data used in this research were gathered from diverse sources, including Addis Ketema Sub-city Administration Work Enterprise and Industry Development Office records (2023), books, research journals, articles, and online repositories.

To assess the determinants of loan repayment performance among SMEs, this study considered several variables. The dependent variable was the loan repayment performance while the independent variables were borrower's characteristics (gender, age, education and business experience) and loan characteristics (interest rate, loan size and loan repayment period).

3.4 Population of the Study

According to Sekaran and Bougie (2016), the population refers to the entire group of people, events, or things of interest that the researcher wishes to investigate and make inferences for a research. The study was carried out on the determinants of loan repayment performance of SMEs in Addis Ketema sub-city. Therefore, the target population of this study was small and medium size enterprises owners operating in Addis Ketema sub-city.

The population size data was obtained from the Addis Ketema Sub-city "Administration Work Enterprise and Industry Development Office" (2023). According to their records, there were 726 small and medium enterprises in the area. Those were classified into five categories namely manufacturing, construction, urban agriculture, service, and trade (Tamirat, 2019). The targeted population of this study consisted of all this five sectors of SMEs, which were available in Addis Ketema Sub-city, Addis Ababa.

Type of Enterprise	Total Number of Enterprises
Small and Medium size	726

Table 1: Total number of SMEs in Addis Ketema Sub-city.

(Data Source: Addis Ketema sub city Administration Work Enterprise & Industry Development office Feb, 2023)

3.5. Sampling

3.5.1. Sample Size

The purpose of this study was to investigate the determinants of loan repayment performance in SMEs. To achieve this objective, the study required data from a sample of SMEs that have borrowed loans from financial institutions. However, Due to time and money constraint, it was difficult to collect data from all these SMEs. Therefore, the study determined the sample, which representative of the total population.

The sample of this research calculated by using Taro Yamane formula. Girma (2018) explained that, "Yamane provided a simplified formula to calculate sample sizes". It is a straightforward formula takes into account the size of the population, the desired level of precision, and the confidence level of the study.

To determine the required sample size at 95% of confidence level and level of precision (sample error/ allowable error) 5%.

The formula is as follows:

$$\boldsymbol{n = \frac{N}{1 + N(e)^2}}$$

Where :

n= is the required sample size

N = is the population size and

e = is sample error

Assuming a population size of 726 and a margin of error of 5% (0.05), to calculate the sample size by using the Taro Yamane formula:

$$\boldsymbol{n = \frac{726}{1 + 726(0.05)^2}}$$

From the total populations of 726 SMEs applying the above formula:

n = 726 / (1 + 1.8145)

n = 726 / 2.8145

n= 258 small and medium size enterprises

Thus, a sample size of 258 SMEs selected from the total population of 726 with 95% confidence level and 5% sample error.

3.5.2 Sampling Techniques

This study employed a multiple stage sampling technique. Firstly, purposive sampling techniques adopted in selecting an Addis Ketema sub city. This sub-city was chosen because it was known to have a large number of small and medium-sized enterprises (SMEs) compared to other sub-cities in Addis Ababa (Tamirat, 2019). Additionally, the sub-city had been identified as a hub for business activities and had a reputation for being a source for entrepreneurship (Tamirat, 2019).

Lastly, the study employed simple random sampling techniques to carefully select the sample of SMEs owners who participated in this research. As a result, the respondents were chosen randomly from various SME sectors within Addis Ketema Sub-city, Addis Ababa.

3.6. Methods of Data Analysis

After the data collected from the respondents by using structured questionnaire was analyzed by applying econometric method and descriptive statistics. This study employed binary logistic regression model by using statistical package software SPSS (SPSS: Statistical Package for Social Sciences). To assess the influence of loan repayment of SMEs, the binary logistic regression model was used.

Binary logistic regression model is used to analyze the relation of each factor such as borrower characteristics and loan characteristics with loan repayment. Loan repayment was the dependent variable, whereas borrower’s characteristics and loan characteristics were independent variables.

Further, the analyzed data was presented in the form of table, and the presented data were also interpreted to provide detailed conclusions and recommendations regarding to the effect of independent variables on the dependent variables that influence the loan repayment performance of SMEs owner's.

3.7 Description of Variables

The aim of this study was to investigate the determinants of loan repayment performance in Small and Medium-Sized Enterprises (SMEs). Therefore, the study identified a total of eight variables including one dependent variable and seven independent variables to examine their relationships with the loan repayment performance, as potential independent variables.

3.7.1 Dependent Variable

The dependent variable in this study was the loan repayment performance of SMEs, which is a dichotomous or binary variable that indicates whether the borrowers repay their loans on time within the agreed time frame (coded as 1) or not (coded as 0).

3.7.2 Independent Variables

The independent variables are the factors that may affect the loan repayment performance of SMEs. This study identified several independent variables that have a statistically significant influence on loan repayment. These are categorized borrower factor (such as being a female borrower, age of the borrower, levels of education of the borrower and borrower business experiences) and loan factor (such as interest rates, loan size, and loan repayment period).

3.8 Model Specification

In this study, a binary logistic model used to analyze the impact of various factors on loan repayment behavior of SMEs. In this case, the model examine the impact of the borrower's gender, age, education level, business experience, loan interest rate, loan size, and loan repayment period on loan repayment behavior. The dependent variable in the model is binary, representing whether the borrower has defaulted on their loan or not. The independent variables are the borrower's gender, age, education level, business experience, loan interest rate, loan size, and loan repayment period.

The logistic regression model is represented as:

$$\text{logit}(Y) = \beta0 + \beta1X1 + \beta2X2 + \beta3X3 + \beta4X4 + \beta5X5 + \beta6X6 + \beta7X7$$

Where:

logit(Y) represents the natural logarithm of the odds of loan repayment (Y=1) relative to the odds of default (Y=0).

β0 is the intercept, indicating the log odds of loan repayment when all independent variables are zero.

β1, β2, β3, β4, β5, β6, and β7 are coefficients that measure the change in log odds of loan repayment associated with a one-unit increase in the respective independent variable, while keeping other variables constant.

The formulation of the model is as follows:

Loan Repayment = β0 + β1(Gender) + β2(Age) + β3(Education Level) + β4(Business Experience) + β5(Loan Interest Rate) + β6(Loan Size) + β7(Repayment Period)

Where:

β0 represents the constant term.

β1, β2, β3, and β4 denote the coefficients for gender, age, education level, and business experience, respectively. These coefficients measure the impact of each independent variable on loan repayment behavior.

β5, β6, and β7 are the coefficients for loan interest rate, loan size, and loan repayment period, respectively. They also represent the impact of each independent variable on loan repayment behavior.

In summary, this study employed a binary logistic regression model to analyze the influence of various factors, such as gender, age, education, business experience, loan attributes, and repayment period, on the loan repayment behavior of SMEs. The model estimates coefficients

and odds ratios to assess the significance and direction of these factors in relation to loan repayment performance.

3.9 Ethical Consideration

The following ethical consideration implemented throughout conducting the entire research in any interactions with the respondents and participants. All respondents of the research fully informed that their participation is solely on their willingness and they are volunteering to participate on their own. In addition, they will explicitly be informed, at the beginning, by the researcher that they can withdraw from participating in the research anytime if they do need to do so. Moreover, it will be ensured that all the respondents participated in the research with a fully informed consent & the researcher will provide sufficient information and assurance to allow participant on understanding the implication of the research to be conducted. Furthermore, it will be firmly established that the prepared questionnaires are free from the use of any offensive, discriminatory or some other unacceptable language and they are only focused on the research objective. Important aspects such as privacy and anonymity of the respondent will be properly keep.

Further, to acknowledgements of sources, the referencing system employed in this study was the American Psychological Association Publication Manual (APA). All cited sources were carefully referenced in accordance with the APA guidelines.

CHAPTER FOUR: DATA PRESENTATION AND ANALYSIS

4. Introduction

The aim of this study was to investigate the factors that affect loan repayment for small and medium-sized enterprises (SMEs) in Addis Ketema sub-city. The research objectives were used to present the research results in this section. Both descriptive and inferential statistical analyses were used, and numerical values were presented using tables to test assumptions. Primary data was collected through questionnaires from a sample of 200 SMEs in Addis Ketema sub-city, while secondary data was obtained from the document of Addis Ketema sub-city "Administration Work Enterprise and Industry Development Office" (2023).

4.1. Descriptive Statistics Analysis

This section provides descriptive statistics analysis including response rate and describes demographic characteristics of sampled respondents, followed by a concise summary and interpretation of the results. Subsequently, the statistical descriptions of the factors that influence the loan repayment performance of SME's based on the descriptive analysis were discussed.

4.2 Response Rate of Questionnaire

The study collected data from 200 small and medium-sized enterprises in the Addis Ketem sub-city using questionnaires, and obtained secondary data from existing documents at the sub-city's administration work enterprise and industry development office. Out of 258 questionnaires distributed to respondents, 200 were fully completed, resulting in a response rate of 77.5% that was believed adequate for the study. A response rate of 77.5% is higher than the average response rate for business surveys, which is typically around 60%. Therefore, the responses from these 200 participants analyzed for this study.

4.3 Background Information of Respondents

The research paper presented demographic data on gender and age. In the gender category, there were 162 males, accounting for 81.0% of the total sample, while females numbered 38, making up 19.0% of the sample, with a total sample size of 200 participants. As for age, the study classified participants into five groups. The largest age group was 26-35 years, comprising 82

individuals, or 41.0% of the sample. The 36-45 years age group had 65 participants (32.5%), the 18-25 years group had 21 participants (10.5%), the 46-55 years group had 31 participants (15.5%), and those over 55 years had only 1 participant (0.5%). The total sample size for the age variable also equaled 200 participants. Table 4.2 displayed gender and age distribution of the participants.

Gender	**Frequency**	**Percent**
Male	162	81
Female	38	19
Age	**Frequency**	**Percent**
18-25 yrs	21	10.5
26-35 yrs	82	41
36-45 yrs	65	32.5
46-55 yrs	31	15.5
Over 55 yrs	1	0.5
Total	**200**	**100**

Table 2: Demographic profile of Respondents

Gender and Loan Repayment are cross-tabulated in the below table. Out of 162 males, 76 failed to repay the loan within the specified period while 86 of them repaid the loan on time. Out of 38 females, 12 of them failed to repay the loan within the specified period while 26 of them repaid the loan on time. Overall, out of 200 respondents, 88 failed to repay the loan within the specified period while 112 of them repaid the loan on time.

Gender * Loan Repayment Cross tabulation				
		Loan Repayment		
		No	Yes	Total
Gender	Male	76	86	162
	Female	12	26	38
Total		88	112	200

Table 3: Gender and Loan Repayment

4.4 Descriptive Statistics about Loan and Borrower Characteristics

This research paper investigates the determinants of loan repayment performance in Small and Medium-Sized Enterprises (SMEs) by examining the influence of loan size. The questionnaire asked the respondents to indicate the extent to which loan size contributed to their inability to pay back the loan on a five-point Likert scale ranging from “No influence” to” Very strong influence". Here below the data is presented in two categories: high loan size and low loan size. For SMEs with high loan sizes, 31.5% of respondents reported a large influence on their loan repayment ability, while 18.5% cited a very strong influence. In contrast, 19.5% felt that loan size had no influence on their repayment ability. For SMEs with low loan sizes, 27.5% perceived no influence, and 25.5% reported a large influence on their repayment ability. These findings highlight the varying perceptions of loan size's impact on loan repayment ability among SMEs and suggest that it is a crucial factor to consider when studying loan repayment performance in this sector.

High Loan Size	**Frequency**	**Percent**
No influence	39	19.5
Minimal influence	25	12.5
Moderate influence	36	18.0
Large influence	63	31.5
Very strong influence	37	18.5
Low Loan Size	**Frequency**	**Percent**
No influence	55	27.5
Minimal influence	42	21.0
Moderate influence	26	13.0
Large influence	51	25.5
Very strong influence	26	13.0
Total	**200**	**100.0**

(Source: computed from the survey data, 2023)

Table 4: Descriptive statistics loan size influence on loan repayment

For the high interest rate, the majority of the respondents indicated a “Very strong influence " of influence on loan repayment ability (47.5%), whereas only 5.5% of respondents said that high interest rate had no influence on loan repayment.

High interest rate	Frequency	Percent
No influence	11	5.5
Minimal influence	16	8.0
Moderate influence	17	8.5
Large influence	61	30.5
Very strong influence	95	47.5
Total	200	100.0

(Source: computed from the survey data, 2023)

Table 5: Descriptive statistics high interest rate influence on loan repayment

The impact of the repayment period of the loan on loan repayment ability presented as follows in the frequency tables. For the short-term repayment period influence on their loan repayment ability, it was found that 29.5% of respondents indicated that short-term repayment period had a large influence on loan repayment of SMEs, whereas 13.5% said that short-term repayment period had no influence on their loan repayment ability.

For the long-term repayment period influence on their loan repayment ability, it was found that 39.5% of respondents indicated that long-term repayment period had no influence on loan repayment of SMEs, whereas only 2.5% of respondents agreed that long-term repayment period had a very strong influence on loan repayment.

Short-term Loan Repayment Period	Frequency	Percent
No influence	27	13.5
Minimal influence	9	4.5
Moderate influence	69	34.5
Large influence	59	29.5
Very strong influence	36	18.0
Total	200	100.0

(Source: computed from the survey data, 2023)

Table 6: Descriptive statistics short-term loan Influence on loan repayment

For the borrower characteristics, the older borrower age had the highest frequency of responses at a “No influence “29.0%”, followed by 25.5% respondents for “Moderate influence” on loan repayment of SME. Regarding education level, 47 respondents (23.5%) said that a low level of education had a Moderate influence on loan repayment of SMEs, followed by 42 respondents (21.0%) indicated that low level of education had strong influence on their loan repayment ability.

Finally, 79 respondents (39.5%) indicated that little business experience had a large influence on loan repayment of SMEs, followed by 57 respondents (28.5%) for little business experience had Very strong influence on their loan repayment ability.

4.5 Logistic Regression Analysis

The objective of this study was to determine the challenges of loan repayment faced by small and medium enterprises (SMEs). The data was analyzed using SPSS, and the output is presented below. The logistic regression model included seven independent variables, namely gender, loan size, business experience, level of education, borrower age, interest rate, and repayment period. The dependent variable was loan repayment status, which was dichotomous, with 1 indicating successful repayment and 0 indicating default.

4.5.1. Model Specification Tests

Logistic regression is the statistical technique used to predict the relationship between independent and dependent variable where the dependent variable is binary. Before extracting the factors of the exploratory variables, model test were conducted by testing various types of tests that the model needs in order to ensure that the variables comprising each factors are highly reliable and internally consistent. In this study, an attempt is made to test Multi-collinearity test, goodness of fit test and Hypothesis test the result of which are presented and discussed as follows.

4.5.2. Multicollinearity test

Multicollinearity is a common issue in statistical modeling that arises when two or more independent variables are highly correlated with each other. This can lead to unstable estimates and a decrease in the accuracy of the model. In logistic regression, multicollinearity is

particularly problematic, and it is important to identify and address it in order to produce reliable results. The SPSS output of collinearity statistics presented in table 7 below shows that the collinearity statistics for a model with loan repayment as the dependent variable and several independent variables: high loan size, low loan size, little business experience, older borrower age, high interest rate, long repayment period, low level of education, medium repayment period, and short repayment period.

The collinearity statistics include tolerance and variance inflation factor (VIF) for each independent variable. Tolerance measures the proportion of variance in an independent variable that is not accounted for by other independent variables. VIF is the reciprocal of tolerance and measures the extent to which an independent variable is linearly related to other independent variables. In general, a tolerance value less than 0.1 or a VIF value greater than 10 indicates high collinearity among independent variables.

In this model, As indicated table 7 below all the independent variables have tolerances greater than 0.1 and VIF values less than 10, indicating no high collinearity among the independent variables.

Coefficients[a]			
Model		Collinearity Statistics	
		Tolerance	VIF
1	Gender	.941	1.063
	High Loan Size Influence	.620	1.612
	Low Loan Size Influence	.615	1.625
	Short-Term Loan Influence	.616	1.623
	Medium-Term Loan Influence	.619	1.616
	Long-Term Loan Influence	.700	1.429
	Interest Rate Influence	.769	1.300
	Old Borrower Age Influence	.640	1.562
	Low Level of Education Influence	.641	1.560
	Little Business Experience Influence	.848	1.179
a. Dependent Variable: Loan Repayment			

Source: Own Survey, June, 2023, SPSS output

Table 7: Binary logistic regression: Collinearity Statistics

4.5.2.1. Omnibus Tests of the Model

The SPSS output of table 8 below shows that, the Omnibus Tests of Model Coefficients for a model with a dependent variable and multiple independent variables. The Omnibus Tests of Model Coefficients is a statistical test used to determine the overall significance of a model. It tests whether the model as a whole provides a better fit to the data than a null model, which assumes that all the independent variables are equal to zero.

In this model, the Chi-square value for the Omnibus Tests of Model Coefficients is 125.969, with 38 degrees of freedom. The significance level (Sig.) is 0.000, indicating that the model as a whole is significant at $p < 0.001$. This means that the model provides a significantly better fit to the data than the model.

Overall, these results suggest that the model is a good fit for the data and that the independent variables included in the model have a significant impact on the dependent variable.

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	125.969	38	.000
	Block	125.969	38	.000
	Model	125.969	38	.000

Source: Own Survey, June, 2023, SPSS output

Table 8 Binary logistic regression: Omnibus Tests of Model Coefficients

4.5.2.2. Goodness of Fit Test of the Model

The Model Summary provides information on the goodness of fit of the model, as well as the proportion of variance in the dependent variable explained by the independent variable. The binary logistic regression model summary of this study presented in table 9 below.

In this model, the -2 Log likelihood value for Step 1 is 148.403. The Cox & Snell R Square value is 0.467, and the Nagelkerke R Square value is 0.626. The Cox & Snell R Square and Nagelkerke R Square are measures of the proportion of variance in the dependent variable that is explained by the independent variable. The Nagelkerke R Square is a modified version of the Cox & Snell R Square that is scaled to range from 0 to 1.

Overall, the Model Summary suggests that the independent variable has a moderate to strong relationship with the dependent variable, as indicated by the Cox & Snell R Square and Nagelkerke R Square values.

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	148.403[a]	.467	.626
a. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found.			

Table 9: Binary logistic regression: Model Summary

4.5.2.3. Classification Table

The classification table provides information on the accuracy of the model in predicting the dependent variable based on the independent variables. In this model, the Classification Table shows the observed and predicted values for the dependent variable, along with the percentage of correct predictions. The model predicted two categories for the dependent variable, "No" and "Yes", with a cut value of 0.500. For the "No" category, the model correctly predicted 74 cases and incorrectly predicted 14 cases, resulting in a percentage correct of 84.1%. For the "Yes" category, the model correctly predicted 97 cases and incorrectly predicted 15 cases, resulting in a percentage correct of 86.6%. The overall percentage of correct predictions is 85.5%.

The Classification Table provides a useful tool for evaluating the accuracy of a logistic regression model in predicting the dependent variable. The percentage correct indicates the overall accuracy of the model, while the individual cell values provide information on the accuracy of the model in predicting each category of the dependent variable. Overall, these results suggest that the model has a high level of accuracy in predicting the dependent variable, as indicated by the high percentage of correct predictions for both categories.

Classification Table[a]					
			Predicted		
			Loan Repayment		Percentage Correct
	Observed		No	Yes	
Step 1	Loan Repayment	No	74	14	84.1
		Yes	15	97	86.6
	Overall Percentage				85.5
a. The cut value is .500					

Table 10: Binary logistic regression: Classification Table

4.6 Hypothesis Test

In the hypothesis testing framework, the binary logistic regression analysis was conducted to investigate the relationship between independent variables include gender, age, level of education, business experience, interest rate, loan size, and repayment period with the dependent variable the loan repayment of Small and Medium Enterprises (SMEs). Both the dependent and independent variables in the model were presented by using the statistical tools (See Appendix 3). Thus, the logistic regression model output of the variables included in this study was presented as follows.

Hypothesis	Independent Variable	B	S.E.	Wald	df	Sig.	Exp(B)
H1	Gender	1.298	0.683	3.606	1	0.058	3.661
H2	Age	8.79	1.154	2.586	4	0.067	6.398
H3	Education Level	-1.657	0.172	3.923	4	0.417	0.191
H4	Business Experience	2.03	2.123	2.874	4	0.579	7.616
H5	Interest Rate	-3.586	2.17	8.457	4	0.076	0.028
H6	Loan Size	-3.285	1.14	8.302	1	0.004	0.037
H7	Repayment Period	-4.141	1.397	8.785	1	0.003	0.016

Table 11: Summary of the logistic regression results

The first hypothesis (H1) stated that there is a statistically significant relationship between being a female borrower and loan repayment performance of SMEs. However, the logistic regression results indicated that gender was marginally significant (B=1.298, Wald=3.606, df=1, p=.058, Exp(B)=3.661), but the effect did not reach conventional significance ($p < 0.05$),. The results showed that gender was not a significant predictor of loan repayment performance. Therefore, H1, suggesting a significant gender effect, was not supported.

The second hypothesis (H2) stated that there is a statistically significant relationship between age of the borrower and loan repayment performance of SMEs. The logistic regression results found that older borrower age was a significant predictor (Wald = 8.790, df = 4, p = .067), However, the effect did not reach the conventional significance level ($p < .05$), suggesting that age not have a significant impact on loan repayment for SMEs. Therefore, H2 was not supported.

The third hypothesis (H3) stated that there is a statistically significant relationship between levels of education of the borrower and the loan repayment performance of SMEs. However, the logistic regression results did not show education level to be a significant predictor of loan repayment. Therefore, the hypothesis H3 was not supported by the data.

The fourth hypothesis (H4) stated that there is a statistically significant relationship between borrower business experiences and loan repayment performance of SMEs. However, the logistic regression results did not show business experience to be a significant predictor of loan repayment. So that the business experience of the owner did not have a significant effect on loan repayment. Therefore, the hypothesis H4 was not supported by the data.

The fifth hypothesis (H5) stated that there is a statistically significant relationship between interest rates and loan repayment performance of SMEs. The logistic regression results showed that high-interest rates were a marginally significant predictor of loan repayment ($\chi 2$=8.457, df=4, p=.076). The level of influence of the interest rate on loan repayment was moderate (Exp(B) = 0.028) with a coefficient estimate of -3.586 and a standard error of 2.170. This result indicates that a one-unit increase in the interest rate decreases the odds of loan repayment by a factor of 0.028. This suggests that SMEs received loans with higher interest rates were less likely to repay their loans successfully. Thus, the hypothesis H5 that the Interest rate of the loan has a statistically significant effect on loan repayment of SMEs supported.

The sixth hypothesis (H6) stated that there is a statistically significant relationship between loan size and loan repayment performance of SMEs. The logistic regression results showed that high loan size was a significant predictor of loan repayment (Wald = 16.044, df = 4, p = .003). This result suggests that borrowers who take out larger loans are less likely to repay them. The high loan size had a significant negative effect on loan repayment (B=-3.285, Wald=8.302, df=1, p=.004, Exp(B)=.037). The odds ratio for high loan size was 0.037, indicating that borrowers who received loans with high loan sizes were 0.037 times less likely to repay their loans than those who received loans with lower loan sizes. Similarly for others reference category of high loan size influence (B = -3.407, p = .005), and (B = -2.011, p = .049) were negatively associated with loan repayment. Therefore, the hypothesis H6 that the size of the loan has a statistically significant effect on loan repayment of SMEs supported.

The seventh hypothesis (H7) stated that there is a statistically significant relationship between loan repayment period and loan repayment performance of SMEs. The analysis found that the repayment period of the loan (H7) had a significant relationship with loan repayment (Wald = 18.735, df = 4, Sig. = 0.001). Specifically, borrowers influenced by short-term loans (reference category 4) were less likely to repay the loan. Therefore, H7, which suggested a statistically significant effect of the repayment period, was supported.

In summary, among the hypotheses tested, only H5, H6, and H7 were supported by the logistic regression results. These findings indicate that interest rates, loan size, and repayment period significantly influence loan repayment in Small and Medium Enterprises (SMEs). However, the other hypotheses related to gender, age, education level, and business experience were not supported by the data, suggesting that these factors may not play a significant role in loan repayment performance for SME owners.

4.7 Discussion

The study conducted a binary logistic regression analysis to examine the relationship between independent variables, including gender, age, level of education, business experience, interest rate, loan size, and repayment period, and dependent variables the loan repayment of Small and Medium Enterprises (SMEs). The study aimed to investigate the challenges that SMEs face while repaying their loans. The findings revealed that gender, age, level of education, and

business experience did not have a significant effect on the loan repayment of SMEs. On the other hand, repayment period, interest rate, and loan size were significant predictors of loan repayment.

This finding is consistent with the previous studies on determinants of loan repayment behavior of SMEs, such as Girma(2018) and Salifu et al. (2018), which found that factors such as loan size and interest rate significantly influence loan repayment behavior. The study conducted by Girma (2018) also found that loan size had a significant effect on loan repayment, which supports the finding of this study. In addition, Khan and Riath (2021) examined SMEs loan repayment behavior in Bangladesh and found that the interest rate was a significant predictor of loan repayment behavior. Similarly, Salifu et al. (2018) investigated the determinants of loan repayment performance of SMEs in Ghana and found that the size of the loan was a significant predictor of loan repayment behavior. These studies suggest that interest rates and loan sizes are critical factors affecting loan repayment behavior of SMEs.

Regarding the impact of gender, age, education level, and business experience on loan repayment of SMEs, this study is consistent with previous studies that have found mixed results. For example, Salifu et al. (2018) found that gender and age did not significantly influence loan repayment performance of SMEs, while Girma (2018) found that age had a significant effect on loan repayment behavior of SMEs. In addition, this study is consistent with the study conducted by Tesfahun et al. (2016), which found that no significant relationship between age and loan repayment performance.

However, the findings of this study differ from Khan and Riath's (2021) study on SMEs loan repayment behavior in Bangladesh, which found that gender is a significant factor affecting loan repayment behavior. However, this study is in line with the study conducted by Tesfahun et al. (2016), which found that gender was not a significant predictor of loan repayment performance of small-scale enterprises financed by microfinance institutions. Moreover, the findings of this study on education level and business experience are inconsistent with those of Girma (2018), who found that both education level and business experience significantly affected loan repayment behavior of SMEs. However, this finding is also consistent with Tesfahun et al. (2016), which also found that both education level and business experience did not have a significant relationship between the loan repayment performance.

Regarding the impact of loan repayment period on SMEs loan repayment, this study is consistent with those of Salifu et al. (2018), they found that loan repayment period was a significant determinant of loan repayment performance of SMEs. However, this study is inconsistence with Tesfahun et al. (2016), they found no significant relationship between repayment period and loan repayment performance.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides summary, conclusions and recommendations of the study on the determinants of loan repayment performance in Small and Medium-Sized Enterprises (SMEs) in Addis Ketema sub-city, Ethiopia. It also presents the limitations of the research and suggests for future research. The conclusions drawn in this study are based on the research objectives.

5.2 Summary

The study aimed to identify the determinants of loan repayment performance in Small and Medium-Sized Enterprises (SMEs) in Addis Ketema sub-city, Ethiopia. Data was collected from 200 SMEs through questionnaires, and secondary data was obtained from documents at the sub-city's administration work enterprise and industry development office. The response rate was 77.5%, which is higher than the average response rate for business surveys. The study used binary logistic regression analysis to test the impact of seven independent variables on the dependent variable, loan repayment status. The collinearity statistics showed that there was no high collinearity among the independent variables, and the Omnibus Tests of Model Coefficients indicated that the model as a whole is significant at $p < 0.001$. The Model Summary suggested that the independent variable had a moderate to strong relationship with the dependent variable. Overall, the study suggests that the independent variables included in the model have a significant impact on the loan repayment status of SMEs in Addis Ketema sub-city.

Particularly, the research identifies significant factors impacting loan repayment, highlighting the influence of gender, age, education level, business experience, interest rates, loan size, and repayment period. Surprisingly, gender, age, education, and business experience did not emerge as significant predictors, aligning with some prior research but contradicting others. In contrast, the study emphasizes the significance of repayment period, interest rates, and loan size, consistent with previous findings.

5.3 Conclusion

Based on the binary logistic regression analysis conducted on seven independent variables, it was found that the gender of the borrower, age of the borrower, level of education, and business experience did not have a significant effect on the loan repayment of Small and Medium Enterprises (SMEs). On the other hand, repayment period, interest rate, and loan size were found to be significant predictors of loan repayment status. Specifically, SMEs are less likely to repay their loans when they borrow short-term loan. SMEs with more business experience were more likely to repay their loans successfully, while those with higher interest rates and larger loan sizes were less likely to do so. Moreover, a longer repayment period had a positive effect on loan repayment of SMEs.

In conclusion, these findings have important implications for lenders and policymakers, as they suggest that SMEs with larger loans, shorter repayment periods, and higher interest rates may need additional support to ensure successful loan repayment. On the other hand, SMEs with more business experience and longer repayment periods may be more likely to repay their loans successfully.

5.4 Recommendation

Based on the findings of the study, it recommended that lenders should offer additional support to SMEs with larger loans, shorter repayment periods, and higher interest rates to ensure successful loan repayment. Further, the study recommends that small and medium enterprises should develop appropriate mechanisms to ensure that they repay their loans within the specified period to avoid affecting future access to finances from financial institutions.

Financial institutions should revise the terms and conditions attached to loans to reduce loan repayment problems associated with loan characteristics. Moreover, the government and financial institutions should develop effective policies regarding SMEs loans, as they are vital for economic growth and development of the country.

5.5 Limitations and Suggestions for Further Research

The study focused on determining the factors that influence loan repayment by small and medium enterprises in Addis Ketema sub-city, which limits the generalizability of its findings. Therefore, it is highly recommended that future studies investigate the determinants of loan repayment for SMEs in rural areas, as these enterprises operate under different circumstances compared to their urban counterparts.

Furthermore, the study's quantitative approach to data collection was challenging, as it was difficult to find entrepreneurs who would complete the questionnaires accurately, and the returned questionnaires were not within the specified time frame. Therefore, for future research, a qualitative approach should be considered to obtain a more in-depth understanding of the determinant factors affecting small and medium enterprises' loan repayment. Finally, the study's binary logistic regression analysis only considered a limited number of independent variables such as gender, loan size, business experience, borrower age, interest rate, repayment period, and level of education. Hence, future studies should consider more dependent and independent variables to enhance the conclusion of this study. Moreover, it is recommended that further research be conducted with a larger sample size to confirm these findings.

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APPENDICES

APPENDIX 1

Research Questionnaire

Addis Ababa University

College of Business and Economics

Department of Accounting and finance

Questionnaire for a Research On

Challenges of loan repayment on small and medium enterprises: The case of Addis Ketema sub-city.

Dear participants of the research:

I am a graduate student at Addis Ababa University, College of Business and Economics. Currently, I am undertaking a research on the Challenges of loan repayment on small and medium enterprises: The case of Addis Ketema sub-city. This questionnaire is part of the research project conducted for the fulfillment of the requirements of a degree of Master of Science in Accounting and Finance designed to collect information on your opinion regarding to loan repayment.

The research is only academic purpose and any information obtained will be kept confidentially. Your cooperation and support will be highly expected. Therefore, I kindly request you to answer the questions carefully and genuinely. Moreover, I sincerely acknowledge your participation in filling the Questionnaires and strongly believe that your responses are correct to the best of your knowledge. Lastly, If you have any doubt or question (s), please call to me +251 919191921.

Thank You for Participation!

Temesgen Wubetu

Please tick or fill for the following question

Section 1: Background Information

1. Gender: Male _____ Female _____

2. Age: 18-25 yrs._____26-35 yrs. _____36-45 yrs._____46-55 yrs._____ Over 55 yrs. _____

3. Your level of education: Illiterate ___ primary School _____ High School _____ Vocational Education _____Degree_____ Second Degree_____

Others _____

4. Marital status: Married _____ Unmarried _____ Divorced _____ Widowed _____

5. Indicate your business category:

Small enterprise: _____ Medium enterprise: _____

6. What type of business you do? Manufacturing _____Construction_____, urban agriculture_____ Service_____ Trade_____

7. How long have you been in business? "Please indicate the number of years you have been in business"

1 year or less _____

2-5 years_____

6-10 years _____

11-15 years _____

16 years or more_____

8. What is your position in your business? Please indicate your position in the business:

I am the business owner_____

I am employee_____

Section 2: Loan Repayment

1. Did you borrow money for your business from financial institution?

Yes _____ No_____

2. Do you have other sources of credit other than financial institution?

Yes _____ No_____

3. What is the repayment period of loan that you take from the financial institution?

Short loan term (up to 1 years) _____ medium loan term (between 1-5 years) _____ long loan term (between 5-10 years) _____

4. Did you repay the loan within the specified period?

Yes _____ No_____

5. Which of the following loan characteristics is most likely to have a negative impact on your ability to pay back your loan on time? Please select one option

High interest rate_____

Large loan amount_____

Small loan amount_____

Larger loan repayment period _____

Smaller loan repayment period_____

6. Among the following borrower characteristics, which one is having the greatest negative impact on your ability to repay the loan on time?

Low level of education _____

Limited business experience_____

Advanced age_____

7. Evaluate the extent to which following **loan characteristics** influence loan repayment by SMEs. "Please indicate the extent to which the following factors contributed to your inability to pay back the loan"

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

Loan characteristics	1	2	3	4	5
High loan size influence on loan repayment ability					
Low loan size influence on loan repayment ability					
Short-term loan repayment period (up to 1 year) influence on loan repayment ability					
Medium-term loan repayment period (between 1-5 years) influence on loan repayment ability					
Long-term loan repayment period (between 5-10 years) influence on loan repayment ability					
High Interest rate influence on loan repayment ability					

8. Evaluate the extent to which following **borrower characteristics** influence **loan repayment** by SMEs.

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

Age influence on loan repayment ability (Specifically, if the borrower is older, it may affect their loan repayment ability)	1	2	3	4	5
low Level of education influence on loan repayment ability					
little business experience influence on loan repayment ability					

Appendix 2

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የብድር ባህሪያት	ምንም ተፅዕኖ የለውም (1)	አነስተኛ ተፅዕኖ አለው (2)	መካከለኛ ተፅዕኖ አለው (3)	ትልቅ ተፅዕኖ አለው (4)	በጣም ታይለኛ ተፅዕኖ አለው (5)
የብድሩ መጠን ከፍተኛ መሆን የተበደሩትን ገንዘብ					

በወቅቱ እንዳይመልሱ ተፅዕኖ ያደርጋል					
የብድሩ መጠን አነስተኛ መሆን የተበደሩትን ገንዘብ በወቅቱ እንዳይመልሱ ተፅዕኖ ያደርጋል					
የብድሩ መክፈያ ጊዜው አጭር መሆኑ (እስከ 1 ዓመት) የተበደሩትን ገንዘብ በወቅቱ እንዳይመልሱ ተፅዕኖ ያደርጋል					
የብድሩ መክፈያ ጊዜው መካከለኛ መሆኑ (ከ1-5 ዓመታት መካከል) የተበደሩትን ገንዘብ በወቅቱ እንዳይመልሱ ተፅዕኖ ያደርጋል					
የብድር መክፈያ ጊዜው ረጅም መሆኑ (ከ5-10 ዓመታት መካከል) የተበደሩትን ገንዘብ በወቅቱ እንዳይመልሱ ተፅዕኖ ያደርጋል					

የወለድ መጠኑ ከፍተኛ መሆን የተበደሩትን ገንዘብ በወቅቱ እንዳይመልሱ ተፅዕኖ ያደርጋል					

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የተበዳሪ ባህሪያት	ምንም ተፅዕኖ የለውም (1)	አነስተኛ ተፅዕኖ አለው (2)	መካከለኛ ተፅዕኖ አለው (3)	ትልቅ ተፅዕኖ አለው (4)	በጣም ኃይለኛ ተፅዕኖ አለው (5)
የተበዳሪው በዕድሜ ትልቅ መሆን የተበደሩትን ገንዘብ በወቅቱ እንዳይመልሱ ተፅዕኖ ያደርጋል					
የተበዳሪው የትምህርት ደረጃ ዝቅተኛ መሆን					

የተበደሩትን ገንዘብ በወቅቱ እንዳይመልሱ ተፅዕኖ ያደርጋል					
የተበዳሪው የንግድ ልምድ አነስተኛ መሆን የተበደሩትን ገንዘብ በወቅቱ እንዳይመልሱ ተፅዕኖ ያደርጋል					

Appendix 3

Binary logistic regression: Variables in the Equation

Variables in the Equation									
								95% C.I.for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1[a]	Gender (1)	1.298	.683	3.606	1	.058	3.661	.959	13.975
	High loan size			16.044	4	.003			
	High loan size(1)	-3.285	1.140	8.302	1	.004	.037	.004	.350
	High loan size(2)	-.471	1.036	.207	1	.649	.624	.082	4.752
	High loan size(3)	-3.407	1.208	7.954	1	.005	.033	.003	.354
	High loan size(4)	-2.011	1.021	3.880	1	.049	.134	.018	.990
	Low loan size			7.671	4	.104			
	Low loan size(1)	.677	.850	.634	1	.426	1.968	.372	10.408
	Low loan size(2)	-1.709	1.183	2.086	1	.149	.181	.018	1.841
	Low loan size(3)	-1.189	1.044	1.299	1	.254	.304	.039	2.354
	Low loan size(4)	1.892	1.381	1.877	1	.171	6.633	.443	99.354
	Short term loan			18.735	4	.001			
	Short term loan (1)	-2.443	1.657	2.174	1	.140	.087	.003	2.235
	Short term loan (2)	.233	1.035	.051	1	.822	1.263	.166	9.606

	Short term loan (3)	-.724	1.197	.366	1	.545	.485	.046	5.067
	Short term loan (4)	-4.141	1.397	8.785	1	.003	.016	.001	.246
	Medium term loan			2.464	4	.651			
	Medium term loan (1)	1.404	.913	2.363	1	.124	4.070	.680	24.375
	Medium term loan (2)	.754	.908	.689	1	.407	2.125	.358	12.596
	Medium term loan (3)	.589	1.422	.172	1	.679	1.803	.111	29.262
	Medium term loan (4)	-14.860	22490.455	.000	1	.999	.000	.000	.
	Long term loan			5.918	4	.205			
	Long term loan (1)	.315	.746	.178	1	.673	1.370	.318	5.909
	Long term loan (2)	1.973	1.036	3.631	1	.057	7.195	.945	54.777
	Long term loan (3)	2.862	1.529	3.501	1	.061	17.489	.873	350.435
	Long term loan (4)	-2.132	2.612	.666	1	.414	.119	.001	19.831
	High interest rat			8.457	4	.076			
	High interest rat(1)	21.446	8327.597	.000	1	.998	2059200784.714	.000	.
	High interest rat(2)	-3.586	2.170	2.730	1	.098	.028	.000	1.950
	High interest rat(3)	.095	1.939	.002	1	.961	1.100	.025	49.156
	High interest rat(4)	-1.375	2.012	.467	1	.494	.253	.005	13.037
	Older borrower age			8.790	4	.067			
	Older borrower age(1)	1.104	.936	1.392	1	.238	3.016	.482	18.870
	Older borrower age(2)	.648	.988	.431	1	.512	1.912	.276	13.248
	Older borrower age(3)	-1.210	.980	1.526	1	.217	.298	.044	2.034
	Older borrower age(4)	1.856	1.154	2.586	1	.108	6.398	.666	61.428
	Low level education			3.923	4	.417			
	Low level education(1)	.122	.953	.016	1	.898	1.130	.174	7.320
	Low level education(2)	-.534	.986	.294	1	.588	.586	.085	4.049
	Low level education(3)	.345	.857	.161	1	.688	1.411	.263	7.575

	Low level education(4)	-1.657	1.213	1.866	1	.172	.191	.018	2.055
	Little business experience			2.874	4	.579			
	Little business experience(1)	2.030	2.123	.915	1	.339	7.616	.119	488.009
	Little business experience(2)	-.131	1.853	.005	1	.944	.877	.023	33.125
	Little business experience(3)	.590	1.866	.100	1	.752	1.805	.047	69.998
	Little business experience(4)	.861	1.878	.210	1	.647	2.366	.060	93.874
	Constant	1.909	1.795	1.131	1	.288	6.747		
a. Variable(s) entered on step 1: Gender , High loan size, Low loan size, Short term loan , Medium term loan , Long term loan , High interest rat, Older borrower age, Low level education, Little business experience.									