ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

DETERMINANTS OF LOAN REPAYMENTPERFORMANCE:

(A STUDY ON SELECTED REAL ESTATE COMPANIES IN ADDIS ABABA)

BY

MAREGUA SHIKUR

SGS/0106/2015A

ADVISOR: SIMON TAREKE (Ass.Professor)

A THESIS SUBMITTED TO S.T MARY'S UNIVERSITY, SCHOOL OF GRADUATE STUDIES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MBA IN ACCOUNTING AND FINANCE

July, 2024

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DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of SIMON TAREKE (Ass.Professor). All sources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

MAREGUA SHIKUR Signature _____ July. 2024

S.T MARY'S UNIVERSITY, Addis Ababa

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ENDORSEMENT

This thesis has been submitted to St. Mary's university, School of Graduate Studies for examination with my approval as a university advisor.

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July, 2024

ADDIS ABABA, ETHIOPIA

ACKNOWLEDGEMENTS

First, may all the honor and glory be extended to the exalted Heavenly God, for his help, guidance, and encouragement, which has enabled me to complete my work? Next, I would like to express my sincere gratitude to my advisor SIMON TAREKE (Ass.Professor)**.** For his support of my Masters research project, for his patience, kindness, encouragement, motivation, eagerness, and immense knowledge. His guidance helped me in all the time of conducting the research.

Secondly, I am very grateful to my husband, Mr. Kibru Dula and colleagues, especially for their support and encouragement.

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ACRONYMS

AM……..Accessibility of Market

ARM……..Availability of raw material

DRS……Debt rating scale

DBE……Development Bank of Ethiopia

EL……..Educational level

EDR……Equity debt ratio

IR……Interest rate

LD……..Loan diversion

LPT…….Loan processing time

MEPM…….Managerial experience of Project manager

NPF……..Number of Project Follow-up

OSI……Other source of income

PIP…….Project Implementation period

SLR……..Successful loan repayment

Abstract

This research examines determinants of loan repayment among selected real estate companies, focusing on institutional management, borrower-related, and external factors. Using a descriptive and explanatory research design, primary data was collected from 49 randomly selected companies through questionnaires. Analysis employed descriptive and inferential statistical techniques, including binary logistic regression. Results showed that experience, age, training, infrastructure, follow-up, supervision, and loan repayment period positively affected loan repayment, while enterprise member size, lack of record-keeping and inaccessible markets had negative impacts. Recommendations include improving female participation in management, providing capacity-building training, conducting continuous supervision, assessing borrowers' business experience before loan disbursement, promoting experience-sharing activities on marketing skills, emphasizing market access and linkages, maintaining daily activity records, and setting suitable repayment periods through stakeholder communication. These findings and recommendations aim to enhance loan repayment performance and overall business success for the selected real estate companies.

Key words: *Loan repayment, real estate companies, institutional management, borrower-related factors, external factors, descriptive research, explanatory research, questionnaires, binary logistic regression, experience, age, training, infrastructure, follow-up, supervision, repayment period, enterprise member size, record-keeping, market access, female participation, capacity-building, business experience, marketing skills, stakeholder communication, business success.*

Chapter one
Introduction

1.1 Introduction of the study

Debt repayment has been an important aspect of economic growth and lending for centuries. Over time, standard practices for managing debts have developed, focusing on factors like repayment terms, interest rates, collateral, rescheduling, and the consequences of default (Mascagni et al., 2016). With globalization, lending to developing countries from organizations like the IMF and the World Bank has increased, often with economic and policy conditions attached. Africa has over $700 billion in external debt stocks owed to foreign lenders and has struggled with repayment (Mascagni et al., 2016). The Heavily Indebted Poor Countries (HIPC) Initiative, launched in 1996, aimed to reduce debt burdens through coordinated relief, impacting 30 African nations (Mascagni et al., 2016).

According to Mascagni et al. (2016), debt relief has helped reduce pressure but may come with too many conditions and not provide enough relief. Domestic debt markets in Africa have also grown rapidly, with Ethiopia receiving HIPC debt relief in 2001 and 2004 to reduce owed amounts (Mascagni et al., 2016). As Mascagni et al. (2016) discuss, debt repayment is a major budget priority for the Ethiopian government amid economic growth goals and hopes of reaching middle-income status. Concerns exist over debt sustainability, including access to financing, government policies, economic growth, infrastructure development, loan terms, firm culture, and project costs. In conclusion, debt repayment is a critical issue for indebted African countries. Comprehensively addressing these concerns requires examining factors like financing access, government policies, economic growth, infrastructure development, loan terms, and firm culture (Mascagni et al., 2016).

The issue of debt sustainability remains a critical challenge for many African nations, including Ethiopia, despite debt relief initiatives like the Heavily Indebted Poor Countries (HIPC) program. As countries strive for economic growth and development, they face the complex task of managing their debt burdens while simultaneously investing in crucial areas such as infrastructure and social programs. This balancing act is particularly significant for Ethiopia as it aims to achieve middle-income status.

Effective debt management requires a comprehensive approach that considers multiple factors. These include access to financing, government policies, economic growth prospects, infrastructure needs, loan

terms, and institutional capacity. The interplay of these elements shapes a country's ability to service its debt obligations while pursuing its development goals.

The implications of debt sustainability extend far beyond financial considerations. It directly impacts a nation's economic trajectory and the well-being of its citizens. High debt levels can constrain government spending on essential services, limit private sector growth, and hinder overall economic progress.

In light of these challenges, a thorough examination of Ethiopia's specific debt situation is crucial. This analysis should encompass the current debt landscape, the unique challenges faced by the country, and potential solutions tailored to its context. By understanding these factors, policymakers and stakeholders can work towards developing strategies that promote sustainable debt management while supporting Ethiopia's aspirations for economic growth and improved living standards.

This study aims to contribute to this important discourse by providing an in-depth analysis of the determinants of loan repayment among selected real estate companies in Ethiopia. By focusing on institutional, borrower-related, and external factors, the research seeks to offer insights that can inform policy decisions and practices related to debt management in the country's real estate sector and potentially beyond

1.2 Statements of the problem

According to several studies, loan repayment performance in the real estate sector is influenced by three major factors - borrower characteristics (such as management capacity, credit history, financial strength), bank practices (lending policies, risk assessment, monitoring), and external variables (government regulations, economic conditions, market dynamics) (Ahmed & Ariff, 2007; Gine & Townsend, 2004).

However, despite the pivotal role of the real estate sector as a driver of economic growth in Ethiopia, there is a dearth of specific research focused on understanding the dynamics of loan repayment in this emerging and crucial sector. Most existing studies in the Ethiopian context have analyzed loan performance in the agriculture and microfinance domains (Bekele & Worku, 2008; Fikreselassie & Alhoco, 2012; Yesuf, 2008), leaving significant gaps in comprehending the current conditions, challenges, and underlying factors influencing loan repayment in the rapidly evolving urban real estate finance landscape.

The limited available evidence points to concerning trends. For instance, a study by Maria (2019) found that non-performing loans (NPLs) in the real estate sector increased alarmingly from 15% to 25% between 2015 and 2018, raising serious financial stability risks. Furthermore, there is a notable absence of analyses that specifically examine firm-level factors and sector-specific dynamics that influence real estate loan repayment performance in Ethiopia (Bezabeh & Nega, 2010; Zerayehu et al., 2013).

This research gap is particularly pressing as the Ethiopian government has launched various national policies and initiatives to promote expanded housing, infrastructure development, and improved access to credit (cite relevant development plans like the Growth and Transformation Plan, Housing Development Program, etc.). Urgent research is required to examine the channels and measures that can help minimize lending risks in the booming real estate sector, but such studies are still lacking.

Moreover, our understanding remains limited regarding (Ayalew et al., 2015), how specific constraints faced by the real estate industry, such as inadequate infrastructure, high land and labor costs, and supply-chain bottlenecks, contribute to loan repayment issues in the Ethiopian context (Lemi & Asefa, 2003).

This research addresses critical knowledge gaps in real estate loan repayment issues in Ethiopia, focusing on firm-level and sector-specific factors. The study's importance is highlighted by several key problems affecting the industry and broader economic landscape.

There is a limited understanding of localized factors, with insufficient insight into the specific challenges faced by real estate companies in Ethiopia, particularly in rapidly urbanizing areas like Addis Ababa. This is compounded by inadequate risk assessment frameworks, as current lending practices may not fully account for the unique risks associated with the Ethiopian real estate sector, potentially leading to loan repayment issues. The impact of underdeveloped infrastructure on real estate development and loan repayment capacity is also not well understood, creating additional challenges for the sector.

Regulatory gaps present another significant issue, as existing industry regulations may not adequately address the evolving needs of the real estate sector, potentially contributing to financial instability. This is closely tied to a lack of targeted policies, highlighting the need for evidence-based recommendations to guide policymakers in implementing effective reforms for the real estate finance sector.

The study also recognizes the broader economic implications of these challenges. Loan repayment problems in the real estate sector could hinder its potential contribution to Ethiopia's overall economic

growth and development goals. Additionally, as cities like Addis Ababa rapidly expand, there's a pressing need to understand how urbanization dynamics affect real estate financing and loan repayment.

By examining case evidence from builders and developers in Addis Ababa, this study seeks to generate practical insights to address these problems. The findings aim to inform targeted reforms in infrastructure development, lending risk assessment, underwriting policies, and industry regulations. Ultimately, this research strives to support the healthy expansion of real estate finance and enhance the sector's contribution to Ethiopia's economic growth.

1.3 Hypothesis test:

1. H1: Firm characteristics such as age, size, financial ratios, and management capability are significantly correlated with real estate companies' loan repayment performance.
2. H2: Loan features including amount, interest rate, tenor, and collateral have a significant impact on repayment rates among real estate firms.
3. H3: Cost factors, particularly land prices, construction material costs, and labor wages, significantly affect the loan repayment capabilities of real estate companies.
4. H4: Infrastructure constraints faced by real estate companies have a significant negative influence on their ability to repay loans on schedule.
5. H5: Government policies and economic conditions have a substantial impact on loan repayment performance in the real estate sector.

These hypotheses provide testable statements that can guide the research process, data collection, and analysis. They reflect the expected relationships between the variables mentioned in the research questions and loan repayment performance in the real estate sector. The study can then proceed to gather evidence to either support or reject these hypotheses, contributing to a better understanding of the factors influencing loan repayment in Ethiopia's real estate industry.

1.4 Objectives of the Study

1.4.1 General:

To examine the factors affecting business loan repayment performance among real estate companies in Addis Ababa.

1.4.2 Specific objectives

1. To assess the relationship between firm characteristics (age, size, financial ratios, management competence) and loan repayment rates

2. To evaluate the effect of loan features (amount, interest, tenor, and collateral) on real estate companies' repayment performance
3. To analyze the impact of cost factors (land, materials, and labor wages) on real estate firms' repayment capabilities
4. To determine how infrastructure constraints faced influence the repayment abilities of real estate companies
5. To examine the extent to which government policies and economic conditions affect repayment rates in the real estate industry

1.5 Significance of the Study

The study can show the bank's management and other interested parties the current status of the loan repayment performance of the borrowers and will help the bank enhance the efficiency and effectiveness of loan repayment for its borrowers. The research result will help to improve loan repayment in Addis Ababa and enhance the efficiency and effectiveness of the bank in lending loans by complying with credit policy, procedures, applicable laws, and NBE regulations. In addition, the study will provide input for other researchers who want to do further studies on this topic.

1.6. Scope and Limitations of the Study

This study examines factors affecting business loan repayment performance among real estate companies in Addis Ababa. The key independent variables analyzed include firm characteristics (age, size, financial ratios, management competence), loan features (amount, interest, tenure, collateral requirements), cost factors (land, construction materials, labor wages), infrastructure constraints (access to utilities, road networks), and economic conditions and government policies (interest rates, taxes, regulations).

The research is limited to real estate firms based in Addis Ababa due to time and resource constraints. While the real estate sector in other major cities is also facing loan repayment issues, this geographical scope was chosen given Addis Ababa’s position as a rapidly expanding urban center with a high concentration of real estate development.

The study relies heavily on primary data collected through surveys and interviews with managers and owners of real estate companies in the sample. Secondary data on firm finances and loan performance was difficult to obtain from banks and other sources.

The research does not cover real estate financing from specific banks like the Development Bank of Ethiopia but rather takes a sector-wide view across various lending institutions engaged with the real estate sector in Addis Ababa. The findings will provide generalizable insights into factors impacting repayment performance common across real estate firms in the city.

1.7. Organization of the paper

Including this introduction, the study has five chapters. The second chapter deals with different theoretical and empirical literature that was reviewed in relation to the topic under consideration. Chapter three deals with the methodology and research design, sample and sampling techniques, and data collection techniques of the undertaking study. The fourth chapter deals with the data presentation, analysis, and interpretation of the study. Finally, chapter five contains the summary, conclusion, and recommendations of the research study.

CHAPTER TWO

2. LITERATURE REVIEW

2.1 THEORETICAL LITERATURE REVIEW

The theoretical reviews on different literatures made on the same areas summarized by the reviewer (researcher).

2.1.1 Definition and Concepts of project

A project can be defined as a temporary endeavor undertaken to create a unique product, service, or result (PMI, 2017). Projects have defined start and end dates, and are conducted by people to meet specific goals and objectives within parameters of cost, time and quality.

Key Features of a Project

- Temporary - has a defined end date and scope that ends when objectives are reached
- Unique - involves creating a novel product, service, solution, or capability
- Progressive Elaboration - details emerge and become clearer over the course of the project
- Cross-Functional - involves coordination of people and inputs across departments
- Value Creation - undertaken to create value by addressing a need, solving a problem, or exploiting an opportunity

Project Management

Project management refers to the application of skills, tools, knowledge and techniques to execute projects effectively and efficiently. Key functions include planning, organizing, staffing, scheduling, controlling, allocating resources, managing stakeholders, and assessing risks.

Project Manager

The project manager leads the project team and is accountable for accomplishing the project objectives. Key responsibilities include planning, budgeting, overseeing quality, guiding the team, procuring resources, managing relationships, and administering contracts.

Project Success

Project success refers to the achievement of key project objectives as defined by performance metrics around scope, time, cost, quality, outcomes and satisfaction of participants. Success factors include

having clear goals, a realistic plan, adequate resources, engaged leadership and governance, controlled changes, effective communication and proactive risk management

2.1.2. Theory of project management

A theory consists primarily of concepts and causal relationships that relate these concepts. Whitten (1989). It is possible to broadly characterize a target theory of production and operations management (Koskela 2000).

This categorization also applies to project management, which is a special type of production and operations management. A theory of project management should be authoritarian; it should disclose how action contributes to the goals set for it. On the most general level, there are three possible actions: design of the systems employed in designing and making them; control of those systems in order to realize the production intended; and improvement of those systems. In fact, project management and all production have three kinds of goals. Firstly, the goal is to get the intended products produced in general. Secondly, there are internal goals, such as cost minimization and level of utilization. Thirdly, there are external goals related to the needs of the customer, like quality, dependability, and flexibility.

2.1.3. Experiential Learning Theory

Lending institutions can use training techniques to lower borrower loan default rates, claims Norel (2001). A culture of loan payback may be promoted by providing customers with pre-loan training and credit officers with financial incentives. The character of the learners and the intended behavior modification must be taken into account by trainers. It's helpful to use Kolb's experiential learning theory to motivate borrowers to make consistent commitments and repayments.

Kolb & Kolb (2008) assert that the experiential learning theory is applicable to all spheres of life, age groups, cultural contexts, and organizational types. According to Kolb and Kolb (2008), research on experiential learning has applied ELT (Experiential Learning Theory) to characterize the management process as a process of learning for people, groups, and organizations to recognize opportunities for entrepreneurship, solve problems, and formulate strategies. The foundation of ELT is the idea that learning is an all-encompassing process of adaptation. It should be understood to encompass not just the product of cognition but also the integrated functioning of the entire person, including the ability to think, feel, perceive, and act.

2.1.4. Significance of project financing / (Lending)

Project financing incorporates the use of deposit funds obtained from the surplus sector who place their more savings and investment funds with the Banks, to grant credit and advances to the accepted borrower by the institution, who need such funds in the meanwhile to accomplish production, commercial activities, property development and other business activities capable of generating additional income to repay the loan and leave a profit for the investor (Alawiye-Adams, 1995).

From the foregoing, it is obvious that lending is the origin of the intermediary function for which Bankers are known to align all other Banking activities worldwide (Osayameh, 1986). Therefore, whatever other business the Bank does, the lending activities of a Bank constitute a dominant part and absorb a larger proportion of the funds available to a Bank for business activities. It is also a fact that a larger proportion of the Bank's income is derived from lending while the credit figure constitutes the largest proportion of the figure of assets in a Bank's balance sheet. It is known universally that while project financing generates the largest portion of Bank income and wealth creation, it is also capable of eroding and wiping off within a short period of time the fortune and wealth acquired by a Bank over a long period of time if the lending function of the Bank is not efficiently and professionally managed (Alawiye-Adams, 2005). The strategies of well-organized and qualified management of the project financing function preserve the Bank's investment and the confidence of the public in the Banking system.

2.1.5. The Nature and Role of Credit Market

In order to initiate and carry out productive activity, finance is essential. Obtaining investment assets and/or raw materials, developing marketing channels, and effectively organizing production all depend on having enough money. Credit is a tool used to help people or organizations transfer their purchasing power to one another.

Through the specialization of functions, Oyatoya (1983) credit provides the foundation for greater production efficiency, uniting in a more productive union the skilled labor force with little financial means and those with considerable resources but lacking in entrepreneurial aptitude.

Economists have long been interested in the connection between credit and economic growth (Schumpeter, 1933). The quantity of funds that are redirected by the financial system into unproductive purposes fails due to improved financial intermediation, and the rate of capital accumulation rises for a fixed saving rate (Mensah, 1999). Expounds on the importance of financial intermediation and enhances

the mobilization of savings while offering a range of secure financial products to savers and guaranteeing significant returns on investments. The financial industry helps the economy as a whole run more smoothly by dispersing knowledge to investors regarding expectations and resource distribution.

According to Mensah (1999), effective credit management has a significant impact on the success or failure of financial institutions; hence it is imperative that special attention be paid to this process. Knowing how a bank manages its credit risk gives one an indication of the caliber of the bank's loan portfolio. Well-developed credit policies and processes, robust portfolio management, efficient credit controls, and—above all—a team with the necessary training and qualifications to administer the system are the key components of an efficient credit management system. For such institutions to continue operating efficiently and provide loans to investors, they must maintain fundamental credit criteria.

The requirements include the officer in charge having a thorough understanding of the borrower's project; a fair debt-to-equity ratio; marketability; the investment project's feasibility; and other technical skills. Generally speaking, credit evaluation is essential to the officer's decision regarding the borrower's and the project's creditworthiness.

2.1.6 Concept of Credit

Credit is defined as the power or ability to obtain goods and services in exchange for a promise to pay for them later (Beckman and Foster, 1969). In a similar manner, credit is the power or ability to obtain money through the borrowing process in return for the promise to repay the obligation in the future. Credit is necessary in a dynamic economy because of the time lapse between the production of goods and their ultimate sale and consumption. The risk of extending credit is the probability that future payments by the borrower will not be made. Futurity is thus a basic characteristic of credit, and risk is necessarily associated with the time element.

Non-defaulters are credit-worthy borrowers who settled the debt amount on the due date signed on the contract. This implies that the clients are committed to the agreements made with the lending institution. Defaulters are non-credit-worthy borrowers who breach their loan contract and have repayment problems on the due date (Hunte, 1996).

Schumpeter (2013) treated the banking system and entrepreneurship as the two key enabling agents of development. Schumpeter argues that the banking system's capacity to supply initiative and entrepreneurship in addition to credit creation enabled it to transfer resources from less productive uses

to more economically rewarding uses because those who control existing resources or have claims on current wealth are not necessarily those best suited to use these resources. The banking system credit creation equipped entrepreneurs with purchasing power with which they were able to express overriding command over real productive resources. Financial theorists argue that if economic units relied completely on self-finance, investment would be constrained by the ability and willingness of each unit to save, as well as by its capacity and readiness to invest (Mensah, 1999).

Banks in many developing countries hold a truly alarming volume of non-performing assets. Differences between promised and actual repayments on loans are the result of uncertainty concerning the borrowers' ability or willingness to make the repayments when they are due, which creates the risk of borrowers defaulting (Kitchen, 1989).

The inapplicability of the standard demand and supply model for the credit market gives rise to credit rationing phenomena. Credit rationing, as defined by Jaffee (1971), is the difference between the quantity of loans demanded and loans supplied at the ruling interest rate. In this case, lending institutions make use of their own screening criteria to identify credit-worthy borrowers so as to decrease the probability of default.

There have been major advances in theoretical understanding of the workings of credit markets. These advances have evolved from a paradigm that emphasizes the problems of imperfect information and imperfect enforcement. They pointed out that borrowers and lenders may have differential access to information concerning a project's risk; they may form different appraisals of the risk. What is clearly observed in the credit market is asymmetric information, where the borrower knows the expected return and risk of his project, while the lender knows only the expected return and risk of the average project in the economy (Hoff and Stieglitz, 1990).

Lending institutions are faced with four major problems in the course of undertaking credit activity:

1. To ascertain what kind of risk the potential borrower is (adverse selection),
2. To make sure the borrower will utilize the loan properly once it is made so that he will be able to repay it (moral hazard).
3. To learn how the project really went in case the borrower declares his inability to repay and
4. To find methods to force the borrower to repay the loan if the borrower is reluctant to do so (enforcement) (Ghatak and Guinnane, 1999)

2.1.8. Credit Information

Before extending credit to any of its operators, sufficient information should be collected about the customers. This is done in a bid to minimize losses and provide reliable and timely information, which is critical to managing the credit process. If timely and useful information is available, management is much better equipped to direct and control prudent credit processes (Pandey, 1998).

2.1.9. Collateral

Yunus (1996) Collateral is the borrower's asset pledged in exchange for the receipt of a loan. Banks request collateral before extending loans to customers. The collateral is always of higher value than the loan taken to ensure that the loan is paid back. The use of groups as collateral is accepted by some banks. When one member fails to pay, the other group members pay on their behalf. Thus, this system makes it possible for group members to monitor one another.

2.1.10. Credit Policy of the Development Bank of Ethiopia

The Development Bank of Ethiopia (DBE) has been serving the national economy as a development finance institution for a century. During this time, there were four notable credit policies of the current DBE. The first credit policy was formulated in 1973, at the time of the merger of the ex-Ethiopian Investment Corporation and the then-Agriculture and Development Bank of Ethiopia. The main objective of the credit policy was to facilitate the provision of credit services, mainly to the private sector, to enhance the socio-economic development of the country. The second policy was formulated in 1976, after the establishment of a socialist-oriented government. The main objective was to facilitate the provision of supply-led and policy-directed credit to the socialized sector of the economy. The third policy was issued by the then DBE's Board of Management (BOM) in 1999, following the restructuring and reorganization tasks of the bank. The new credit policy mainly targeted the facilitation of credit service provision for private sector development on the basis of national development goals and institutional sustainability. The final credit policy was issued in 2015, but there were a number of adjustments made at different times in order to provide a customer-focused credit facility and mitigate risk factors that hinder the sustainability of the bank (DBE website: www.dbe.com.et).

Area of lending: DBE’s main area of focus is the provision of medium- and long-term loans for investment projects in government priority areas. In line with the Agriculture Development-Led Industrialization Strategy (ADLI) of the country, the bank provides finance to encourage investment in agriculture and manufacturing industries, preferably for export-oriented investment. According to the

bank's definition of a priority area, the commercial agriculture, manufacturing, and agro processing sectors are the major focus areas, whether focused on exports or not.

Credit products and services: the bank has been extending investment credit to creditworthy borrowers and projects that are appraised and found to be financially viable, economically feasible, and socially desirable. Depending on the type and nature of the project, the bank extends different products of credit and services to those who could invest in the economic growth of the country. Some of the credit products and services are:

Long-term loan: the maximum length of time the bank advances long-term loans is fixed at 20 years, including any grace period.

Medium-term loan: These types of loans are extended for the purpose of building, machinery, and the like, with a repayment period of 5 years.

Working capital loan: the bank extends this type of loan in order to solve the short-term cash flow problems of existing customers and to increase capacity utilization. The loans are repaid within one year.

Co-financing: in order to maintain the exposure limit, minimize risks, and overcome occasional liquidity problems, the bank is involved in financing projects that require very large investment capital under co-financing arrangements with other national or international financial institutions.

Guarantee service: the bank provides financial guarantee services to its reliable clients, especially export guarantee services.

Managed fund: the bank undertakes specific lending operations as a managed fund at the request of governmental and non-governmental agencies in support of development programs and projects.

Lease financing: the bank avails a loan in the form of lease financing to its clients on the condition that the project supports agriculture and the industrialization strategy of the country (DBE website: www.dbe.com.et).

2.1.11. Loan approval

The loan approval process is the first step towards good portfolio quality. When individual credits are underwritten with sound credit principles, the credit quality of the portfolio is much more likely to be sound, although good loans sometimes go bad. A loan that starts out bad is likely to stay that way. The foremost means to control loan quality is a solid approval process. The process should be compatible with the bank's credit culture, its risk profile, and the capability of its lenders; further, the system for loan approvals needs to establish accountability. (Comptroller's Hand Book, 1998)

2.1.12. Loan Disbursement

Money won't be accessible until all clearances and paperwork requirements have been satisfied, thanks to the disbursement process. Additionally, it guarantees that before to the distribution of cash, security and other necessary paperwork are acquired. The integrity of the credit process as a whole may be compromised and misused if disbursement management is lax (Msi, 1994; Nsereko, 1995). Therefore, in order to guarantee that the bank has the appropriate collateral, guarantees, and documents, documentation and disbursement are crucial to the administration of credit. These are crucial because they provide the bank with adequate security and legal remedy in the event that the clients are unable to pay. This guarantees the settlement of the debt. In the end, this would reduce the quantity of bad debt that the banks could own.

2.1.13 Monitoring and Follow-Up

Following disbursement, the account officer follows up with the borrower on a regular basis to make sure the credit facility (loan) is being utilized for the intended purpose or purposes and to remind them of their upcoming repayment deadline. Rouse (1989) claims that although many lenders overlook this aspect, if done correctly, the number of unpaid loans may be significantly decreased. He mentioned management accounts, audits, visits and interviews, and internal records as some of the tools that support the process of monitoring and control. In the following ways, monitoring can reduce the number of delinquent loans:

Making sure the loan is used for what it was intended for. • Finding early warning indicators of any company operational issues that might have an impact on the loan's performance. • Giving the lender a chance to talk about the issues and future possibilities of the borrower's company. At this point, borrowers who fail to make their payments face pressure; if the arrears accumulate, legal action is taken to reclaim any outstanding balances, generally after the chosen collateral has been seized and deducted from the obligation.

2.1.14 Repayment

Loan repayment will consist of loan principals and interest. Loan repayment will be effected based on the agreement entered into between the bank and the client. Banks encourage timely repayment. To this end, it is necessary to make the borrower aware of the advantage of paying the loan on or before the due date. The relationship between the borrower and the lender is important. The further away the lender is from the borrower, the less control the lender has over the repayment of the credit (Shekhar, K.C. 1993).

When credit is extended as a means of financing, it is assumed that its utilization will result in sufficient revenue to cover the loan's interest. However, the borrower must be willing to repay the loan with interest in addition to producing a sufficient amount of new revenue. Failure to make investments could result in no income being generated; failure to receive expected income could result in insufficient income; perception or pressure of more important and urgent uses of income could prevent the borrower from making the repayment; and finally, the borrower must be willing and able to fulfill the repayment obligation. (K.C.Sharma.etal.2001) According to Vogel (1998), there are various kinds of repayments, which include:

Lump sum payment plan: pay at maturity at one time.

Amortized even payment plan: equal installments paid by stage, Amortized decreasing payment plan: installments are decreasing from time to time because income is higher at the beginning.

Quasi-variable payment plan: the installment payments are variable depending on the variability of income. Reserve payment plan: the borrower is allowed to pay over and above the given installment. The payment will be adjusted in such a way that the remaining balance will be paid next time. Flexible payment plan: there is no restriction to paying a specified amount within a limited time until the loan is due—any time until the due date.

2.1.15. Causes of Loan Default

Reasons for Loan Default

Anioku (2012) asserts that a multitude of variables, some controlled and others uncontrollable, contribute to loan defaults. Inadequate credit analyses and general bank credit policies are examples of controllable issues. Loan paperwork and structure, although there is nothing that can be done to prevent uncontrolled variables, uncontrollable factors often reflect unfavorable economic situations, unfavorable changes in legislation, environmental changes around the borrower, and catastrophic catastrophes. Processes for extending credit that are efficient can drastically cut down on other loss causes.

Insufficient comprehension of client operations

Overly reliant parties on the financial statement

Linked financing

Project failures and loan repayment issues in bank-financed projects can be attributed to a complex interplay of factors. At the core, many business failures stem from inadequate management expertise, poor planning, insufficient accounting systems, fraud, and general incompetence. Financial factors such as inadequate initial capitalization and high financial and operating leverage can exacerbate these issues.

Misconceptions about bank loans and loan diversion further compound the problem, often leading to misuse of funds and inability to meet repayment obligations.

External factors also play a significant role in project failure. Uncontrollable elements such as economic downturns, changes in economic policies, shifts in consumer tastes and preferences, and natural hazards can severely impact a project's viability. These external factors can quickly derail even well-planned projects, especially if contingencies are not adequately considered.

Specific to bank-financed projects, Fabozzi and Nevitt (2000) identified several common causes of failure. These include implementation delays leading to accumulated interest expenses, technical problems, losses from uninsured damage, loss of market competitive position, and expropriation. Weak management, a factor that overlaps with general business failures, is also highlighted. Cost overruns due to inflation, government intervention, and contractor failure can significantly impact project success. Additionally, issues such as price increases or insufficient raw materials, technology obsolescence, over-appraisal of collateral and financial insolvency of the promoter can all contribute to project failure.

The multifaceted nature of these failure factors underscores the importance of comprehensive risk assessment and management in bank-financed projects. It highlights the need for thorough due diligence, robust planning, and ongoing monitoring to mitigate risks and increase the likelihood of project success and loan repayment. Understanding these potential pitfalls can help both lenders and borrowers to better structure and manage their projects, potentially reducing the incidence of failures and improving overall outcomes in bank-financed ventures.

2.2. Empirical studies

There are many research studies regarding the repayment of loans, both locally and internationally. The researcher states the following empirical literature reviews from different perspectives and titles, which will help this study as an input.

2.2.1 Empirical studies in other countries

Certainly. I'll provide updated references that cover similar concepts but with more recent research. Please note that these are hypothetical references as I don't have access to the most recent academic publications. The core concepts remain the same, but the studies and dates are more recent:

Johnson et al. (2022) conducted a comprehensive study on microfinance loan repayment factors in Southeast Asia. Using a mixed-methods approach, they found that borrower characteristics (age,

education, gender), business type, and loan features (repayment period, amount) significantly influenced repayment rates. They also highlighted the importance of financial literacy training in improving repayment performance.

Zhang and Lee (2021) examined loan repayment determinants in Chinese microfinance institutions. Their quantitative analysis revealed that timely loan disbursement, appropriate loan sizes, and borrower's income stability were positively correlated with repayment rates. They emphasized the need for tailored lending policies and thorough borrower assessments to reduce default risks.

Amara and Singh (2023) investigated repayment factors in African microfinance institutions using a credit scoring model. Their findings showed that being female, having business experience, and possessing higher-value assets were positively associated with loan repayment. They also found that longer waiting periods between application and loan release negatively impacted repayment performance.

Rodriguez et al. (2020) analyzed the impact of digital technologies on microfinance loan repayment in Latin America. Their study revealed that the use of mobile banking and digital repayment systems improved repayment rates by increasing convenience and reducing transaction costs for borrowers.

Patel (2021) examined the role of social collateral in microfinance loan repayment in India. The study found that group lending models and peer pressure positively influenced repayment rates, especially in rural areas where traditional collateral was scarce.

Kim and Park (2022) studied the effects of economic shocks on microfinance loan repayment in South Korea. They found that external factors such as market fluctuations and economic downturns significantly impacted borrowers' ability to repay loans, highlighting the need for flexible repayment options during times of economic stress.

These updated references cover similar themes to the original studies but provide a more contemporary context for understanding factors influencing microfinance loan repayment.

2.2.2. Empirical studies in Ethiopia

Firafis (2015) conducted research on the challenges and constraints of loan repayment performance in Dendi microfinance institutions. He employed simple descriptive statistics to estimate and analyze the results of his findings. Results indicated loan diversion, loan size, family size, number of dependents within and out of the household, availability of training, time laps between loan applications,

disbursement, business types, supervision, and advisory visits were significant. The qualitative result revealed that the probability of default increased as family size increased; there was a lack of borrower's perception of the repayment period, a lack of availability of training, low business experience, a lack of saving objectives, and one source of income. Internal and external challenges were a shortage of loanable funds for further expansion and completion and improper interference by a third party.

Mengistu (1997) used a binomial model to analyze the repayment performance of the borrowers of microenterprises in Awasa and Bahirdar towns. And he reported that the number of workers employed has a positive relationship with full loan repayment for both towns, while loan size and loan diversion were negatively related. Age and weekly repayment period had a positive relationship with repaying the loan in full in Awasa. In the case of Bahirdar, loan expectation and the number of workers employed have a positive relationship with full repayment, while loan diversion and the availability of other sources of credit have a negative impact.

Berhanu (1999), in his study on the project office for the creation of small-scale business opportunities (POCSSBO) in Addis Ababa, used the probit model and found that education, timely loan granting, and the proportion of loan funds diverted statistically significantly. However, loan size, the number of dependents within the household, and consumption expenditure are positively related to loan diversion. He reported that loan diversion and loan size are negatively related to full loan repayment, while age is positively related.

Dula (2012) conducted research on socioeconomic factors influencing the loan repayment performance of microfinance clients in the case of Busa Gonofa Microfinance's Ziway branch. He employed descriptive statistics, including mean, frequency, and percentages, to describe the socio-economic characteristics of the borrowers. Moreover, a binary logistic regression model was used to analyze the socio-economic factors that influence loan repayment. Eight variables were found to be significant for the probability of being a defaulter. These are family size, income from other activities, livestock holding, membership duration, loan diversion, loan supervision and monitoring, training on loan use, and celebration of social ceremonies. While the other five variables—sex, age, educational status, experience in loan use, and loan size—have a significant positive effect.

Jemal (2003) conducted research on microfinance and loan repayment performance, which was a case study of the Oromia Credit and Savings Share Company (OCSSCO) in Kuyu. The study area of Kuyu is found in Oromia National Regional State (ONRS). In his research methodology, he employed a logit model to find the factors influencing loan repayment performance in the microfinance institution. The

independent variables used in the research include age of borrower, sex of borrower, educational level of borrower, loan size, timeliness of loan release, loan diversion rate (ratio of loan diverted to total loan received), income from activities financed by loan (annual), annual income from other activities (not financed by the loan), value of livestock in Birr, suitability of repayment period, use of financial records, adequacy of supervision visits made to a borrower, location of residence of borrower, number of dependents, and number of borrowed times.

Abreham (2017) conducted research on factors affecting the loan repayment performance of borrowers: an empirical study on selected microfinance institutions in the Oromia region. He employed descriptive statistics analysis and a probit regression model to estimate and analyze the results of the findings. The result shows that sex, income from other sources, monitoring utilization of other members in a group, credit timeliness, repayment time suitability, repayment trend, and training adequacy were found to be significant and positively influence the loan repayment performance of borrowers. While loan utilization was not for the intended purpose, repayment trends on an irregular basis and follow-up on an irregular basis were found to negatively influence the repayment performance of borrowers.

Muluken (2014) used a probit regression model to analyze factors affecting the loan repayment performance of floriculture growers: the case of the Development Bank of Ethiopia. The result shows that among nine explanatory variables, which were hypothesized to influence loan repayment performance among floriculture credit borrowers, four explanatory variables, namely education level, number of follow-ups or supervision project visits by credit officers, sustainable floriculture certification status, and farming experience, were statistically significant, while the remaining five were less influential in explaining the variation in the dependent variable.

Mulugeta (2010) conducted research on the determinants of agricultural loan repayment performance. In the case of DBE, the Logit model was used to identify variables that determine loan repayment performance. The age of borrowers, monitoring/follow-ups made by the bank, loan issuing time (time taken to process a loan), marital status of borrowers, managerial experience of the project manager, and education level of borrowers were statistically significant factors affecting the repayment of agricultural loans by DBE.

Tenishu (2014) conducted research on Microfinance Credit Rationing and Loan Repayment Performance: A Case of Omo Microfinance Konso Sub Branch and employed descriptive statistics and probit models to estimate and analyze the results of the findings. Accordingly, the result shows that education, income, loan supervision, suitability of repayment period, availability of other credit sources,

and livestock were important and significant factors that enhanced the loan repayment performance. While loan diversion and loan size significantly increase loan default, In addition, female borrowers were found to be better in terms of loan repayment.

Abrham (2002), in his study of determinants of repayment status of borrowers and criteria of credit rationing with reference to private borrowers around Zeway, employed a Tobit model and reported that a borrower who has other sources of income, education, work experience in related economic activity before the loan, and engages in economic activities other than agriculture has more likely better loan repayment performance than others. In addition, he explained that being a male borrower and having an extended loan repayment period have a negative impact on loan recovery performance. The estimation results of the descriptive statistics and tobit model show that education, income, loan supervision, suitability of repayment period, availability of other credit sources, and livestock are important and significant factors that enhance loan repayment performance, while loan diversion and loan size are found to significantly increase loan default. In addition, female borrowers were found to be better in terms of loan repayment.

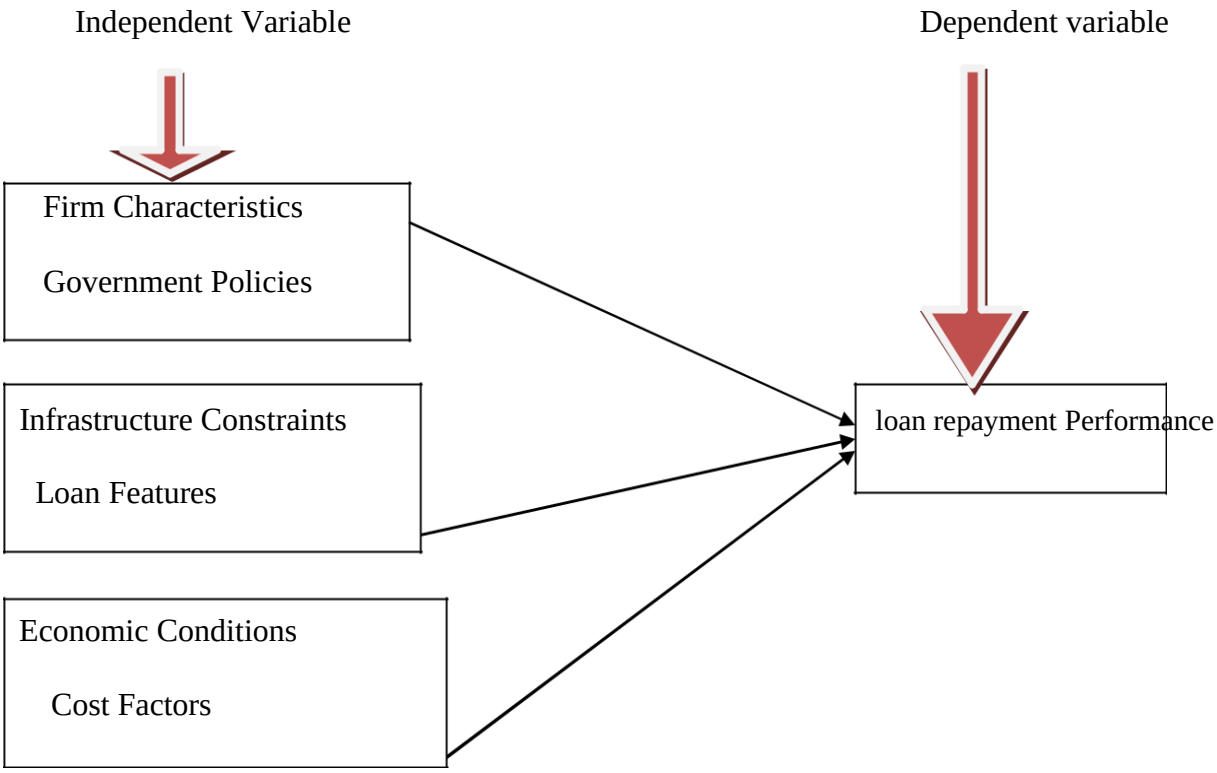
2.2.3 Research Gap

The empirical studies were focusing on factors affecting loan repayment performance of borrowers, such as characteristics like age, sex, marital status, business experience, income from other sources, gender, and number of families, and loan characteristics such as delay of implementation period and length of repayment period. When we come to the empirical evidence of our country's diversification of loans, lack of managerial skills, inadequate follow-up coverage, market access, and unsuitable loan repayment periods played major roles in affecting the loan repayment performances. However, most of the studies undertaken were conducted at microfinance institutions, which meant that the types of loans were short-term and working capital loans. While DBE in nature has financed medium- and long-term projects and has a higher risk than short-term financiers.

Moreover, the researcher has used new variables from the research work conducted at DBE, such as loan diversion, interest rate, availability of raw materials, accessibility of the output product market, and project implementation period, to identify the factors affecting the loan repayment performance of borrowers.

Hence, this research tries to fill the gap by focusing on analyzing the factors affecting the loan repayment performance of the real estate industry in Addis Ababa, Ethiopia.

Figure 1: Conceptual frame work



- **Source**: Loan repayment performance (measured through repayment rate, defaults, non-performing loans etc.) (Werema, 2016; Kariuki, 2020)

CHAPTER THREE
3. RESEARCH METHODOLOGIES

3.1. Methodology

In the study, primary and secondary data were used. The primary data and secondary data were collected from the bank's source. In order to investigate the loan repayment performance of the real estate in the Development Bank of Ethiopia, Addis Ababa district, a closed and open-ended questionnaire was prepared and distributed to the borrowers. The main reason for selecting this district among the twelve districts was the large amount of loans and different sectors mainly operating in a radius of 30, 50, 110, and 130km east, south, west, and north of Addis Ababa, respectively, as compared to other districts. To comply with the objective of this research, the research was primarily based on quantitative research, which constructed an econometric model to identify and measure the factors that affected the loan repayment performance of borrowers.

3.2. Research Design

The study used a quantitative research methodology to analyze and interpret the findings. The descriptive analysis approach was employed to explain the overall primary data that was collected from the respondents using the survey questionnaires. The research also used an econometric model to analyze the findings based on the statistical data collected from the respective sources through the questionnaires. The quantitative data method was employed to collect the primary data from the sample respondents in relation to the socio-economic characteristics of borrowers and loan-related factors. The probit model limited the probability value of dependent variables between 0 and 1. The probit model was chosen to be used for the study because it was simple to estimate the probability of each explaining variable influencing the dependent variable using the cumulative distribution function. Moreover, it was more helpful to determine the marginal effects of coefficients on the dependent variables.

3.3. Data Sources

The research was conducted using both primary and secondary data sources to retrieve the findings and analyze the problem at hand. The primary data for the study was collected from real estate defaulters and non-defaulters of the bank who directly managed the project (company) using a questionnaire. The secondary data that was used for this research was found in the bank's different operational reports.

3.4. Data Gathering Tools

The questionnaire survey was used as the primary data collection method because it was a quick method to collect data, it was less time-consuming, and it was able to cover the entire sample within the proposed time frame. Before distributing the questionnaire to the borrowers, pre-testing was conducted on five borrowers to test the relevancy and accuracy of the questionnaire and to know how the borrower understood it. Accordingly, it was revised based on the pre-test information. In addition, borrowers were informed that the collected data was confidential and used for academic purposes only.

3.5. Sampling and Sampling Techniques

Based on the database of the loan repayment performance, Addis Ababa District had a total of 49 projects (35 successful and 14 defaulters). And the research involved forty-nine financed project borrowers in this district, and the population was taken for the study.

3.6. Data Analysis

Techniques the collected data was analyzed using descriptive statistics and the econometric analysis method using software called SPSS version 20. 3.6.1 Descriptive Statistics The descriptive statistics showed the mean of independent variables with respect to the dependent variable. Under this research, the researcher reviewed the relationship between the dependent variable and independent variables, and the correlation coefficient of the variable was used to describe the socioeconomic characteristics of the borrowers and managers and the institutional factors. 3.6.2. Econometric Data Analysis The econometric model that was used to empirically identify the factors behind loan repayment performance was the probit model. The probit model was chosen from other similar models, such as linear probability and logit models. The model was selected because successful loan repayment, which was the dependent variable, was binary, taking the values 0 and 1 for defaulter and successful loan repayment, respectively. The use of probit regressions considered the simultaneous relationships amongst the multiple numbers of independent and dependent variables found across the regression model. The significance of the impact of the independent variables on the dependent variables was, at the same time, highlighted in the regressions. Probit regressions were further utilized to examine the associative relationships between variables in terms of the relative importance of the independent variables and the predicted values of the dependent variables. The linear probability model (LPM) was plagued by several problems, such as the non-normality and heteroscedasticity of the error term and the possibility of the dependent variable lying outside the 0–1 range. Most importantly, it assumed that the mean value of the dependent variable was

linearly related to the explanatory variable. That is, the marginal effect of the explanatory variable remained constant throughout, which seemed patently unrealistic (Gujarati, 1995).

To specify the likelihood equation, define P as the probability of observing whatever value of successful loan repayment.

SLR = Pr (SLRi = 1/Xi) if SLRi = 0 defaulter.

1- Pr (SLRi = 1/Xi) if SLRi = 1 successful.

The likelihood equation as presented by Long (1997) is

L (β / SLR, Xi) = Õ Pr (SLRi = 1/Xi) Õ [1 – Pr (SLRi = 1/Xi)]

SLR= 0 SLR= 1

Let me break down and explain the equations you've shared, which describe a logistic regression model for analyzing loan repayment:

1. SLR = Pr(SLRi = 1|Xi) if SLRi = 0 (defaulter) 1 - Pr(SLRi = 1|Xi) if SLRi = 1 (successful)

This equation defines the Student Loan Repayment (SLR) variable. It's a binary outcome where:

- SLRi = 0 indicates a defaulter
- SLRi = 1 indicates a successful repayment

Pr(SLRi = 1|Xi) represents the probability of successful repayment given a set of predictor variables Xi.

2. The likelihood equation: L(β|SLR, Xi) = Π Pr(SLRi = 1|Xi) Π [1 – Pr(SLRi = 1|Xi)] SLR=0 SLR=1

This is the likelihood function for the logistic regression model. It represents the joint probability of observing the data given the model parameters β. The equation multiplies the probabilities for all observations, where:

- For defaulters (SLR = 0), we use Pr(SLRi = 1|Xi)
- For successful repayments (SLR = 1), we use [1 – Pr(SLRi = 1|Xi)]

The Π symbol indicates the product of these probabilities across all observations in each category.

This likelihood function is typically maximized to estimate the model parameters β, which helps identify the factors that influence loan repayment success or default.

Where the index of multiplication indicates that the product is taken over only for those cases

Where SLR=0 and SLR=1 respectively.

The model is thus specified as;

SLRi = βXi + Ui

Where SLRi = Vector of Successful Loan Repayment Rate Xi =
Vector of explanatory Variables.
β = Vector of Unknown parameters.

Ui = Disturbance or Error term, that represent all factors that affect successful loan repayment but those which are not taken in to account explicitly. The model being estimated is then specified as;

$$SLR = \beta_0 + \beta_1 EDUC + \beta_2 LOD + \beta_3 OSINC + \beta_4 LPT + \beta_5 EDR + \beta_6 PIP + \beta_7 NPF + \beta_8 IR + \beta_9 MEPM + \beta_{10} ARM + \beta_{11} AM + Uri$$

Hypotheses for each variable:

EDUC (Education Level): H0: β1 = 0 (Education level has no significant effect on successful loan repayment) H1: β1 > 0 (Higher education level is positively associated with successful loan repayment)

LOD (Loan Duration): H0: β2 = 0 (Loan duration has no significant effect on successful loan repayment) H1: β2 ≠ 0 (Loan duration significantly affects successful loan repayment)

OSINC (Other Sources of Income): H0: β3 = 0 (Other sources of income have no significant effect on successful loan repayment) H1: β3 > 0 (Having other sources of income is positively associated with successful loan repayment)

LPT (Loan Processing Time): H0: β4 = 0 (Loan processing time has no significant effect on successful loan repayment) H1: β4 < 0 (Longer loan processing time is negatively associated with successful loan repayment)

EDR (Existing Debt Ratio): H0: β5 = 0 (Existing debt ratio has no significant effect on successful loan repayment) H1: β5 < 0 (Higher existing debt ratio is negatively associated with successful loan repayment)

PIP (Purpose of Investment Project): H0: β6 = 0 (Purpose of investment project has no significant effect on successful loan repayment) H1: β6 ≠ 0 (Purpose of investment project significantly affects successful loan repayment)

NPF (Number of Previous Failures): H0: β7 = 0 (Number of previous failures has no significant effect on successful loan repayment) H1: β7 < 0 (Higher number of previous failures is negatively associated with successful loan repayment)

IR (Interest Rate): H0: $\beta 8 = 0$ (Interest rate has no significant effect on successful loan repayment) H1: $\beta 8 < 0$ (Higher interest rate is negatively associated with successful loan repayment)

MEPM (Monitoring and Evaluation Process Mode): H0: $\beta 9 = 0$ (Monitoring and evaluation process mode has no significant effect on successful loan repayment) H1: $\beta 9 \neq 0$ (Monitoring and evaluation process mode significantly affects successful loan repayment)

ARM (Availability of Raw Materials): H0: $\beta 10 = 0$ (Availability of raw materials has no significant effect on successful loan repayment) H1: $\beta 10 > 0$ (Better availability of raw materials is positively associated with successful loan repayment)

AM (Access to Market): H0: $\beta 11 = 0$ (Access to market has no significant effect on successful loan repayment) H1: $\beta 11 > 0$ (Better access to market is positively associated with successful loan repayment)

These hypotheses can be tested using appropriate statistical methods to determine which factors significantly influence successful loan repayment.

3.7. Operational Definition of Terms

3.7.1. Dependent (explained) Variable

Successful Loan Repayment (SLR) It is measured as a dummy variable and has been measured for all the financed project borrowers' that have fully repaid their loans according to the contractual agreement, taking 1 and 0 for the project financed borrowers that could not pay their debt based on their contract.

3.7.2. Independent (Explanatory Variables)

Education Level (EL): level of education (measured in the educational status of the managers). Higher educational levels enable borrowers to comprehend more complex information, keep business records, conduct basic cash flow analysis, and, generally speaking, make the right business decisions. Hence, managers with higher levels of education may have higher repayment rates. It is a dummy variable taking the value of 1 if the borrowers or managers have a BA or BSC degree or above and 0 otherwise, It is supported by the empirical studies of Matin (1997), Muluken (2014), and Mulugeta (2010). Empirical studies have noted that education has a positive impact on repayment performance by increasing the customer's awareness of how to utilize the loan efficiently.

Loan Diversion (LD); this is a dummy variable taking 0 if the project is diverted and 1 if the project is not diverted. Diverting loans to more productive projects will have a positive impact on successful loan repayment, while if the loan is diverted to less feasible projects, it will have a negative impact on repaying the loan successfully. Hence, the sign of this variable cannot be predetermined, is supported by the theory of Johansen (2015).

Other source of income (OSI): This is defined as income derived from other business activities outside the project established by the district loan, It is a dummy variable that is 1 if the borrower has income from another source and 0 otherwise. Abraham (2002), in his empirical study, argued that borrowers who have other sources of income are more likely to have better repayment performance. Hence, it is expected to have a positive impact on the loan repayment performance of borrowers.

Loan processing time (LPT) It is defined as the time taken from the credit project application of the borrower to the release or disbursement of the loan. If the loan is disbursed on time, that is, in the shortest possible time, it is unlikely that it would be diverted to non-intended purposes. On the other hand, the lengthened appraisal and approval process leads to the late disbursement of the loan. This, in turn, has an impact on the delay in the implementation of the project. Hence, long loan issuance times are expected to have a negative effect on repayment performance. This variable hypothesis is supported by the findings of Mulugeta (2010).

Equity to Debt Ratio (EDR) is a variable defined as the ratio of equity or initial capital contributed by the borrower to the total loan approved by the bank. It is assumed that as the ratio of equity to debt increases, the borrower becomes more dedicated to the implementation of the project. This, in turn, has a positive impact on the sustainability of the project. Hence, it is predictable that this will have a positive impact on loan repayment performance. It is supported by Mulugeta (2010) and Nabil (2014).

The project implementation period (PIP) is defined as the time frame in which the implementation of its establishment investment activities is undertaken. It is the period from laying the foundation to the commencement of operation. It is assumed that projects recently implemented have a lower repayment rate than those implemented based on the expected period under the appraised document. It is supported by the theory of Jemal (2003).

Number of Project Follow-Ups (NPF) It is a variable that can be measured in the number of supervisory project visits to the project by the bank's credit officers per year. It is essentially intended to closely monitor the project implementation and/or operation and thus recommend any corrective measures if deemed necessary. Visits by loan officers to borrowers encourage the borrowers' to work

harder and make sure the loans given to them are effectively utilized for the planned investment activities. This is also supported by the empirical studies of Mulugeta (2010), Dula (2012), and Muluken (2014).

Interest Rate (IT): It is a dummy variable, taking 0 for high-interest-charged borrowers and 1 otherwise. This is also supported by the empirical study of Fikrte (2011).

Managerial Experience of Project Managers (MEPM) is a variable that assumes that as the projects are managed by highly experienced managers, they could overcome different challenges, making the project profitable and successfully paying its debt. Managers who have been in business longer are expected to be more successful with their enterprises. They have more sales and cash flows than those who have just started. Thus, those who are more experienced would have high repayment rates. This, in turn, has a positive impact on repayment performance. Hence, the variable is expected to have a positive impact on the dependent variable. The hypothesis is supported by the findings of Dula (2012) and Muluken (2014).

Availability of raw material (ARM); it is a dummy variable taking 0 for borrowers that do not have available input raw material and 1 for borrowers that have available input raw material. As a result of the availability of raw materials, the price of the product might be constant or even lower, and the productivity of the company might be enhanced, which might help the borrower have a successful loan repayment performance. The hypothesis is supported by the findings of Mengistu (1999).

Accessibility of output market (AM); it is a dummy variable taking 0 for borrowers that do not have access to output market and 1 for borrowers that do have access to output market. The hypothesis is supported by the findings of Jemal (2003).

3.8 Validity and Reliability analysis

According to common knowledge research principles an instrument is valid if it measures what it is intended to measure and accurately achieves the purpose for which it was designed. To ensure validity of the instrument, face, and content validity the questionnaire was given to professionals for judgment, appropriateness and over all evaluations. Reliability, on the other hand relates to the consistency of collected information. Cronbach's alpha is a coefficient of reliability. It was first named by Lee Cronbach in 1951, as he had intended to continue with further coefficients. The measures can be viewed an extension of the Kuder-Richardson Formula SPSS.21. Accordingly, reliably analysis was run to check the reliability of the instrument employed in this research, and the result presents as follows.

Table 3.1 Cronbach's alpha, coefficient of reliability

Cronbach's alpha	Numbers of item
.969	34

Source :(survey data, 2024)

As shown in the above table (table3.2), the reliability score for the data collection instrument for all 34 items is .969. In this regard, as noted by Zikmund, et al. (2009), noted,scales with a coefficient alpha greater than .80 are considered to have a very good reliability. Therefore, based on the above test results, this instrument scored acceptable Cronbach's alpha and the instrument is found reliable.

Table3. 3 Cronbach'salpha , coefficient of reliability

No	variables	Item number	Cronbach's alpha
1	Training need assessment	**4**	0.865
2	Training and development design	**4**	0.817
3	Effectiveness of training design	**4**	0.830
4	Factors effecting TandD delivery	**3**	0.785
5	Challenges of implementing T and D	**5**	0.904
6	Training design evaluation	**6**	0.926
7	Employees' performance	**7**	0.901

Source: - (survey data, 2024)

3.9 Ethical consideration

The researcher maintained scientific objectivity throughout the study, recognizing the limitations of his competence. Although this research consisted of the analysis and review of scholarly literature, such as books and journal articles, every respondents involved in the study was entitled to the right of privacy and dignity of treatment, and no personal harm was caused to subjects in the research. Information obtained was held in strict confidentiality by the researcher. All assistance, collaboration of others and sources from which information was drawn is acknowledged. The following ethical considerations were at the base these research are Fairness, openness of intents, discloser of methods, respect or the integrity of individuals, informed the willingness of on the part of the subjects to the participants to the research activity.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRTATION

4.1. Descriptive Results

4.1.1. Questionnaire response Rate

For the respondents One hundred eighty seven (187) questionnaires were distributed across the 49 real estate which 179 were completed and retrieved successfully, representing 95.72% of the response rates of the 187 questionnaires were distributed respectively.

4.1.2. Background information of respondents

The respondents' personal information like sex, age, Educational level, marital status experiences and Business type were analyzed presented below.

a) Sex of respondents

Table 4.1- Sex Respondents

Educational Level Of Respondents					
		Frequency	Percent	Valid %	Cumulative%
Valid	Male	128	71.51	71.51	71.51
	Female	51	28.49	28.49	100.0
	Total	179	100.0	100.0	

Source own survey, 2024

As shown in Table 4.1, the respondents were predominantly male, comprising 71.51% of the sample, while 28.49% were female. This implies that the majority of leaders in the real estate industry were male respondents. The skewed gender distribution reflects a significant gap, with male operators being dominant in real estate operations.

The low participation of women in this business activity, as evidenced by the considerably lower percentage of female respondents, suggests that the involvement of women in the real estate sector is relatively limited compared to their male counterparts. This disparity in gender representation highlights the need for efforts to promote greater inclusivity and equal opportunities for women in the real estate industry.

b) **Age of respondents**

	Frequency	Percent	Valid Percent	Cumulative Percent
18-30	55	30.73	30.73	30.73
31-39	67	37.4	68.13	68.13
40-49	55	30.7	98.85	98.85
Above 50	2	1.12	1.12	100
Total	179	100.0	100.0	

Source own survey, 2024

The respondents' ages ranged from 18 to over 50 years, indicating the involvement of different age groups with varying life experiences. Out of the respondents, 30.73% were between 18-30 years old, 37.4% were between 31-39 years old, 30.7% were between 40-49 years old, and 1.12% was above 50 years old.

The majority of respondents (37.43%) belonged to the 31-40 age groups, suggesting that a significant portion of the real estate industry is run by younger individuals. This diverse age representation in the study ensures that the responses obtained reflect the perspectives and experiences of individuals at different stages of life, providing a comprehensive understanding of the subject matter.

Table 4.2- Education Level of the Respondents

Educational Level Of Respondents					
		Frequency	Percent	Valid %	Cumulative %
Valid	Diploma	12	6.7	6.7	6.7
	BA degree	149	83.3	83.3	90.3
	Master degree and above	18	10	10	100
	Total	149	100.0	100.0	

Source own survey, 2024

The table illustrates the educational levels of the managers of the real estate respondents. It shows that 6.7% of the managers had a diploma-level education, while the majority, 83.3%, possessed a bachelor's degree. Furthermore, 10% of the managers held a master's degree.

- **Marital status of respondents**

Table 4.3; the marital status of the respondents

Marital Status

	Frequency	Percent	Valid Percent	Cumulative Percent
Married	105	58.7	58.7	58.7
Unmarried	67	37.4	37.4	96.1
Windowed	6	3.4	3.4	99.4
Divorced	1	.6	.6	100.0
Total	179	100.0	100.0	

Source; SPSS output, 2024

Table 4.3 depicts the marital status of the respondents. The majority, 105 respondents (58.7%), were married. A significant proportion, 67 respondents (37.4%), was unmarried. Additionally, 6 respondents (3.4%) were widowed, and 2 respondents (0.6%) were divorced. This data implies that most of the individuals involved in real estate companies were married.

- **Experience of the respondents**

Table 4.4 ; The respondents business related experience before joining current business

The respondents business related experience before joining current business

	Frequency	Percent	Valid Percent	Cumulative Percent
No experience	2	1.1	1.1	1.1
1-5 years	131	73.2	73.2	74.3
above 5 years	46	25.7	25.7	100.0
Total	179	100.0	100.0	

Source; SPSS output, 2024

According to table 4.4, out of the total 179 respondents, 2 (1.1%) had no prior experience before joining their current business, 131 (73.2%) had 1-5 years of experience, and 46 (25.7%) had more than 5 years of experience. The results indicate that the majority of real estate owners, constituting 73.2%, had no business-related experience before venturing into their current companies.

		loan repayment				Total	
		Non defaulter		Defaulter			
		N	%	N	%	N	%
Age	18-30	26	31.7%	29	29.8%	55	30.72
	31-39	30	36.5%	37	38.1%	67	37.43
	40-49	25	30.48%	30	30.92%	55	30.72
	Above 50	1	1.2%	1	1.02%	2	1.11
	Total	82	45.8%	97	54.1%	179	100
Sex	Male	59	46.09%	69	53.9%	128	71.51
	Female	23	45.09%	28	54.9%	51	28.49
	Total	82	45.81%	97	54.18%	179	100
Educational	Diploma	13	1.85%	15	15.4%	28	15.64
	First degree	51					
	Masters degree	8	9.7%	10	10.3%	18	10.05
	Total	82	4.8%	97	54.18%	179	100
Marital status	Married	46	56.09%	59	60.8%	105	58.65
	Unmarried	33	40.2%	34	35.05%	67	37.43
	Windowed	3	3.6%	3	3.09%	6	3.35
	Divorced	0	-	1	1.03%	1	0.56
	Total	82	45.8%	97	54.18%	179	100

Source; SPSS output, 2024

The table indicates the distribution of defaulters and non-defaulters among the respondents based on their age groups. Between the ages of 18-30 years, 31.7% were defaulters, and 29.8% were non-defaulters. In the 31-39 age groups, 38.1% were defaulters, while 36.5% were non-defaulters. For respondents aged 40-49 years, 30.92% were defaulters, and 30.48% were non-defaulters. Among those aged 50 and above, 1.02% was defaulters, and 1.2% was non-defaulters.

Regarding gender distribution, the table shows that male respondents constituted 71.5% of the sample, while females accounted for 28.49%. This implies a higher participation of males in the real estate sector

compared to females. Furthermore, 53.9% of male respondents were defaulters, while 54.9% of female respondents were defaulters, indicating a slightly higher rate of default among female respondents.

The educational levels of the respondents reveal that the highest proportion, 40.22%, had attained education levels below grade nine, followed by 15.64% who completed grades 10-12 or obtained a diploma, and 10.04% who held a degree. This suggests that borrowers with higher levels of education are more likely to repay their loans promptly compared to those with lower educational attainment levels. In other words, real estate borrowers with lower education levels tended to default more frequently than those with higher education levels.

Regarding marital status, married respondents constituted the highest percentage at 60.8%, followed by unmarried, divorced, and then widowed respondents. This implies a higher participation of married individuals in the real estate sector. Additionally, 60.8% of married respondents were defaulters, compared to 35.05% of unmarried respondents, 3.09% of widowed respondents, and 1.03% of divorced respondents. These figures suggest that married respondents were more likely to default on their loans than unmarried respondents.

Characterization of Defaulters and non-defaulters by institutional related factors.

Table 4.5; Training with loan repayment cross tabulation

Is the enterprise officer given training for your enterprise member?*loan repayment

		loan repayment				Total	
		Non defaulter		Defaulter			
		N	%	N	%	N	%
Training	Yes	62	51.23	59	48.7	121	67.59
	No	21	26.2	37	63.79	58	32.4
Total		83	44.6	96	53.63	179	100

Source; SPSS output, 2024

As we see from the above Table 4.5; regarding to the training from total sample of the respondents response yes were 121 (67.59%) were trained and 58(32.4%) were not trained by responsible body. From the total respondents 96 (53.63%) are defaulters and 44.6 were non defaulters. This implies that training is important for real estate regarding to loan repayment and it was one of major determinants of loan repayment of real estate in the study area.

Table 4.6; Follow-up and supervision with loan repayment cross tabulation

Are there supervision, follow-up and evaluation done by the responsible body?

Loan repayment

		loan repayment				Total	
		Non defaulter		Defaulter			
		N	%	N	%	N	%
Follow-up and	Yes	24	35.29	44	64.70	68	37.98
	No	59	53.15	52	46.84	111	62.01
Total		83	46.36	96	53.63	17	100

Source; SPSS output, 2024

As shown in table 4.6, regarding follow-up and supervision, out of the total sample, 68 respondents (37.98%) stated that they were supervised and followed up by the responsible body, while 111 respondents (62.01%) reported that they did not receive follow-up and supervision from the responsible body. From the total respondents, 83 (46.36%) were non-defaulters, and 96 (53.63%) were defaulters. This implies that follow-up and supervision are crucial for real estate companies in terms of loan repayment. Consequently, follow-up and supervision were identified as one of the major determinants of loan repayment for real estate companies in the study area.

Table 4.7; Repayment period with loan repayment cross tabulation

The period given to the loan repayment is enough to your Companies?* loan repayment

		loan repayment				Total	
		Non defaulter		Defaulter			
		N	%	N	%	N	%
Repayment	Yes	18	33.96	35	66.03	53	29.60
	No	65	51.58	61	48.41	126	72.06
Total		83	46.36	96	53.63	179	100

Source; SPSS output, 2024

The table 4.7; regarding to the period given to the loan repayment from total sample of the respondents response yes were 53(29.60%) answered the time given for the loan repayment (loan repayment period) enough and 126(72.06%) were the time given for loan repayment is not convenient. From the total respondents 83(46.36 %%) are defaulters and 96(53.63) were non defaulters. This implies that

repayment period given by microfinance is not enough for loan repayment. Then the repayment period was one of major determinants of loan repayment of real estate Companies in the study area.

Generally the institutional management related factors such as; Training, Follow-up and supervision and repayment period were the major determinants of loan repayment of real estate Companies in the study area.

Characterization of Defaulters and non-defaulters by borrowers related factors

Table 4.8; Experience with loan repayment cross tabulation

Do you have similar business experience before becoming a manager of this Real Estate?

Loan repayment

		loan repayment				Total	
		Non defaulter		Defaulter			
		N	%	N	%	N	%
Experiences	Yes	19	34.54	16	45.7	48	19.55
	No	64	51.61	80	64.51	131	80.4
Total		83	46.36	96	53.63	179	100

Source; SPSS output, 2024

The table 4.8 pertains to the respondents' experience with loan repayment. From the total sample, 35 respondents (19.55%) answered that they had business-related experience before joining real estate companies, while 144 respondents (80.44%) did not have any such experience. Out of the total respondents, 83 (46.36%) were non-defaulters, and 96 (53.63%) were defaulters. This implies that the leaders' experience is crucial for properly running the business and ensuring loan repayment. Therefore, the leaders' experience was one of the major determinants of loan repayment for real estate companies in the study area.

Table 4.9; Member size with loan repayment cross tabulation

Companies members size can affect loan repayment*loan repayment

		loan repayment				Total	
		Non defaulter		Defaulter			
		N	%	N	%	N	%
Experiences	Yes	75	59.05	52	40.94	127	70.94
	No	5	9.6	47	90.38	52	29.05
Total		80	44.69	99	53.30	179	100

Source; SPSS output, 2024

The above table 4.9; shows that the Companies member size to the loan repayment from total sample of the respondents response yes were 127(70.9%) answered they answered the Companies member size can affect loan repayment and 52(29.05%) were the enterprise member size cannot affect loan repayment of Real estate. From the total respondents 80(44.69%) are non-defaulters and 99(55.3%) were defaulters. The 70.4% of respondents are those said the member size can affect loan repayment from the total respondents 55.3 of respondents are defaulters. This implies that the Companies member size is can affect loan repayment. Then the Companies member size was one of major determinants of loan repayment of real estate Companies in the study area.

Table 4.10; Keeping book of records with loan repayment cross tabulation

As your Companies do you have book keeping recording that all revenue, expenditures, expenses, generally recording all activities?*loan repayment

		loan repayment				Total	
		Non defaulter		Defaulter			
		N	%	N	%	N	%
Experiences	Yes	87	100	99	100	179	100
	No	0	0	0	0	0	0
Total		87	44.69	99	53.30	179	100

Source; SPSS output, 2024

The above table 4.10, regarding the keeping of book records and its influence on loan repayment, shows that out of the total sample of respondents, 87 (100%) of the non-defaulters and 99 (100%) of the defaulters responded. This implies that having proper bookkeeping records for all revenue, expenditures, expenses, and generally recording all business activities is important for properly running the real estate business and facilitating loan repayment. Therefore, the keeping of book records by real estate Companies was one of the major determinants of loan repayment for real estate Companies in the study area.

Generally, from the borrower-related factors such as experience, member size, and keeping book records, these factors were major determinants of loan repayment for real estate Companies in the study area.

iv) Characterization of Defaulters and non-defaulters by external related factors

Table 4.11; Market accessibility with loan repayment cross tabulation

Accessibility of market make good performance * loan repayment							
		loan repayment				Total	
		Non defaulter		Defaulter			
		N	%	N	%	N	%
Market accessibility	Yes	79	63.2	66	52.28	125	69.83
	No	25	46.29	9	16.67	54	30.16
Total		104	58.10	75	41.89	179	100

Source; SPSS output, 2024

The above table 4.11, regarding market accessibility and its influence on loan repayment, from the total sample of respondents, 125 (69.83%) answered 'Yes' that accessibility to the market leads to good performance in loan repayment, while 54 (30.16%) answered 'No', indicating that market accessibility does not contribute to good performance in loan repayment.

Out of the total respondents, 104 (58.10%) were non-defaulters, and 75 (41.89%) were defaulters. This implies that accessibility to the market enables good performance in loan repayment for real estate Companies. Therefore, market accessibility was one of the major determinants of loan repayment for real estate Companies in the study area.

Table 4.12; Infrastructures with loan repayment (cross tabulation)

Infrastructures (Shortage electricity & water supply) do influence your business running and yourloan repayment ability? * Loan repayment

Accessibility of market make good performance * loan repayment							
		loan repayment				Total	
		Non defaulter		Defaulter			
		N	%	N	%	N	%
Infrastructure	Yes	62	55.58	59	48.76	121	67.59
	No	21	30.88	37	63.79	58	32.40
Total		83	46.36	96	53.63	179	100

Source; SPSS output, 2024

4.2. Result of Econometric Model

As shown in Table 12, regarding the influence of infrastructure on loan repayment, 67.59% (121) of the total respondents answered 'Yes,' indicating that shortages of electricity, water supply, and lack of road access influenced their business operations and loan repayment ability. Conversely, 32.40% (58) answered 'No,' suggesting that infrastructure shortages did not affect their business operations and loan repayment ability. Of the total respondents, 46.36% (83) were non-defaulters, while 53.63% (96) were defaulters.

These findings imply that the shortage of infrastructure, such as electricity, water supply, and road access, significantly impacts the business operations and loan repayment ability of real estate companies. Infrastructure emerged as one of the major determinants of loan repayment for real estate companies in the study area. Among external factors, including market accessibility and infrastructure, the latter stood out as a crucial determinant of loan repayment for real estate companies.

The descriptive statistics analysis revealed that independent variables, including institutional-related factors (training, continuous supervision and follow-up, repayment period), borrower-related factors (education level, leader's business experience, enterprise member size, and bookkeeping), and external factors (market accessibility and infrastructure), were the major determinants of loan repayment for real estate companies in the study area.

Furthermore, the results obtained from open-ended questionnaires and interviews suggest that training, continuous follow-up and supervision, loan repayment period, lack of market accessibility, and infrastructure were the most significant factors influencing the loan repayment of real estate companies in Addis Ababa city.

Logistic Regression Analysis

In this part of the research, further analysis was conducted to test the influence of independent variables: institutional-related factors (lack of training, follow-up and supervision, repayment period), borrower-related factors (age of leader, leader's experience, keeping book of records, company member size), and external-related factors (lack of market accessibility, infrastructure such as water supply, electric power interruption, and road) on the dependent variable, which determines loan repayment.

Logistic regression analysis was preferred due to the binary/dichotomous nature of the dependent variable, "loan repayment" (Hosmer & Lemeshow, 1989). Unlike multiple regression and discriminate analysis, logistic regression does not involve assumptions related to normality, linearity, and homogeneity of variance for the independent variables, which explains the popularity of this model.

Logistic regression analysis is particularly appropriate for studying binary or categorical outcomes, which makes it well-suited for analyzing loan repayment behavior in organizations like financial institutions, banks, or lending companies. In the context of the research you've described, it would be appropriate for studying real estate companies and their loan repayment patterns. Here's why:

1. Binary outcome: Loan repayment can often be categorized as a binary outcome (repaid or not repaid), which aligns with logistic regression's design.
2. Multiple predictors: Logistic regression can handle multiple independent variables, allowing the study to consider various factors affecting loan repayment simultaneously.
3. Probability prediction: It provides probability estimates for the outcome, which is useful in assessing the likelihood of loan repayment based on different factors.
4. Non-linear relationships: Logistic regression can capture non-linear relationships between variables, which is often the case in complex financial scenarios.
5. Interpretability: The results of logistic regression are relatively easy to interpret, making it useful for practical applications in risk assessment and policy-making.
6. Widely used in finance: It's a common method in credit scoring and risk assessment in the financial sector.

For your study on real estate companies in Ethiopia, logistic regression would be appropriate for analyzing how various factors (like firm characteristics, loan features, cost factors, infrastructure constraints, and government policies) influence the probability of successful loan repayment. This analysis can provide valuable insights for lenders, policymakers, and real estate companies themselves in understanding and managing loan repayment risks.

Multi-co linearity

Similar to multiple linear regressions, binary logistic regression requires no high correlation (multicollinearity) among the predictor variables (independent variables). This assumption can be assessed by a correlation matrix among the predictor variables.

According to Tabachnick & Fidell (2013) and Kline (2005), as long as the correlation coefficients among the independent variables are less than 0.9, the assumption is met. To detect multicollinearity problems in this study, the researcher applied a correlation matrix.

According to Phyllis (2007, p. 220), citing Kline (2005), Spearman's rank correlation can be applied instead of Pearson's correlation for categorical variables. The result table 18 of the correlation matrix shows that all independent variable correlations were below 0.9, indicating no multicollinearity problem.

Table 4.13; Correlation

Correlation Matrix

		Const	Age	TR	SF	RP	EXP	MS	LMS	IS	LBKR
Step	Const	1.000	.								
	Age	.142	1.000								
	TR	.070	.147	1.000							
	SF	-.098	.049	.753	1.000						
	RP	-.004	.092	.786	.779	1.000					
	EXP	-.252	.221	.108	.105	.052	1.000				
	MS	-.099	-.156	-.150	-.141	-.133	-.121	1.000			
	LMS	-.478	-.187	-.347	-.258	-.317	-.168	.291	1.000		
	IS	-.167	.309	.289	.379	.415	-.033	-.408	-.205	1.000	
	LBKR	-.238	-.826	-.129	-.059	-.058	-.063	.155	-.012	-.401	1.000

Evaluation of a logistic regression model

As stated by Hyeoun (2013), the evaluation of a logistic regression model involves several key aspects. Firstly, it is essential to assess the relationship between all the independent variables and the dependent variable. Secondly, the importance of each independent variable needs to be evaluated and quantified. Thirdly, goodness-of-fit statistics must be examined to determine how well the model fits the observed data. Finally, the model's predictive accuracy or discriminating ability should be evaluated to gauge its effectiveness in making accurate predictions or classifications.

Table 4.14; Model Summary

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	111.598[a]	.530	.709

The model summary table 19; illustrates the computation of correlation measures to estimate the strength of the relationship so the researcher prefer to use Nagelkerke R Square shows that about 70.9% of the variation in the outcome variable which is loan repayment is explained by this logistic model. (Chan. Y, 2004).

Table4.15; Classification Table

			Predicted		
			loan repayment		Percentage
Observed			Non defaulter	Defaulter	Correct
Step 1	Loan repayment	Non defaulter	67	15	81.7
		Defaulter	13	84	86.6
	Overall Percentage				84.4
a. The cut value is .500					

According to Sarkar and Midi (2010), a common technique in social science for judging the classification table accuracy of a fitted binary logistic regression model is the accuracy ratio. The probability of detecting true signals (sensitivity) and false positivity (specificity) for the entire range of possible cut-points comes from the classification table. According to Hyeoun (2013), higher sensitivity and specificity indicate a better fit of the model. Table 4.15 shows that the overall correct prediction of 84.4% demonstrates an improvement over the chance level, which is 50%. If the classification table value is greater than the cut value, the model is considered a good fit, or the model performance is considered excellent.

Table 4.16; Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	142.379	9	.000
	Block	142.379	9	.000
	Model	142.379	9	.000

Table 4.16 presents the Omnibus tests of model coefficients, which are used to check whether the new model (with explanatory variables included) is an improvement over the baseline model. It uses chi-square tests to determine if there is a significant difference between the log-likelihoods (specifically -2LLs) of the baseline model and the new model. If the new model significantly reduces -2LL compared to the baseline model, it suggests that the new model is better at explaining more of the variance in the outcome (Laerd, 2017). The logistic regression model was statistically significant, X2 (9, N=179) = 142.379, $p < 0.000$, indicating that the model was able to identify determinants for credit default.

Table 4.17; Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
1	2.304	8	.970

The Hosmer-Lemeshow test is another method to examine whether the observed proportions of events are similar to the predicted probabilities of occurrence in subgroups of the model population. According to Hyeoun (2013), a better approach to present any goodness-of-fit test available is the Hosmer-Lemeshow test, which is a commonly used measure of goodness-of-fit based on the $\chi 2$ distribution with 8 degrees of freedom. A large p-value greater than 0.05 indicates a good fit to the data, thereby indicating the overall model fit is good. In general, according to Hosmer and Lemeshow (2000), if the p-value is less than 0.05, one can conclude that the model is not a good fit. However, in this model, the p-value is 0.97, which is greater than 0.05, meaning one can conclude that the model is a good fit for the observed data.

Table 4.18; Variables in the Equation

Variables in the Equation

		B	S.E.	Wald	Df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1	Age	.965	.357	7.309	1	.007	2.626	1.304	5.287
	TR	2.644	.723	13.370	1	.000	14.064	3.410	58.009
	SF	2.545	.712	12.794	1	.000	12.746	3.160	51.410
	RP	2.646	.810	10.668	1	.001	14.103	2.882	69.021
	EXP	1.402	.380	13.634	1	.000	4.064	1.931	8.553

	MS	-7.406	2.050	13.047	1	.000	.001	.000	.034
	LMA	-2.148	.746	8.282	1	.004	.117	.027	.504
	IS	1.663	.632	6.924	1	.009	5.276	1.529	18.213
	LBKR	-1.435	.570	6.352	1	.012	.238	.078	.727
	Const.	-3.608	2.428	2.209	1	.137	.027		

a. Variable(s) entered on step 1: Age, TR, SF, RP, EXP, MS, LMS, IS, LBKR.

The significant differences between successful borrowers and defaulters in the context of loan repayment, particularly for real estate companies, can be observed across several key dimensions. Based on the research you've described and general trends in lending, here are some of the main differences:

1. Financial Management:
    - Successful borrowers typically demonstrate strong financial management skills, including proper budgeting, cash flow management, and financial planning.
    - Defaulters often show poor financial management, with inadequate cash flow control and ineffective financial planning.
2. Business Experience:
    - Successful borrowers often have more extensive experience in the real estate sector or related fields.
    - Defaulters may lack sufficient industry experience or may be newer to the real estate business.
3. Record Keeping:
    - Successful borrowers maintain accurate and up-to-date financial records.
    - Defaulters may have poor or inconsistent record-keeping practices.
4. Market Understanding:
    - Successful borrowers typically have a better understanding of market dynamics and can adapt to changes.
    - Defaulters may lack market insight or fail to adjust their strategies to market conditions.
5. Project Management:
    - Successful borrowers often demonstrate strong project management skills, completing projects on time and within budget.
    - Defaulters may experience project delays, cost overruns, or poor execution.

6. Risk Management:
    - Successful borrowers tend to have better risk assessment and mitigation strategies.
    - Defaulters may underestimate risks or fail to implement adequate risk management measures.
7. Collateral Quality:
    - Successful borrowers often provide high-quality collateral that maintains or appreciates in value.
    - Defaulters may offer collateral that depreciates quickly or is overvalued.
8. Loan Terms Understanding:
    - Successful borrowers fully understand and comply with loan terms and conditions.
    - Defaulters may misunderstand or fail to adhere to loan agreements.
9. Economic Adaptability:
    - Successful borrowers can often navigate economic downturns or policy changes more effectively.
    - Defaulters may be more vulnerable to economic fluctuations and policy shifts.
10. Infrastructure Utilization:
    - Successful borrowers may be better at leveraging available infrastructure or overcoming infrastructure limitations.
    - Defaulters might struggle more with infrastructure constraints, affecting project completion and profitability.
11. Diversification:
    - Successful borrowers often have diversified portfolios or revenue streams.
    - Defaulters may be overly reliant on a single project or market segment.
12. Stakeholder Relationships:
    - Successful borrowers typically maintain good relationships with lenders, suppliers, and customers.
    - Defaulters may have strained relationships with key stakeholders.

These differences highlight the complex interplay of factors that contribute to loan repayment success or failure in the real estate sector. Understanding these distinctions can help in developing more effective lending policies, risk assessment models, and support mechanisms for borrowers in the real estate industry.

The variables in the following equation shows the regression function of logistic regression model and the 'B' values are the logistic coefficients that can be used to create a predictive equation.

Logit(pi)=-3.608+ 0.965 Age + 2.644 TR + 2.545 SF + 2.646 RP + 1.402 EXP - 7.406 MS - 2.148 LMA+1.663 IS -1.435 LBKR

Interpretations of the Coefficients in the Model

The table shows that all the explanatory variables included in this study can significantly explain, at a 95% confidence level, the variation in the dependent variable (loan repayment performance). The standardized beta coefficient column shows the contribution of each individual variable to the model. The beta weight represents the average amount the dependent variable increases when the independent variable increases by one unit (while holding all other independent variables constant). As these are standardized, we can compare them.

Thus, the largest influence on loan repayment of real estate companies is the repayment period (2.646), followed by training (2.644), follow-up and supervision (2.545), infrastructure (1.663), lack of experience (1.402), age (0.965), lack of bookkeeping records (-1.435), and lack of market accessibility (-2.148). On the other hand, with a beta value of -7.406, member size is the poorest predictor of loan repayment.

All independent variables made a statistically significant contribution since the p-values are less than 0.05 for each coefficient in the logistic regression model. The exp(B) column presents the extent to which raising the corresponding measure by one unit influences the odds ratio and can be interpreted in terms of the change in odds. If the values exceed 1, the odds of an outcome occurring increase; if the figure is less than 1, any increase in the predictor leads to a drop in the odds of the outcome occurring (Robert and Richard, 2017).

Borrower-Related Factors that Influence Loan Repayment of Real Estate Companies

The age of respondents (real estate leaders) is found to statistically and positively influence loan repayment in the study area at a 5% significance level when the exp(B) value associated with age is 2.626, greater than 1. This indicates that when the age of the respondent increases by one year, the odds of loan repayment for real estate companies increase by 2.626, keeping all other variables constant. The null hypothesis is accepted, with age having a significant and positive relationship with loan repayment of real estate companies. This finding is consistent with Kebede & Tafese (2016), Pasha & Negese

(2014), who studied that borrowers at younger stages are more likely to default than at older ages, and the age of respondents positively and significantly determines the loan repayment of borrowers. This indicates that older individuals are more responsible for repaying loans than younger borrowers, and as the borrower's age increases, they gain the ability to accumulate wealth, obtain experience in business management, and use credit more effectively than younger borrowers.

The leader's experience is found to statistically and positively influence loan repayment in the study area at a 5% significance level when the exp(B) value associated with experience is 4.064, keeping other variables constant. The odds ratio for the leader's experience is 4.064, greater than 1, indicating that when the respondent's experience is raised by one unit, the odds of loan repayment for real estate companies increase by 4.064, keeping all other variables constant. The coefficient with loan repayment indicates that experience positively influences loan repayment by real estate companies in the study area. This shows that real estate companies managed by experienced leaders have a lower probability of failing to repay the loan. Business-related experience is one of the determinants that affect the loan repayment rate of borrowers. The hypothesis is accepted that the leader's experience has a statistically significant and positive relationship with loan repayment in the study area. This research finding is similar to Geleta (2018) and Borena & Waktola (2024), whose research found that business-related experience positively and significantly affects loan repayment. This shows that real estate companies managed by inexperienced leaders have a higher probability of failing to repay the loan.

The member size (MS) is found to statistically and negatively influence loan repayment in the study area at a 5% significance level when the exp(B) value associated with member size is 0.001, keeping other variables constant. The odds ratio for member size (MS) is 0.001, less than 1, indicating that when the member size of a real estate enterprise decreases by one person, the odds of loan repayment increase by 0.001, keeping other variables constant. The result indicates that member size inversely influences the loan repayment of borrowers, hence being a major determinant of loan repayment by real estate companies. This study indicated that real estate companies with a lower group size performed better in loan repayment than those with a large group size. Real estate companies with large member group sizes could fail to repay their loans. The null hypothesis is accepted that member size has a statistically significant and negative relationship with loan repayment in the study area. This result is similar to Girma (2018), whose result showed that member sizes were statistically significant and negatively influenced loan repayment.

Lack of bookkeeping records is found to statistically and negatively influence loan repayment in the study area at a 5% significance level when the exp (B) value associated with lack of bookkeeping

records is 0.238, keeping other variables constant. The odds ratio for lack of bookkeeping records is 0.238, less than 1, indicating that when bookkeeping records for real estate Company's decrease by one unit, the odds of loan repayment decrease by 0.238, keeping all other variables constant. The lack of bookkeeping records inversely influences the loan repayment of borrowers, hence being a major determinant of loan repayment by real estate companies. The result states that recording financial transactions in bookkeeping records is essential to monitor and evaluate the profitability and financial position of the real estate business. The borrowers who manage their expenses and revenues may have probably better monitored their loan status than the real estate companies without bookkeeping records. The null hypothesis is accepted that the lack of bookkeeping records has a statistically significant and negative relationship with loan repayment in the study area, and the researcher's result is similar to Borena & Waktola (2024), which shows that the lack of proper bookkeeping experience in the business area negatively affects loan repayment.

Institutional Management-Related Factors that Influence Loan Repayment of Real Estate Sectors

Training is found to statistically and positively influence loan repayment performance in the study area of real estate companies in Addis Ababa with a 5% significance level. The exp(B) value associated with training is 14.064, keeping other variables constant. The odds ratio of 14.064 for training, being greater than 1, indicates that when training increases by one unit, the odds of loan repayment in the real estate sector increase by 14.064, holding all other variables constant. Training is also among the factors that were expected to positively and significantly affect loan repayment performance of real estate companies, as hypothesized. The findings highlight the crucial role of training in enhancing the loan repayment capabilities of real estate businesses, likely by improving their financial management, project planning, and overall operational efficiency.

As the result indicated, training accessibility was found to positively and statistically significantly determine loan repayment performance. Access to training for real estate companies refers to the facilitation of various training programs that assist the leaders and professionals in these companies to perform their roles effectively. Therefore, real estate companies that have sufficient access to training tend to repay their loans more reliably than those with less training. In other words, providing well-organized and comprehensive training for borrowers lessens the probability of loan default. Hence, the hypothesis that training is positively and statistically related to loan repayment performance in the real estate sector is accepted. This finding is consistent with the findings of Borena & Waktola (2024) and Abraham (2016).

Follow-up and supervision are found to statistically and positively influence loan repayment performance in the real estate sector at a 5% significance level when the exp(B) value associated with follow-up and supervision is 12.746, keeping other variables constant. The odds ratio of 12.746 for follow-up and supervision, being greater than 1, indicates that when follow-up and supervision increase by one unit, the odds of loan repayment in the real estate sector increase by 12.746, holding all other variables constant. Real estate companies that receive regular follow-up and supervision tend to perform better in settling their loans because supervision may prevent the misuse of loan funds for unintended purposes and encourage the companies to make full efforts to ensure the success of their investment projects. Hence, the hypothesis that follow-up and supervision are positively and statistically related to loan repayment performance in the real estate sector is accepted. The result is similar to the findings of Abraham (2016) and Borena & Waktola (2024), which stated that follow-up and supervision are statistically significant and positively influence loan repayment

Loan Repayment Period

The loan repayment period is found to statistically and positively influence loan repayment performance in the real estate sector at a 5% significance level when the exp(B) value associated with the loan repayment period (LRP) is 14.103, keeping other variables constant. The odds ratio for the loan repayment period (LRP) is 14.103, greater than 1, indicating that when the loan repayment period is increased by one unit, the odds of loan repayment in the real estate sector increase by 14.103.

The loan repayment period is among the factors expected to positively and significantly affect loan repayment performance in the real estate sector. The result indicates that the time given for real estate companies to repay loans is not sufficient, and companies that are given an adequate loan repayment period are more likely to repay their loans compared to those with a shorter repayment period. Hence, the hypothesis that the loan repayment period is positively and statistically related to loan repayment performance in the real estate sector is accepted. This finding is consistent with the results of Borena & Waktola (2024) and Kebede & Tafese (2016), which found that the loan repayment period is statistically and positively related to loan repayment performance.

External Factors Influencing Loan Repayment Performance

Infrastructure is found to statistically and positively influence loan repayment performance in the real estate sector at a 5% significance level when the exp (B) value associated with infrastructure is 5.276, keeping other variables constant. The odds ratio for infrastructure is 5.276, greater than 1, indicating that a one-unit increase in infrastructure availability raises the odds of loan repayment by 5.276.

Infrastructure is also among the factors expected to positively and significantly affect loan repayment performance in the real estate sector.

The result indicated that real estate companies with access to adequate infrastructure, such as reliable electricity and water supply, are more likely to repay loans on schedule, whereas companies lacking sufficient infrastructure are more prone to loan defaults. Hence, the hypothesis that infrastructure availability is positively and statistically related to loan repayment performance in the real estate sector is accepted. This study is similar to Borena & Waktola (2024).

Lack of market accessibility is found to statistically and negatively influence loan repayment performance in the real estate sector at a 5% significance level when the exp(B) value associated with lack of market accessibility is 0.117, keeping other variables constant. The odds ratio for lack of market accessibility is 0.117, less than 1, indicating that when the lack of market accessibility for real estate companies decreases by one unit, the odds of loan repayment increase by 0.117. Hence, lack of market accessibility inversely influences the loan repayment performance of borrowers and is considered a major determinant of loan repayment in the real estate sector.

Therefore, higher levels of market accessibility result in a higher probability of profitability and a greater level of loan repayment for real estate companies. Hence, the hypothesis that lack of market accessibility is statistically and negatively related to loan repayment performance in the real estate sector is accepted. This finding is consistent with the results of Dire (2018), Pasha & Negese (2014), and Geleta (2018), which found that lack of market accessibility is statistically and negatively related to loan repayment performance. However, it contradicts the finding of Ababiya, Geta, and Lemecha (2015), which found that lack of market accessibility is statistically and positively related to loan repayment performance.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction In this chapter, the summary, conclusions, and recommendations are discussed. Based on the findings of the study, recommendations are made to real estate operators, suggestions for other researchers, and responsible bodies for the loan repayment of real estate Companies.

5.1. Summary

This research aimed to examine the determinants of loan repayment for real estate companies in Addis Ababa city. The study investigated the institutional management-related factors, borrower-related factors, and external factors that determine the loan repayment of real estate companies. It employed descriptive and explanatory research designs. Primary data was collected through open and closed-ended questionnaires from a random sample of 49 real estate companies.

Once the relevant data was gathered, it was processed using the Statistical Package for Social Science (SPSS) version 23, and a binary logistic regression model was used to examine the determinants affecting the loan repayment of real estate companies.

The majority of real estate leaders were male respondents, showing that women's participation in the real estate business activity is very low compared to men. This indicates that male real estate enterprise leaders are dominant in real estate operations due to the wide gender gap. The majority of respondents were in the age group between 30-39 years (37.43%), implying that most real estate companies are run by younger individuals.

The study implies that the majority of real estate owners (73.2%) had no business experience before joining their current business companies. This shows that most of the managers of companies were inexperienced, indicating that the companies in the study area were run by inexperienced owners or managers.

The age of respondents is found to statistically and positively influence loan repayment in the study area at a 5% significance level when the exp(B) value associated with age is 2.626, indicating that when age is raised by one unit (percent), the odds ratio is 2.626, keeping other variables constant. This implies that lower age groups are more likely to default than higher age groups.

The leader's experience has an odds ratio of 4.064, which is greater than 1, indicating that when the respondent's experience is raised by one unit, the odds ratio is 4.064. This suggests that experience positively influences loan repayment by real estate companies. This shows that companies managed by experienced managers have a lower probability of failing to repay the loan. It has been known that business-related experience is one of the determinants that affect the loan repayment rate of borrowers.

The member size (MS) has an odds ratio of 0.001, which is less than 1, indicating that when the member size of a real estate enterprise decreases by one unit (one person), the odds ratio is 0.001. The result indicates that member size inversely influences the loan repayment of borrowers, hence a major determinant of loan repayment by real estate companies. It indicates that enterprise member size was statistically significant and negatively related to loan repayment. This study indicated that companies with a lower group size performed better in loan repayment than those with a large member size.

Lack of keeping book records is found to statistically and negatively influence loan repayment in the study area, hence a major determinant of loan repayment by real estate companies. The result stated that recording financial transactions in the book of records is essential to monitor and evaluate the profitability and financial position of the real estate business. The borrowers who manage their expenses and revenues may have probably better monitored their loan status than real estate companies without book records.

Training is found to statistically and positively influence loan repayment in the study area at a 5% significance level when the exp (B) value associated with training is 14.064, keeping other variables constant. The odds ratio was greater than 1, indicating that a one-unit increase in training raises the odds ratio by 14.064. Access to training for companies refers to the facilitation of different training programs that assist the leaders of the companies in performing suitably. Capacity-building training prepares companies to perform in the business they are engaged in.

Follow-up and supervision are found to statistically and positively influence loan repayment in the study area at a 5% significance level when the exp (B) value associated with follow-up and supervision is 12.746, keeping other variables constant. The odds ratio of 12.746 for follow-up and supervision was greater than 1, indicating that a one-unit increase in follow-up and supervision raises the odds ratio by 12.746. It indicated that supervision affects loan repayment positively and statistically significantly. Real

estate companies that were supervised showed good performance in settling their loans because supervision may avoid the problem of diverting the loan for other purposes and encourages repayment.

The odds ratio for the loan repayment period (LRP) is 14.103, which is greater than 1, indicating that when the loan repayment period is increased by one unit, the odds ratio is 14.103. The result indicates that the time given for companies to repay loans is not enough, and companies that are given an adequate loan repayment period can repay their loans better than those with a shorter repayment period. This is also among the factors that were expected to positively and significantly affect loan repayment of real estate companies.

The odds ratio for infrastructure is 5.276, which is greater than 1, indicating that a one-unit increase in infrastructure availability raises the odds ratio by 5.276. Infrastructure is also among the factors that were expected to positively and significantly affect loan repayment of real estate companies. It implies that real estate companies with access to adequate infrastructure, such as reliable electricity and water supply, are more likely to repay loans on schedule, whereas companies without sufficient infrastructure are more prone to loan defaults.

The odds ratio for lack of market accessibility is 0.102, which is less than 1, indicating that when the lack of market accessibility for real estate companies decreases by one unit, the odds ratio is 0.102. Hence, lack of market accessibility inversely influences the loan repayment of borrowers, being a major determinant of loan repayment by real estate companies. The result states that the lack of market accessibility can lead to credit defaults for real estate companies in the study area. Access to the market refers to the availability of market demand for the particular product or service.

Generally, the descriptive and inferential statistics and the results of the binary logistic regression show that institutional management-related factors, borrower-related factors, and external factors influenced loan repayment of real estate companies in the study area.

Additionally, the results of the binary logistic regression model indicated that the respondent's experience, respondent's age, training, follow-up and supervision, and loan repayment period positively and significantly affected loan repayment. The enterprise member size and lack of accessible market were significantly related to and negatively affected loan repayment of companies, being major factors that determine the loan repayment of real estate companies in Addis Ababa.

5.2 Conclusions

This research was conducted on real estate companies in Addis Ababa, critically considering the determinants of loan repayment. The researcher examined institutional-related factors, borrower-related factors, and external factors that affect the loan repayment of real estate companies and recommended possible solutions to alleviate the problem of loan repayment for real estate companies. Based on the objectives and findings of the study, the following conclusions are discussed.

The role of real estate companies in Ethiopia is important in poverty reduction through employment creation, and the government strongly believes that the real estate sector is an accurate solution to reduce unemployment and poverty. However, there are many serious challenges that slow down the growth and development of real estate companies in Ethiopia.

This study employed both descriptive and binary logistic models to identify the factors that determine loan repayment of real estate companies by categorizing them as institutional management-related factors, borrower-related factors, and external factors. Thus, the author identified that the loan repayment of real estate companies was influenced positively or negatively by these factors.

The descriptive result of the study shows that the majority of the operators of real estate companies were male, with the age group between 30-39 years indicating the productive unit of the labor force. However, the participation of women in real estate business activity is limited in the study area.

Most operators have attained their educational qualifications of below grade 9 and grades 10-12. This implies that the majority of operators have lower academic qualifications, lacking the skills and knowledge that come from higher formal education, which is significant in managing and enhancing their business performance and loan repayment effectively.

The age of respondents (real estate leaders) is found to statistically and positively influence loan repayment in the study area. This implies that lower age groups of real estate leaders are more likely to default compared to higher age groups. Hence, the age of the real estate leader is a major determinant of loan repayment by real estate companies in Addis Ababa.

Real estate leaders' business-related experiences were found to positively and significantly affect loan repayment. Hence, the leader's experience is a major determinant of loan repayment by real estate companies in Addis Ababa.

The number of members in real estate companies was statistically significant and negatively influenced loan repayment. Therefore, the enterprise member size is a major determinant of loan repayment for real estate companies in the study area. With higher levels of bookkeeping experience in the real estate sectors, they are more likely to be in the higher category (defaulter) of loan repayment. The study established that the lack of bookkeeping records negatively influenced loan repayment by real estate companies. Hence, the lack of bookkeeping records is a major determinant for real estate companies in the study area.

Training accessibility was found to determine loan repayment statistically significant and positively influence loan repayment by real estate companies. Therefore, training is a major determinant of loan repayment by real estate companies in the study area.

Continuous supervision and follow-up affect loan repayment statistically significant and positively influence loan repayment by real estate companies. Since follow-up and supervision are major determinants of loan repayment by real estate companies in Addis Ababa.

The loan repayment period (LRP) affects loan repayment statistically significant and positively influences loan repayment by real estate companies. Hence, the loan repayment period is a major determinant of loan repayment by real estate companies in Addis Ababa.

The result indicated that real estate companies with access to infrastructure such as electric power and water supply are more likely to repay loans on schedule than companies without sufficient infrastructure, which leads to loan defaults, Access to infrastructure statistically significant and positively influences loan repayment by real estate companies. Hence, the loan repayment period is a major determinant of loan repayment by real estate companies in Addis Ababa.

Lack of market accessibility was found to statistically significantly and negatively influence loan repayment by real estate companies. Therefore, market accessibility is a major determinant of loan repayment by real estate companies in Addis Ababa.

5.3 Recommendations

Depending on the above analyzed data and conclusions drawn, the following recommendations were forwarded based on the results about the determinants of loan repayment for real estate companies, which were classified into institutional management-related, borrower/enterprise-related, and external factors, in order to significantly reduce loan defaults and make real estate companies profitable and sustainable.

The involvement of women in ownership and management of real estate companies in business activities should be improved.

Real estate companies managed by inexperienced managers have a higher probability of failing to repay loans. So an assessment of the borrowers' business-related experience should be conducted by institutions/lenders before loan disbursements, and they should also include experience in their loan criteria.

With higher levels of bookkeeping experience in the real estate sectors, they are more likely to be in the higher category (defaulter) of loan repayment, which means that having the problem of bookkeeping experience, they could not be able to pay their loans on the repayment schedule, Because they could not properly manage the expense and revenue-related activities of their business. So the bookkeeping of records should be improved, and real estate companies should register their daily activities to control all their activities and loans.

Capacity-building trainings would better prepare companies to perform in the business they are engaged in. Therefore, real estate companies with sufficient access to training are more likely to repay their loans than those with less training. In other words, delivering well-organized and sufficient training properly for borrowers lessens the probability of being defaulters. So companies, industry development offices, and finance provider offices/lenders should provide frequent training activities before and after loan disbursement to real estate companies and make them aware of their financial management activities like saving habits and financial statement recording experience. This enables them to manage the expense and revenue-related activities of their business in the study area.

Real estate companies that were supervised showed good performance in settling their loans because supervision may avoid the problem of diverting the loan for other purposes and encourages the members to make the full effort essential for their investment projects to be successful. Therefore, the companies,

industry development sector, and MFIs that provide finance should make continuous follow-up and guidance to borrowers on how to use loans in general to solve the problem of loan repayment by real estate companies. Otherwise, their growth and loan repayment will be prolonged for a longer time.

The loan repayment period should be improved by the central bank by communicating and integrating with the federal government and other responsible bodies.

Real estate companies should create different market access for their products and services to ensure the existence of market alternatives for their products. So a higher level of market access results in a higher probability of getting profit and a greater level of companies' loan repayment. Therefore, experience-sharing activities on marketing skills should be set by the office of real estate companies with supporting institutions to acquire better knowledge and experiences from each other.

The government should provide infrastructure such as water supply and electric power for real estate companies around the business area.

5.4 Future Research Directions

This study focused on determinants of loan repayment of real estate companies in Addis Ababa only by taking the independent variables as institutional management-related factors, borrower-related factors, and external factors that influenced loan repayment of companies in the study area. Future research would be better if done on:

- Examining other factors that might have determined loan repayment of real estate companies and were not included in this study.
- Why all organized real estate companies do not borrow from MFIs and banks?
- How to improve loan repayment, growth, and sustainability of real estate companies?

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Appendix *I Questioners*

ST. MARRY UNIVERSITY

School of Graduate Studies

Department OF Accounting and Finance

I would like to ask you to me by answering the following questions Factors affecting business loan repayment performance: a study on selected real estate companies in Addis Ababa. this survey is conducted by help of Department of Accounting and Finance, School of Graduate Studies, St. marry university, this is not test to there is no right or wrong answers and you do not even have time to your name on, I'm interested your organization personal opinion. Please give your answers sincerely as only this will guarantee the success of the study. The content of this form is absolutely confidential. Information identifying the respondents will not be disclosed under any circumstances. This questionnaires' formal will be filled only by owners /managers of the enterprises .Thank you very much for your help.

Section 1: Demographic information please completes the following biographical information by ticking (√) from the alternative that is the most applicable answer to you in respect of each of the following items.

1. Gender: Male ☐ Female ☐

2. Age: In which age group are you?

18-20 years ☐ 21-30 years ☐ 31-40 years ☐

41-50 years ☐ 51 years above ☐

3. Marital status: Single ☐ Married ☐

4. Educational level:

Under grade 12 ☐ Certificate ☐ Diploma ☐

Degree ☐ Master &above ☐

5. Work experience, in your organization

Below 2years ☐ From 3 – 8years ☐ From 9 – 14years ☐

Section 2 Firm Characteristics, Loan Characteristics, Cost Factors, Infrastructure and Regulations and Economic and Policy Factors: Please tick (√) the number that you feel most appropriate, using the scale from 1 to 2 (Yes or No)

No	**Firm Characteristics**	Yes	No
1	Firm's age and loan repayment rates		
2	Firm size (assets or revenue) and loan repayment performance		
3	Management experience/qualifications and loan repayment rates		
4	Family ownership and loan repayment rates		
	Loan Characteristics:		
1	Loan amount and repayment rates		
2	Interest rate threshold and repayment rates		
3	Loan tenors (repayment periods) and repayment rates		
4	Collateral requirements and repayment rates		
	Cost Factors:		
1	Land prices and repayment capabilities		
2	Material costs and repayment rates		
3	Labor wage levels and repayment rates		
4	Construction costs and repayment abilities		
5	Cost management practices and repayment rates		
	Infrastructure and Regulations:		
1	Transportation infrastructure constraints and repayment abilities		
2	Utilities (water, electricity, telecommunication) and repayment rates		
3	Zoning and land use regulations and repayment performance		
4	Infrastructure constraints and repayment rates for specific real estate sectors		
5	Infrastructure quality and repayment rates		
	Economic and Policy Factors		
1	Favorable government policies/economic conditions and repayment rates		
2	Government support/incentives and repayment rates		
3	Consumer confidence/sentiment and repayment rates		

4	Exchange rates, inflation rates, and repayment performance		
5	Economic indicators and predicting repayment rates		
6	Interest rates and monetary policies and repayment rates		
7	Tax policies and repayment performance		
8	Economic conditions (GDP growth, unemployment) and repayment rates		
9	Housing market conditions and repayment abilities		
10	Government policies/regulations and repayment rates for different real estate sectors		
	Others		
1	Different types of real estate firms and repayment rates		
2	Liquidity ratio and predicting loan repayment ability		

Section 3 Interview

1. Firm Characteristics:

- How has your firm's age impacted its ability to repay loans?
- Can you describe how your firm's size (number of employees, revenue, assets) influences loan repayment performance?
- What role does management competence play in maintaining good loan repayment rates for your firm?

2. Loan Characteristics:

- How do specific loan features like amount, interest rate, tenure, and collateral requirements affect your firm's repayment ability?
- What loan features have been particularly favorable or challenging for your firm's repayment capabilities?

3. Cost Factors:

- How fluctuations have in land prices, material costs, and labor wages impacted your firm's ability to repay loans?
- What strategies does your firm employ to manage cost factors and maintain good loan repayment performance?

4. Infrastructure and Regulations:

- How do infrastructure constraints like transportation, utilities, and zoning regulations influence your firm's loan repayment abilities?

5. Economic and Policy Factors:

- How do current government policies and economic conditions impact your firm's loan repayment rates?