ST. MERY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

MAJOR DETERMINANT OF CREDIT DEFAULT RISK ON MICROAND SMALL ENTERPRISES BORROWERS

BY HAREGEWEYN GEBREKIDAN

A THESIS TO ST.MARY UNIVERSTY,SCHOOL OF GRADUATE STUDIES IN PARTIAL FULFULIMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTERS OF BUSINESS ADMINSTRATION

IN ACOUNTING AND FINANCE

JUNE 2017

ADDIS ABABA, ETHIOPIA

ST. MERY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

MAJOR DETERMINANT OF CREDIT DEFAULT RISK ON MICROAND SMALL ENTERPRISES BORROWERS

BY HAREGEWEYN GEBREKIDAN

APPROVED BY BOARD OF EXAMINERS

_____   _____

Dean, Graduate Studies   Signature

_____   _____

Advisor   Signature

_____   _____

External Examiner   Signature

_____   _____

Internal Examiner   Signature

DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of_____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.

_____   _____

Name   Signature

St.Mary's University, Addis Ababa   **June14, 2017**

ENDORSEMENT

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

_____ _____

Advisor   Signature

St. Mary's University, Addis Ababa   **June14 ,2017**

Table of contents

Acknowledgements

ACRONYMS

AAMSEDA= Addis Ababa Micro and Small Enterprises Development Agency

ADCSI=Addis Credit and Saving Institutions

CSA=Central Statistical Agency

GTP=Grouth Tranceformation Plans

ILO= Intrnational Labor Oganization

MDG= Millennium Development Goal

MFIs=Micro Finance Institutions

MOTI= Ministy of Trade Industry

NBE= National Bank of Ethiopia

NGO= Non Governmental Organization

LDU=Limited Dependent Variable

OLS= Ordinary Least Lquare

ROSCAS= Ratating Caving and Credit Association

TVET=Technical and Vocational Education training

FeMSEDA = Federal Micro and Small Enterprises Development Agency

List of tables

List of figures

Abstract

Access to financing is an important aspect in the business operation of micro and small enterprises. However, repayment problem is an obstacle to the financial institutions including microfinance institutions (MFIs) that offer microfinance based on specific lending methodologies to provide loan to micro entrepreneurs.This study was conducted with the objective of examining and identifying the factors that influence the loan repayment performance of the loan beneficiaries of ADCSI. In order to achieve this objective, descriptive and explanatory esearch design were selected. both Qualitalive and quantitative approach were used. And also both primary and secondary data to callect data by carring a cross sectional survey design was collected. primarily data were collected 88 out of 100 randomly selected clients (44 defaulters and 44 non-defaulters) by using questionnaire. Moreover, secondary data were obtained from the record of ADCSI and pabulished journal. And aslo stratified sampling technique were used.

For the data analysis, descriptive statistics including mean, standard deviation, frequency and percentages were used to describe the socio-economic characteristics of the borrowers. Besides, t-test was employed to compare the defaulters and non-defaulters group. A binary logit model was used to analyze the socio-economic factors that influence loan repayment performance.13 explanatory variables were included in the regression.out of which nine variable were found to have statistically significant effect on the loan repayment performance.the result of shows that having other source of income,education, credit experience, high sales volume, business experience, credit supervision and being female borrower are important and significant factors that enhance the credit repayment performance, while high dependency ratio and large loan size are undermining factors of the loan repayment performance of borrowers. Therefore, consideration of these factors is vital as it provides information that would enable us undertake effective measures with the aim of improving loan repayment performance in the study area. It would also enable lenders and plicy makers as to where and how to exert their effert in order to minimize loan repayment problem.

1. INTRODUCTION

1.1. Background of the Study

In Ethiopia, like many other developing countries, informal sectors are the main source of employment and income for vast number of people (Berhanu, E. 2005: 96). Addis Ababa, the capital city, is the most populated urban city in the country confronted by MSEs Sectors. Increasing population size due to natural growth and high rural-urban migration makes MSEs more significant.

Micro and Small Business Enterprises (MSEs) make a major contribution to aggregate employment, production, and national income in most countries of the world. This sector of an economy is said to have a significant role in the creation of jobs and income generation for quite a large proportion of the population in developing countries like Ethiopia (Wolday, 2000).

According to international Labor Organization (ILO) (2008), over 40% of most countries, employees are employed in SMEs and approximately 75% of new jobs are generated by the micro and small enterprise sector. Further, the cost of creating jobs through small and micro enterprises is a small fraction of what it takes to create jobs in large enterprises. A survey conducted by the Ethiopian Central Statistical Agency (CSA) (2003), indicates that, the whole number labor force engaged in the informal sector activities and small scale manufacturing industries is more than eight fold to that of the medium and large-scale manufacturing industries.

In most developing countrirs, the micro and small enterprises are becoming important vehicle to address the challenges of unemployment by contributing 1.4 to 1.7 million employment opportunities to job seekers, which represents 78% of the total urban economically active population, compared to 62% for Africa as a whole (Miche'al, 2006).

In Ethiopia, despite the enormous importance of the MSE sector to the national economy about job creation and the alleviation of object poverty, many of the MSEs are unable to realize their

full potential due to the existence of different factors that inhibit their growth and performance. One of the leading factors contributing to the unimpressive growth and performance of the enterprises is limited access to finance (Wolday, 2004).

Microfinance institutions (MFIs) were, therefore, established to fill the gap in the financial services sector by providing fund to those who have been excluded from accessing financial services from formal financial institutions and also contribute to reduce negative impacts of local money lenders in the area where they operate (Miche'al, 2006).

Wolday (2005) revealed that the sustainability of microfinance institutions that reach a large number of rural and urban poor who are not served by the conventional financial institutions, such as the commercial banks, have been a prime component of the new development strategy of Developing countries like Ethiopia.

Onyeagocha et al. (2012) argued that sustainability of MFIs is greatly influenced by the loan repayment performance of their clients. High repayment rates enable MFIs to recover interest income and minimize loan losses which enhance profits. In turn, these profits boost the capital base which enables MFIs to raise their outreach and ease their dependence on donors. However, repayment problem (or credit default risk) become the main obstacle for the microfinance institution to continue providing microfinance services (Nawai and Sheriff, 2013).

Default on borrowed funds could arise from unfavorable circumstances that may affect the ability of the borrower to repay as pointed out by Stigliz and Weiss (1981). Credit default risk includes both the loss of income resulting from the MFIs failure to collect an anticipated interest earning as well as the loss of principal resulting from loan default (NBE, 2010). Loan defaults play crucial role in MFIs expenses, cash flow, revenue and profitability. Poor repayment of credit reduces lenders net return thereby decreasing the ability of the institution to generate resources internally for institutional growth (Onyeagocha et al., 2012).

Although the performance of MFIs of Ethiopia has been remarkable since their establishment, they are experiencing repayment problems as can be observed from their declining repayment

rates (Getaneh, 2005). Abraham (2002) asserted that credit default risk has been a critical problem faced by many micro finance institutions that offer credit to the micro and small enterprises.

one way to address the loan repayment problem is to investigate the factors which affect the loan repayment of MFIs. Empirical work by Jemal (2003) and Samuel (2011) identified; education, household size, income, sales, loan supervision, loan size and suitability of repayment period, as strong determinant factors of loan repayment performance of the Ethiopian microfinance industry.

Further, Abraham (2002) in his study on determinant of loan repayment risk in micro and small enterprises, identified; sex, having other sources of income, education, loan size, business experience and repayment period as key determinants. Similarly, Miche'al (2006) on his study on microfinance repayment problem in the Micro and Small Enterprises sector in Addis Ababa agreed with Abraham (2002) that loan size, business experience and educational level of borrower were strong factors in loan repayment.

Samuel (2011) asserted that solving the major financial constraint of this important sub-sector of the economy is an important step towards the Millennium Development Goals (MDG) which the country is aspiring to achieve. For this to happen as expected, the problem of high default risk associated with them, which made the financial institutes unwilling to provide loan, has to be resolved.

Given the situations and thoughts linked to credit default, the research was things to made empirical investigation on the determinant factors of credit default risk of micro and small enterprises in Addis Credit and Saving Institutions.

1.2 Statement of the problem

Ethiopian government has indicated in the Growth and Transformation Plan (GTP) that creating access to finance for micro and small enterprises as one basic way out from the vicious circle of poverty (GTP, 2011).

The sustainability and continuity of the financial institutions to increase the volume of credit to stimulate the poverty reduction goal depends on the repayment performance. High repayment performance enables the institutions to lower the interest rates and processing costs and consequently increase supply of loans. Besides, high repayment rates reduce the subsidy-

dependence of the credit institutions to assist them attain a better sustainability level. Repayment performance, thus, serves as a positive indicator for increasing the volume of credit availability to various sectors of the economy and attaining a high loan collection rate is a necessary condition for MFI to become self-sustainable in the long run (Wolday, 2005).

The financial institutions, however, continue to decline credit to micro and small enterprises. This decline is partly due to poor loan repayment performance from these sectors and thus, repayment problem is an unsolved issue faced by the majority of financial institutions including microfinance institutions. Moreover, the failure of a large number of microfinance institutions in many developing countries was due, among other things experienced, to their inability to ensure good repayment rates among their borrowers (Abafita, 2003).

The microfinance institutions operate currently in Ethiopia exhibit a number of strengths in their operation. However, Loan repayment has been a serious problem of the Ethiopian microfinance industry. Several incidences of loan repayment problems in microfinance industry have been observed during the last decade and MFIs default rate increased over the stated period and averaged over 27 percent (Samuel, 2011). Additionally, a study made on microfinance repayment problem in micro and small enterprises in Addis Ababa by Miche'al (2006), indicated that repayment rate has decreased considerably and averaged around 69 percent of the total loans due per year.

Similarly, Addis Credit and Saving Institution which is striving to meet the financial need of less privileged entrepreneurs with limited capital base, primarily composed of operators of small and micro enterprises and hut industries, is recently suffering from considerable amount of loan default /delinquency rate. Based on preliminary data collected, on average for the year ended 2015, credit default rate was estimated to reach around 5.5 percent.

According to Hunte (1996), loan default problems destroy lending capacity as the flow of repayment declines, transforming lenders into welfare agencies, instead of a viable financial institution. It incorrectly penalizes creditworthy borrowers whenever the screening mechanism is not efficient. Credit default may also deny new applicants access to credit as the microfinance institution's cash flow management problems increase in direct proportion to the increasing default problem. Besides, loan losses which arise as a result of loan default problems often have

been the largest cost borne by the institutions and the principal cause of insolvency and illiquidity (Nawai & Shariff, 2013).

Studies conducted so far were on micro enterprises (Tefferi,2000; Abraham, 2002; Dejene, 2003; Miche'al, 2006) and on manufacturing firms' case (relatively medium and large scale ones) located in Addis Ababa (Mengistu, 1999). However, these studies don't specifically touch the case of micro and small enterprises. This study therefore tries to narrow the research gap paying attention to this sector of the economy. Studies done on micro enterprises are meant to evaluate the institutional sustainability of the credit scheme. However, this study focuses on identifying factors behind the loan default problem that micro and small enterprises are associated with.

Given the above indicated repayment problems in MFIs along with the gap in the literature in the best of researcher knowledge with regard to credit default problem of MSEs financed by MFIs, it necessitates the need for empirical investigation on factors behind default problem so that the lending unit in MFIs would make appropriate precautions in its lending decision. Therefore, this study attempted to make inquiry on credit default risk and its determinants of Micro and Small Enterprises Borrowers in Addis Credit and Saving Institutions

1.3 *Objective of the study*
1.3.1 *General Objective*

The main objective of the study is to identify the major determinants of credit default risk on micro and small enterprises (MSEs) borrowers on Addis Credit and Saving Institution, Addis Ababa.

1.3.2 *Specific Objectives*

The specific objectives of the research are:

1. Identify the causes which are influencing the credit default problem of MSEs borrowers in Addis credit and saving institution
2. To determine the factors affecting loan repayment performance of micro and small enterprises;
3. To investigate the connection of the determinant factors with loan repayment performance

1.4 Significant of the study

Several incidence of the loan repayment problem in the microfinance industry had been observed during the last decade and MFIs default rate increased over the stated period and average over 27% (Samuel, 2011). Therefore, this study would provide valuable information on the impact of credit default risk on lending outcomes among clients. The study also provideds management of the institution with better insight concerning the existing gap regarding credit default risk in micro and small business enterprises. Further, it hoped to make practitioners in the area aware of the major determinants factors of credit default problem among the borrowers of micro and small business enterprises.

1.5 Scope and Limitation of thestudy

The research paper attempted to determine microfinance institutions credit default risk among the micro and small enterprise sector found only on the city of addis ababa, nifas silk lafto branches of urban loan package borrowers of ADCSI: Because Currently, ADCSI has 10 sub-city branches and 116 service delivery posts (woreda) in Addis Ababa. The major problem encountered in the course of conducting this research was accessing and getting unbiased response of some members of the target group; especially those who fall under the category of delinquency and default. The preliminary investigation focusing on the two most important services delivery centers in terms of the number of clients and the researcher focus two-service delivery due to limit time. In addition, balancing the desired level of accuracy of the estimate and the time and fund available posed a considerable limitation on the research process.

1.6 Structure of the study

This research was involves five chapters. Chapter one contains background of the study, statement of the problem, objectives of the study, significance of the study, scope and limitation of the study. Chapter two deals with literature review. Chapter three deals with research methodology; Chapter four refers to data presentation, analysis, and findings. Conclusion and recommendations are were forward.

CHAPTER TWO

2. REVIEW OF RELATED LITERATURES

2.1 Overview of Micro finance institutions (MFIs) in Ethiopia

People living in poverty, like in Ethiopia, need a wide range of financial services for consumption smoothing, running their business and building assets. But due to collateral problems, poor people in most cases have no credit access from Banks. Microfinance offers financial services such as loans, savings and micro insurance to the poor people either in individual or in a group basis. Lending to the poor usually means that a lender will not be able to get any collateral to secure the loan (Njoroge, and Eff 2009). Dejene (2003) argues in his study on the economic importance of the informal institutions in Ethiopia that the poor are often marginalized in the formal credit markets. This can be explained partly in terms of: 1) a lack of collateral, which makes lending to the poor a risky venture; 2) transaction cost of lending to and borrowing by the poor is often high; and 3) utility loss from repayment is higher for the poor as compared to the richSo the poor don't have access to the formal financial sources.

Ethiopian microfinance sector is characterized by its fast growth, an aggressive drive to achieve scale, a wider geographic coverage, a dominance of government backed Microfinance Institutions (MFIs), an emphasis on rural households, the promotion of both credit and savings products, a primary focus on sustainability and by the fact that the sector is Ethiopian owned and driven (Nugussie and Mitiiku, 2013).

The establishment of sustainable microfinance institutions that reach a large number of rural and urban poor, who are not served by the conventional financial institutions (such as the Commercial Banks) has been a prime component of the new development strategy of Ethiopia. Although the development of microfinance institutions in Ethiopia started very recently, the industry has shown a remarkable growth in terms of outreach, particularly in number of clients (Fikirte, 2011).

2.1.1 Legal frame work of Micro-finance institutions

Since the mid- 1980s, many non-governmental organizations (NGO) in Ethiopia have started providing micro- credit to poor households for income generating activities (Michael 2006). Moreover, as cited in Goshim (2011), the development bank of Ethiopia, in collaboration with the ministry of trade, has launched a micro enterprise-lending program (Kereta 2007). According to the Proclamation No. 40/1996 of the Business of Micro Financing Institutions, Ethiopian nationals and/or organizations wholly owned by Ethiopian Nationals and registered under the laws of Ethiopia and having its head office in Ethiopia should own micro financing institution fully. This legislation excluded international NGOs and other overseas agencies not to own and run microfinance institutions in Ethiopia As cited in Ebisa et.al, (2013), the development of microfinance institutions in Ethiopia is a recent phenomenon. The proclamation, which provides for the establishment of microfinance institutions, was issued in July 1996. Since then, various microfinance institutions have legally been registered and started delivering microfinance services (Wolday, 2000). In particular, the Licensing and Supervision of Microfinance Institution Proclamation of the government encouraged the spread of Microfinance Institutions (MFIs) in both rural and urban areas as it authorized them among other things, to legally accept deposits from the general public (hence diversify sources of funds), to draw and accept drafts, and to manage funds for the micro financing business (Getaneh, 2005).

2.2 Role of Micro financial institution

Schreiner and Colombet (2001, p.339) define microfinance as "the attempt to improve access to small deposits and small loans for poor households neglected by banks." Therefore, microfinance involves the provision of financial services such as savings, loans and insurance to poor people living in both urban and rural settings who are unable to obtain such services from the formal financial sector.

One of the key roles microfinance has to play in development is in bringing access to financial services to the poor, to those who are neglected by the formal banking sector like micro and small enterprises. Micro and small enterprises financed by MFIs can help to establish new marketing links and increase the income of traders, and this can lead to reduced migration due to increased employment opportunities and increased income (Wrenn, 2005, Absanto &Aikaruwa , 2013).

Meklit Microfinance Institution (2005) asserts that the poor are generally excluded from the financial services sector of the economy so MFIs have emerged to address this market failure. By addressing this gap in the market in a financially sustainable manner, an MFI can become part of the formal financial system of a country and so can access capital markets to fund their lending portfolios, allowing them to dramatically increase the number of poor people they can reach.

Microfinance services intervention in developing countries have been considered as one of the policy instruments of government and non government organizations (NGOs) to enable rural and urban poor increase output and productivity, induce technology adoption, improve input supply, increase income, reduce poverty and attain food security (Wolday, 2000).

In 2005, Wolday further reveals that the sustainability of microfinance institutions that reach a large number of rural and urban poor who are not served by the conventional financial institutions, such as the commercial banks, have been a prime component of the development strategy of most developing countries.

According to Jonathan and Beartize (2005), Microfinance institutions operate under a twin mission system: commercial mission (the financial system approach) and social mission (the poverty lending approach). Their commercial mission basically refers to financial viability of the institution delivering the service. These institutions are thus required to provide the service on the basis of cost recovery and even making profits. They also state that the social mission involves serving the poor who are marginalized by the formal banking system and working for alleviation of poverty and income inequality.

those poor borrowers and micro and small enterprises that are credit worthy and capable of repaying their dues. The poverty lending approach on the other hand, stresses the importance of microfinance to help the poorest of the poor through targeted programs (Jonathan &Beartize, 2005).

2.3 Conceptual Definition
2.3 .1 Micro and small enterprises

There is no universally accepted definition of MSEs. Different regions or countries have defined MSEs based on local operations and conditions. It should be noted therefore that certain

definitions may not be applicable in certain regions or settings (Agyapong, 2010). Rigorously defining MSEs has always been difficult, even controversial. The term covers a variety of firms and most writers use it rather as they refer to their particular interest.

The MSEs cover non-farm economic activities mainly manufacturing, mining, commerce and services (URT, 2003). According to Kessy and Urio (2006), MSE can be defined as a productive activity either to produce or distribute goods and or services, mostly undertaken in the informal sector. the definition and criteria for MSE vary from country to country. For example, in Ethiopia, country wide used definition of MESs is on the bases of three criteria. These are: level of paid-up capital/fixed asset, using high tech establishment and consultancy services.

At the micro-level, there is a need to assess the sustainability of an enterprise in terms of the structure of the sector or market in which it operates and, in particular, its relationship with suppliers and customers along the value chain. The micro-level determinants of firm survival (sustainability) include what goes within the enterprise or its immediate environment (the management of human and financial resources and use of physical resources like energy, transport and communications systems) and to the direct interface between enterprises and their customers and suppliers (ILO 2007).

The Ethiopian Federal Democratic Republic, Ministry of Trade and Industry adopted official definition of Micro and a Small enterprise as follows:

Micro enterprises are business enterprises found in all sectors of the Ethiopian economy with a paid-up capital (fixed assets) of not more than Birr 20,000 (about $ 1176), but excluding high-tech consultancy firms and other high-tech establishments.

Small-enterprises means trade work organizations whose minimum paid up capital is not less than Birr 20,000.00 and not exceeding from Birr 500,000.00 and shall not include higher technological consultancy service and other higher technological institutions (National Micro and Small Enterprises Development Agency cited in AAMSEDA, 2003 E.C.).

However, this definition was revised when the government policy shifted from the policy of command system to a system of mixed economy. Accordingly, small scale manufacturing

activities consider that, fixed locations within an urban center uses either operated machinery equipment or engaged in the mechanical or classical transformation of substances into new products through employing at least one person other than owner and family workers.

The statistical definition of MSEs varies by country, and is usually based on the number of employees or the value of assets. The lower limit for MSEs is normally set at 5 to 10 workers and the upper limit at 50 to 100 workers. Since this limit can vary in different countries, one should not overly concern about the lack of consistency in employment-based definition of MSEs(MOTI, 2003).

The CSA (2003) based its definition on size of employment and automation for small, medium and large-scale enterprises and a combination of criteria for informal sector operators. However, this definition could possibly incorporate some capital-intensive establishments, which could fall solely under medium or large-scale categories. Thus, in order to exclude those capital intensive enterprises which will not be entitled for the support services and address the real target MSEs, it is advisable to use a definition that can take this into account. Hence, a definition that is based on capital and which takes into consideration the level of technical and technological capacities is adopted.

MSE development strategy defines MSEs according to the number of employees and capital (FeMSEDA, 2010). Micro Enterprise under the industry sector (manufacturing, construction and mining) is an enterprise operates with 5 people including the owner and/or their total asset is not exceeding Birr 100,000.

2.3.2 Credit Default Risk

National Bank of Ethiopia (NBE, 2010) identified, strategic risk, credit risk, liquidity risk, interest rate risk and operational risk as major categories of asset and liability management risk that a microfinance institution needs to pay due attention. Of all these risks, credit risk is by far the most critical of risk categories for MFIs that concerns all stakeholders where the high loan default rate is the primary cause of the failure of MFIs.

Credit default risk, according to NBE (2010), is the financial exposure resulting from a microfinance institution's dependence on another party (counterparty) to perform an obligation as

agreed. It is the risk to earnings or capital due to borrowers late and non-repayment of loan obligation. NBE further stated that it is the potential loss resulting from the poor quality of the MFIs assets particularly its credit/loan portfolio. The most obvious manifestations of risk in credit projects are poor portfolio quality that leads to bad debt losses that erode the capital of the lending microfinance institution. The major variable that should determine a MFI's risk classification system are: past and present experience with overdue payments and type of methodology used in delivering loans.

In 1999, Rosenberg defined credit default risk as the risk that a borrower will default on any type of debt by failing to make payments which it is obligated to do. The risk is primarily that of the lender and includes lost principal and interest disruption to cash flows, and increased collections costs. The loss may be complete or partial and can arise in a number of circumstances.

Therefore, credit default risk encompasses both the loss of income resulting from the MFIs inability to collect an anticipated interest earning as well as the loss of principal resulting from loan default.

2.4 Addis Credit and Saving Institution (ADCSI)

Addis Credit and saving Share Co. is one of the largest MFIs, which is operating in Addis Ababa, the capital city of Ethiopia. It was established in 2000 for the provision of financial services to active poor people in Addis Ababa for both micro business and small business operators. According to the revised proclamation No. 626/2009, the general objective of ADCSI is to collect deposits and extend credit to rural and urban farmers, as well as micro and small-scale rural and urban entrepreneurs. Its specific objectives are:

- ➢ Provision of credit and saving services to as many active poor as possible;
- ➢ Enhance the development of micro and small enterprises;
- ➢ Give priority to women in the provision of financial services;
- ➢ Enhance the culture of saving of the target group and the public at large;
- ➢ Create long term self employment in income generating activities;
- ➢ Assure financial and operational self-sufficiency of the institution.

ADCSI has a three level organizational structure, namely: head office, branch office and service delivery post. Regarding the program norms, the average loan size differs according to the type of customer; for micro enterprises it is below Birr 5,000 , for small enterprises it is about Birr 5,000 and for medium enterprises it is about Birr 50,000. A client obtains the next higher loan after the successful repayment of the first loan. Loan terms of ADCSI are established at different levels for different activities; maximum loan period of 3 years (36 months) for micro and small enterprise loan and 5 years (60 months) for housing loan. In order to cover its operational costs ADCSI charges 10% interest rate per annum on its loan amount. On the other hand, ADCSI pays 5% interest on the amount saved by its clients. The loan repayment rate of ADCSI was high but it started to decline since (ADCSI, 2016).

2.4.1 Loan discharge requirements

ADCSI provides credit for client only who fulfill the following criteria:, individuals above the age of 18 years, clients should be dedicated to using the loan properly and repaying it on time, be permanent residence of their respective areas, either engaged or ready to engage in micro and small scale business, graduates of technical and vocational training (TVET) and universities organized in the form of cooperatives or business group, projects financed should be feasible and marketable, and have good credit discipline and no mental problems and loan taken from the institution or similar institution should be settled before hand (ADCSI, 2016).

The main purpose client screening mechanisms of the institution are business profitability and experience, interest of doing business, and client's behavior. In order to know the behavior of clients specially for group lending, the firm collects information regarding historical background of borrowers from different stakeholders such as Women association, Youth association, bureau of trade and industry and small scale enterprise agency. In addition, they check the amount of money requested by the client whether it is enough for doing business or not; they have to control under and over finance. ADCSI provides loans based on different modalities. The most ADCSI provide commonly used are group guarantee (joint liability), individually with third – party guarantee, through collateral (a house or vehicle), or clients of the institution based on their savings or business enterprise can be used as a guarantee(ADCSI 2016).

Table 1: Performance of ADCSI

Year	2011/12	2012/13	2013/14	2014/15	2015/16
No. of clients	29,171	32,650	33,569	39,214	33,196
Total loan repayment	388,565,297	505,391,105	808,460,067	1,385,670,000	1,653,750,000
Total Amount of due	385,799,823	523,721,352	818,279,421	1,430,000,000	1,750,000,000
Repayment rate (%)	97%	96.5%	98.8%	96.9%	94.5%
Default Rate (%)	3%	3.5%	1.2%	3.1%	5.5%

Sources: Profile of Addis Credit and Saving Institution (ADCSI, 2017)

Addis credit and saving institution provides saving service to all members of the community (clients, non-clients, governmental and non-governmental organizations) regardless of their level of wealth. In the institution there are two types of saving services, namely, voluntary and mandatory saving that borrowers specific. Passbook saving, time deposits, safe box saving and mobile saving (door to door saving mobilization services) are different forms of voluntary saving the include borrowers and non borrowers client. On the other hand, mandatory saving is a saving that loan clients are expected to become eligible for the loan services of the institution.It has two forms:

1. **Security Saving**–is either to deposit 5 and 10 percent for rural and urban borrowers of their total loan respectively or deducted from their loan.

2. **20/80 Saving Scheme**–clients are required mandator saving of 20% in order to take loan to the maximum loan size ranges up to Birr 200,000 depending on the activity and business plan of the entrepreneurs. They are also obliged to save Birr 100 per month together with their loan repayment. This type of saving scheme is designed for graduates of technical and vocational education training, and universities who are mostly grouped in the form of cooperatives.

2.5 The need of finance

In the current environment characterized by a reduced availability of credit and tighter lending standards, the financing needs of MSEs deserve particular attention. In this regard it is important to recall that MSEs in general are more dependent on their personal savings and relatives than larger firms, which have the expertise, experience, and resources to tap the financial markets.

Obviously, a decision to start a business or expand an already existing firm involves an implicit decision of how to raise money. Consequently, financing is at the center of an operation of MSE. For instance, it is indicated that the inability to raise finance is one of the greatest challenges facing the MSEs and is the critical factor in the establishment and growth of such businesses (Sargent and Young cited in Gashahun, 2004:13).

Similarly, it is pointed out that MSEs need finance to invest in new equipment and machinery, reach out to new markets and products and cope with temporary cash flow shortages as well as to innovate and expand (Fafchamps cited in Gebrehiwot and Wolday, 2003:3).

Lack of sufficient capital, particularly at the start of their operations, was also identified as the major problem for about 35% of the small scale manufacturing industries (Gebrehiwot and Wolday, 2004:54). It is generally assumed by policymakers in developing countries that there is either a high unsatisfied demand or a significant potential demand for finance by MSEs' borrowers. It is also assumed that where this does not already exist, it can be created.

In view of these impediments to the 'demand-following' effect, a need is often perceived for intervention in the intermediation process, specifically for the redirection of credit. Intervention entails governments setting up institutions where the private sector is deemed incapable of doing so, pegging deposit and lending rates at levels perceived to be fair to borrowers and savers but not necessarily coinciding with free market levels, rationing credit to different rates under criteria that underlie mainly government priorities (Ibid, 1993).

The potential demand of the poor for micro credit, on the other hand, is enormous. However, there is very limited supply of financial services to the poor. From the supply side, the major sources of finance for micro and small enterprises can fall under five categories (Wolday, 2000):

    A. Formal banks

B. Microfinance institutions

C. Cooperatives

D. NGOs and Government projects, and Semi – formal and informal sectors

In 2002, Abraham states that the micro and small business enterprises are usually excluded from credit facilities because of many reasons. These include insufficient collateral to support their loans, unable to save, lacking verifiable credit history, high transaction costs, unstable income and high monitoring costs. Microfinance institutions (MFIs) were, therefore, established to fill the gap in the financial services sector by providing fund to those who have been excluded from accessing financial services from formal financial institutions and also contribute to reduce negative impacts of local money lenders in the area where they operate (Miche'al, 2006).

Jonathan and Beartize (2005) claim that Microcredit service offered by microfinance institutions generally is important to the growth and development of micro - enterprises. However, many credit programs previously viewed the Micro and Small Enterprises (MSEs) as potential defaulters and placed credit programs beyond their reach. Even though wide experience today shows that MSEs are not bad credit risks and that their repayment rates can be exemplary, the MSEs operators still are considered to be a high - risk credit population, expensive to serve, and unable to pay the full cost of credit; they are believed to require government subsidization of credit.

Thus, MFIs operate in a niche market as they address the needs of those clients who are considered 'high-risk' by bigger banks. High-risk groups or individuals are characterized as those with very few assets, requiring very small loans, high degree of close follow-up, business appraisal and evaluation, as well as those engaged in activities whose income is fluctuating such as small-holder farmers or petty traders (Nugussie & Mitiiku, 2013).

A credit market differs from standard markets (for goods and services) in two important respects. First standard markets, which are the focus of classical competitive theory, involve a number of agents who are buying and selling a homogeneous commodity. Second in standard markets, the delivery of a commodity by a seller and payment for the commodity by a buyer occur simultaneously. In contrast, credit received today by an individual or firm in exchange for a promise of repayment in the future. But one person's promise is not as good as another.

16

2.6 Credit default risk in micro finance institution

Small-scale credit scheme offered to Micro and Small Enterprises (MSEs) by microfinance institutions has experienced a high rate of default in many developing countries. MFIs in these countries hold a truly alarming volume of non-performing loans (Al- Mamun et al., 2011).

Lending to Micro and Small Medium sized Enterprises (MSMEs) (the acronym SMEs and MSMEs have been interchangeably used in this study) is crucial for economic and social development on one hand, it is deemed to be highly riskier as lending decision on SME sector is characterized by higher asymmetry of information particularly in developing economies on the other. Though asymmetric information between borrowers and lenders is a general feature of all credit markets around the globe, it is acute in SME segment as information assisting default prediction are not often adequately,

reliably and fairly disclosed by the SMEs. Lending decisions of financial institutions are not hence simply characterized by just the demand of borrowers for credit but it is a matter of comprehensive investigation of potential clients' credit repayment behaviors. The capability of borrowers to repay their microcredit loans is an important issue that needs attention. Borrowers can either repay their loan or choose to default. Borrower defaults may be voluntary or involuntary (Amare and Bekabil, 2008).

The agency problem, adverse selection and moral hazard that appear as a result of information asymmetries are the main reason why the credit default risk happened (Nawai & Shariff, 2010).

In credit market, a borrower who takes out loan usually has better information about the potential returns and risk associated with the investment projects for which the funds are earmarked. The lender, on the other hand, does not have sufficient information concerning the borrower. In the absence of information about exactly who is good and who is bad, lenders face a problem. This is because the lenders cannot observe the behaviors of their clients either they are honest and dishonest. The lenders can only observe the outcome of their loans either the clients repay or not (Holtman, 2001).Consequently, Information asymmetries become the main obstacle for financial institutions to provide loans to clients. in 2002, Lidgerwood claims that most micro and small enterprises tend to represent themselves as high quality borrowers despite the fact that lenders know that some are good and some are bad. Asymmetric information is particularly acute for

17

micro and small enterprises because there is very little publicly available information that can be used to assess credit quality.

As a result, Adverse selection and moral hazard jointly generate a socially inefficient supply of finance (i.e. smaller supplies) that one would obtain in a world without asymmetric information problems where truly credit worthy clients would not be rationed out of the lender portfolio (Absanto & Aikaruwa, 2013).

On the other hand, there are several factors that have been attributed to the high default rates in small-scale credit. On the one hand, there are those who argue that characteristics of micro and small enterprises make the cost of administering credit very high compared to the return on the loans. Micro and small enterprises possess shallow management, often with little experience and training; they are usually undiversified, one product firms, they are sometimes new businesses with little track record, and poor financial recording; they may have a new unproven product; they may be reluctant to raise outside equity capital for reasons of expense, loss of control and increased disclosure requirements. These characteristics of micro and small enterprises provide little incentive for any aggressive loan recovery mechanisms (ILO, 2008).

In 1996, Hunte argues that to understand the determinants of loan repayment performance in micro and small enterprises in all its dimensions, it helps to think in terms of loan beneficiary's assets, the returns to (or productivity of) these assets, and volatility of returns or income. He also states that the returns to these assets and volatility of returns depend on access to markets, market fluctuations and access to assets, which in turn determined by fundamental political and social forces and legal structure that defines and enforces private property rights. Thus, the factors affecting loan repayment performance of micro and small enterprises are the result of systematic risk from external factors such as the economic, political, legal and business environment in which the borrower operates.

Bachanga and Aseyo (2013) and Olomola (2000) identified causes of high credit risk as poor management information system, poor screening of borrowers, weak appraisal of loans, unclear communication about product and methodology, no immediate follow up, mixing other social activities with, poor product, natural disasters, corruption at field staff level such as taking bribe for loans or frauds can result in delinquencies and demotivated employees. Jonathan and Beartize

(2005) confirmed that credit default risk is often a result of poorly designed loan product and delivery mechanisms.

Saunders and Cornett (2001), on the other hand, assert that Poor economic conditions and high interest rates contribute to the likelihood of default for many microfinance borrowers. They also reveal that credit default risk is more likely when a borrower has accumulated large losses and other debt burdens.

2.6.1 Controling credit default risk

Loss arising from defaults on loans is among the most serious risks to which microfinance institutions are exposed. Because of the vulnerability of the microcredit sub – sector, lending institutions continue to adopt different techniques to improve repayment frequency and grant more credit access to borrowers who pay their credit on time (Rosenberg, 2002). Besides that, microfinance institutions have to develop lending technologies to help overcome credit market information problems, enhancing the value of the product, while limiting the credit default risk to the institution.

In this regard, perhaps the most celebrated feature of microfinance is the group liability contract, a lending methodology pioneered by the Grameen Bank in Bangladesh. Under this contract, loans without collateral are extended to a group of borrowers whose members are jointly liable for each other's repayment. Since groups form voluntarily and group members are responsible for paying off each other's debts, borrowers have the incentive to screen risky clients, monitor their peers, and enforce repayment. This model is particularly important since micro and small enterprises suffer most from institutional weakness (Carpena et al., 2010). They also assert that MFIs offer credit through group-based lending method to mitigate agency problems, moral hazard and adverse selection and to replace the collateral requirement.

Similarly, in order to overcome the problems associated with the lack of information, the group lending scheme takes an advantage of local information, peer support, and, if needed, peer pressure. The group members may have better information about individuals' efforts and/or abilities than the lender because encourage repayment hence reduce the probability of loan default (Retta 2000). Besides, the joint liability element generates individual incentives to screen

(mitigating adverse selection), monitor each other (mitigating moral hazard) and enforces repayment. Besides that, dynamic incentives are also helps to generate information by starting with small loans and gradually increasing loan size as customers demonstrate reliability (Carpena et al., 2010).

Although studies indicate that such schemes work well if groups are homogeneous and jointly liable for defaults, the practice of denying credit to all groups in case of default is the most effective and least costly way to enforce joint liability (Besley &coate, 1995). Thus, it proved that through group lending, it could mitigate moral hazard, adverse selection and information asymmetry faced by MFIs.

In the view of Saloner (2007), group lending will also minimize loan default. Many microfinance institutions borrow in groups and choose to lend to groups of borrowers rather than on an individual basis. As opposed to ROSCAs, the microfinance institutions provide the loans so that the borrowers are not limited to the money that they themselves can contribute. The general organisation of group lending consists of a group of borrowers who work together, support, and mentor one another to maximise the impact that the loan can have on each individual. Additionally, in many group lending situations, the members of the group are responsible for selecting new members and for the timely repayment by other members, known as joint liability. As a result, group lending tends to lead to superior performance by the borrowers in operating their businesses and better rates of loan repayment.

Nawai and Shariff (2013) and Saunders and Cornett (2001), on the other hand, substantiate the claim that to mitigate the repayments problems, a close relationship between lender and borrower can be applied through business adviser and regular meeting. Besides that, the lender can introduce reward system to those that paid on time such as rebate or discount. moreover, screening borrowers in order to determine these who are most likely to default; monitoring the loan agreement overtime to maximize the probability the loan will be repaid; and helping the borrower manage financial distress, if it should occur, so that the losses incurred are kept to a minimum are also crucial procedures in overcoming loan default problem (Mishkin & Eakins, 2010).

2.6.2 Credit Default Risk Analysis

Saunders and Cornett (2001), Koch (2007) and Sally (2011) identified key risk factors that enable Microfinance institutions to predict loan repayment performance of borrowers and these have been classified according to the five Cs of credit risk analysis. i. e. Character, Capital, Capacity, Condition and Collateral.

➢ Character refers to the way a person has handled past debt obligations. Paying heed to character includes determining the borrower's credit history and personal background, honesty, and reliability to pay debts. Most credit managers consider character the most important factor in predicting whether the borrower will make timely payments and ultimately repay his/her loan (Sally, 2011).

➢ Capital refers to the borrower's wealth position measured by financial soundness and market standing. It involves a borrower's current available assets, such as real estate, savings, or investment that could be used to repay debt if income is unavailable (Koch, 2007).

➢ Capacity involves both the borrower's legal standing and management expertise in maintaining operations so the firm or the individuals can repay its obligations. Considering a borrower's capacity also involves determining how much debt he or she can handle comfortably by analyzing income streams and identifying any legal obligations that could interfere with repayment (Saunders & Cornett, 2001).

➢ Condition refers to the economic environment or industry specific supply, production and distribution factors influencing firms operations. Repayment sources of cash often vary with the business cycle or consumer demand (Saunders & Cornett, 2001).

➢ Collateral is the lenders secondary source of repayment or severity in case of default. Having an asset that the Microfinance institutions can seize and liquidate when borrower defaults reduces loss, but it does not justify lending proceeds when the credit decision is original (Sally, 2011).

2.7 Empirical studies on loan repayment performance

Several studies have been conducted in different developing countries regarding determinants that affect loan repayment performance. The following are determinants of loan repayment performances.

2.7.1 Empirical studies of other countries

Nawai and Shariff,(2010), used literature review to analyses the determinants of repayment performance in microcredit programs and they state that repayment problems become the main obstacle for the microcredit institutions to continue providing microcredit services. Their study also discloses that determinants of repayment performances in micro credit programs can be divided into four factors namely borrower characteristics, firm characteristics, loan characteristics and lender characteristics.

The determinants of loan repayment under the indigenous financial system in southeast, Nigeria (Eze and Ibekwe,2007). They employed descriptive statistics and multiple regressions to analyze the data. The analyzed data reveals that amount of loan received, age of beneficiaries, household size, educational attainment, and occupation can influence loan repayment. Determinants of loan repayment performance of fishermen, Ghana employed multiple regression analysis in their study. Their results revealed that low level of education, lack of alternative income generating activity, cumbersome loan processing procedures, they are likely to have high loan default. The study identified fishing income, amount borrowed and size of loan invested into fishing as significant predictors of loan repayment (Acquah and Addo, 2011).

Bhatt and Tang (2002) studied the determinants of loan repayment in microcredit evidence from programs in the United States. Their study showed that women has low repayment rate because some women entrepreneur in the study might have been engaged in high risk and low return activities.Godquin (2004) also examined the microfinance repayment performance in Bangladesh. His result is female borrowers did not proven to have a significant better repayment performance. The size of loan and the age of the borrower showed the negative impact on the repayment performance.

Gómez and Santor (2008) used descriptive statistics and a standard probit model to study if the microfinance lending model actually work in Nova Scotia, Canada and they reveal that the ratio of household income to loan payment was higher for group than individual borrowers (16.9 vs. 12.5 percent). Also they noted that borrowers who knew more of their fellow members before forming the peer group were less likely to default. Moreover, they reveal that individuals with

greater social ties were less likely to default than others who did not belong to an association, club, or sports team.

The causes of loan default within micro finance institutions in Kenya studied on Causes of loan default within micro financing institutions in Kenya. The study found out that loan repayment default was as result of non supervision of borrowers by the MFIs (Okibo,2013).

Research by Al − Mamun et al. (2013) investigated the factors affecting loan repayment performance of microfinance borrowers in Malaysia. Results from the logistic model showed that the factors affecting the ability of the borrowers to repay their loans are borrowers' level of education, income from other sources, and business experience, business factors, borrowers' attitude towards their loans, other debt burden, amount of loan received, and household size. The research further revealed that business factors such as business loss and failed are the main reasons why borrowers can not payback their loans on time. Besides, the borrowers' attitude towards their loan is also the reason why cannot payback their loan on time.

Vasanthi and Raja (2006) used descriptive and logit model and reveal that that lower income is one of the major factors causing loans default for housing borrowers in Australia. Duy (2013) compared the repayment performance of farmers and non-farmers borrowed from formal banks in Vietnam by using a tobit and reveals that loan repayment performance is positively affected by the gender of borrowers.

2.7.2 Studies done in Ethiopia

Berhanu (2005) studied on the determinants of loan repayment performance of smallholder farmers in North Gondar, Ethiopia. In order to analyze the factors that affect loan repayment, he employed the tobit model. A total of 17 explanatory variables were considered in the econometric model. Out of these seven variables were found to significantly influence the repayment performance. These were land holding size of the family, agro-ecology of the area, total livestock holding, number of years of experience, number of contacts, sources of credit and income from off-farm activities. The remaining variables (family size, distance between main road and household residence, purpose of borrowing, loan amount and expenditure for social festivals) were found to have insignificant effect on loan repayment performance of smallholder farmers.

Assefa (2002) employed a logit model to estimate the effects of hypothesized explanatory variables on the repayment performance of rural women credit beneficiaries in Dire Dewa, Ethiopia. Out of the twelve variables hypothesized to influence the loan repayment performance. of borrowers, six variables were found to be statistically significant. Some of these variables are farm size, annual farm revenue, celebration of social ceremonies, loan diversion, group effect and location of borrowers from lending institution.

A recent study by Fikirte (2011), Samuel (2011) and Abdissa (2012) indicated that age, education, income, loan supervision, suitability of repayment period, availability of other credit sources and livestock holding are important and significant factors that enhance the loan repayment performance of borrowers, while loan diversion, celebration of social ceremonies, household size and loan size are found to significantly increase loan default. The study also revealed that being female and business experiences of the borrower were found to be significant in enhancing loan repayment performance of borrowers.

Abreham (2002) did a study on loan repayment and its Determinants in Small-Scale Enterprises Financing in Ethiopia that   concluded that having other sources of income, education, and work experience in related economic activity before the loan are enhancing while loan diversion, being male borrower, and giving extended loan repayment period are undermining factors of the loan recovery performance of projects.

Addisu (2006) applied descriptive, multivariate regression and logit analysis to assess the micro-finance repayment problems in the informal sector in Addis Ababa (Ethiopia) and finds that the Government owned and NGOs microfinance institutions were found to have high default rate because they perceived risk as a grant and not a liability.

2.8 Conceptualization of the study

As mentioned above, various studies were conducted on the micro enterprises, on manufacturing firms' case (relatively medium and large scale ones) and determinants of loan repayment performance in different countries. Most of these studies were focused on the credit associated with agricultural activities. In Ethiopia Studies conducted so far were on micro enterprises (Teferri, 2000); Abraham, 2002; Dejene, 2003; Miche'al, 2006) and on manufacturing firms' case (relatively medium and large scale ones), located in Addis Ababa (Mengistu, 1999) and on

Financial Sources of MSEs in Addis Ababa (Ermias, 2011). However, these studies don't specifically touch the case of micro and small enterprises. This study therefore tries to narrow the research gap paying attention to this sector of the economy. Studies done on micro enterprises are meant to evaluate the institutional sustainability of the credit scheme. Studies done on Financial Sources of MSEs, how MSEs financial sources are obtained. However, this study focuses on identifying factors behind the loan default problem that micro and small enterprises are associated with. The average of default rate in 2013 was 1.2%, but in 2016 it was 5% (AdCSI, 2016). This implies that the default rate is increasing over time. If it continues like this, the institution will not be effective for the future. Therefore, it is necessary to identify the socio-economic factors of defaulters.

The conceptual framework below listed for the relationship between Socioeconomic characteristics of borrowers and loan characteristics which include the educational level of borrowers, business experience, and household size, income from other sources, loan size, repayment size and timelines of credit release may influence the loan repayment default by clients. Consequently, there are operations that ensure security of the loan such as the loan policies, training on loan use, and proper business screening and follow-up. Without effective mechanisms in place loan defaults are inevitable and loan recovery might be a great challenge for microfinance institutions.

Figure 1: Conceptual Framework
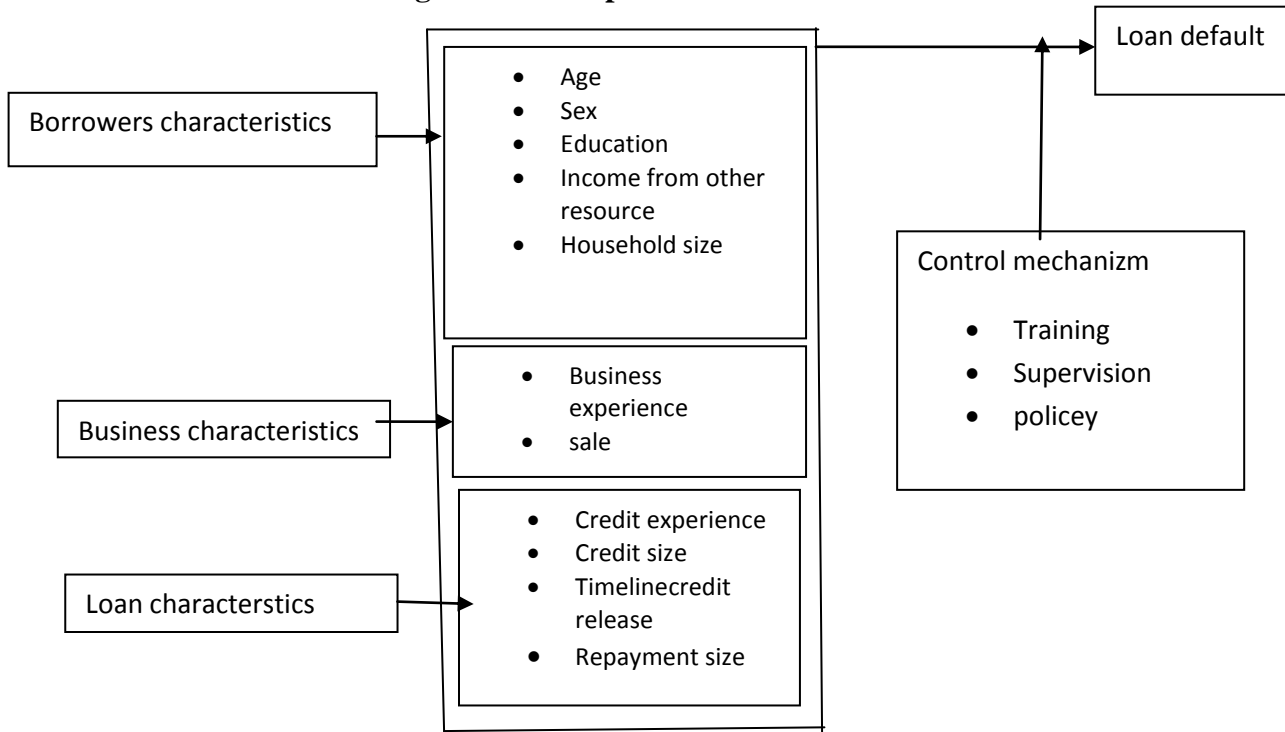
Source: own summary based on literature reviewed (2017)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research design

This study was used the descriptive research design to describe the socio-economic characteristics of the micro and small enterprises borrower in Addis credit and saving institurion in Ethiopia.

Based on the economic theory and data that the explanatory variables were selected for this study has broadly categorized under socio-economic and loan related factors. because out come of the research better to definend and understand of aproblem (Dr,sue greener& Dr, joe.martelli,2015). For similar study, Abraham (2002), Fikirte (2011) and Natukunda (2010) have used both explanatory and descriptive research design.

3.2 Research method and Approach

For this study both quantitative and qualitative Approach were used. the quatitative aspect of the data was focuced on description of socioeconomic variables, loan related variables, and business related variables and attempted to assess the relationship between occurrence of credit default risk and some microfinance institutions specific factors.

Qualitative research approach also used to identified results to be best understanding the research problem. According to Creswell (2009), it also involves the use of both approaches in tandem so that the overall strength of the study is greater than either qualitative or quantitative research.

3.3 Source and type of data

The study used both primary and secondary data to callect data by carring a cross sectional survey design. Secondary sources include published and unpublished materials about credit default risk in micro and small enterprises borrowers. These materials were collected from the ADCSI head office, branch offices. In order to assess the determinants of loan repayment performance, primary data were obtained from the respondents. The respondents are borrowers and loan officers of ADCSI.

3.4 Method of data collection

The primary data was collected through questionnaire from sampling of MSEs borrowers and operators of ADCSIs. The questionnaire include both closed and open ended questions. Closed ended questions are quicker and easier both for respondents (borrowers, branch employee and staff suported) and researcher. Adding open ended questions allows respondents to offer an answer that the researcher was n't include in the questions.

Data collect by the quesionaire have advantage because there is low cost even when the universe is large and is widely spread geographically. It is free from the bias of the interviewer; answers are in respondents' own words. Respondents have adequate time to give well thought out answers and Large samples can be made use of and thus the results can be made more dependable and reliable (C.R.kothari, 1990 2nd book). primary data collected througth in face to face contact to obtain more information about the credit default risk of borrowers. All questions were translated into the local language (Amharic). In generally primary data used to find new idea.

Secondary data used to collect from various article, books, journals, annual reports, and published and unpublished materials about credit default risk in micro and small enterprises borrowers.

3.5 Target of population in the study area

The population of the study include 10 branch and 116 service delivery and 15 micro bank in the Addis credit and saving institution, Ethiopia. The target population were used to collect different information and data on micro and small enterprise borrowers in this study area. The reasons why a credit default risk on micro and small enterprise borrowers were seleced for this study is they offer loans to individual members who are self employed in micro and small enterprise sector whose loan repayments comes from undertaken projects. It is also the area where a diversified economic activities being carried out. The borrowers' composition were also be from diversified activities.then the study focused 1,080 borrowers out of 33,196 from lafto branch and 4 employees(Profile ADCSI(2016).

3.6 Sampling technique

A sample refers to a set of individuals/companies/ selected from an identified population with the intent of generalizing the findings to the entire population. A sample is drawn as a result of Constraints that make it difficult to cover the entire research population (Leedy and Ormord, 2005).

According to similar empirical studies Fikirte (2011) applied a stratified sampling method. Therefore A stratified sampling technique was used to select the respondents. Currently, AdCSI has 10 sub-city branches and 116 service delivery posts in Addis Ababa. The preliminary investigation focused on the two most important services delivery centers in terms of the number of clients. List of loan clients was obtained from the records of the two services delivery centers of the institution. At the outset, the respondents were stratified into two categories, i.e. defaulters and non-defaulters. All borrowers of the microfinance credit that have repaid their loans when the due date were classified as non-defaulters while those who did not repay their loan three months after the due date were classified as defaulters.

3.7 sample size determination

Sampling refers to the statistical process of selecting and studying the characteristics of a relatively small number of items from a relatively large population of such items, to draw statistically valid inferences about the characteristics of the entire population Prior to the actual data collection emphasis was made on the determination of sample size that is mainly dependent on the purpose of the study, available resource and precision (variance) required,according to Sangeeth, (2007). Sudman (1996) suggests that a minimum of 100 sample are required (as cited in fikrte, 2011).Therefore from each stratum, 50 clients were selected randomly in both services delivery centers, respondents to distributing questionairy 100 clients due to two reasons: on one hand all branches are performing the same activities, on the other hand the researcher have limiting time. In addition, during data collection, 4 employees were contacted.

3.8   Empirical model

Based on the economic theory and data that we have, the explanatory variables selected for this study were broadly categorized under socio-economic and loan related factors. The loan repayment performance could be affected by these factors either positively or negatively. Therefore, a brief explanation of the explanatory variables and their influence on the loan repayment performance is presented below.

3.8.1 Estimation Methods

Descriptive statistics was used to summarize the data collected from the sample and the results were tested with non-parametric tests of significance. This involved the use of frequency tables and measures of central tendency such as, mean, median, standard deviation and percentages and also T-test used to comparing mean deviations defaulters and non-defaulters pertaining to each explanatory variable.

Loan repayment is a non-continuous dependent variable that does not satisfy the key assumptions in the linear regression analysis. When the dependent variable to be modeling is limit in its range, using Ordinary Least Square (OLS) may result in biased and inconsistent parameter estimates.

To examine the factors affecting the loan repayment, discrete choice model would used. Thus, the most widely used and appropriate qualitative response models are the logit and probit models (Verbeek, 2008; Gujarati, 2004).

For this study were selected Logit regression models to examine the factors affecting the loan repayment in MSEs. Logit regression models are established through non-linear regression techniques categorized as Limited Dependent Variables Regressions (LDV). The researcher will, therefore, be using a Forced Entry Method, in which all predictor variables are tested in one block to assess   the predictive ability, while controlling for the effects of other predictors in the model.

The logit model is extremely flexible and widely used function, and leads itself to meaningful interpretations when the dependent variable is dichotomous outcome. It is a powerful tool in its

ability to estimate the individual effects of the continuous or categorical variables on the qualitative dichotomous dependent variable (Wright, 1995 and Verbeek, 2008).

In addition, an econometric regression model is applied for to analyse the data. Loan repayment is a dependent variable, while different socio-economic and lender related factors considered as independent variables. In this study, the dependent variable is the probability of default or no default. One should note that the dependent variable is an observed variable, allowing only the probability of 1 or 0. Because there are only two possible events, default (1) and no default (0), then the probability of the occurrence of default (or no default) follows a binomial distribution.

$$y_i = \beta x_i + \varepsilon_i$$

$y_i = 1$ if borrowers (MSEs) are defaulter

$y_i = 0$ if borrowers (MSEs) are non-defaulter

y_i = the observed variable, representing the proportion of loan repayment, β = the unknown parameters that reflecting the impact of change in variable X_i = explanatory variables that determine the dependent variable, ε_i = error terms that is distributed normally with mean 0 and variance σ^2, i = 1, 2, 3….n, represents the number of observations.

$$Prob\ (Y = 1) = \frac{1}{1 + e^{-z_i}}$$

Taking the natural logarithm is:

$$Z_i = \ln\left(\frac{P_i}{1 - P_i}\right) = \propto + \beta_1 X_1 + \beta_2 X_2 + \dots \beta_k X_k$$

If the error term (ε) is taken in to account, the logit model becomes:

$$Z_i = \alpha + \sum_{i=1}^{k} \beta_i X_i + \varepsilon_i$$

The unknown parameters β's are estimated by likelihood function.

Z_i = **LR = f (SEX, AGE, MARTIAL, EDUC, TIMELIN, DEPRATIO, REPSIZ, SALES, BUSEXPR, INCOME, LOANSIZE, VISITS, TRAINING)**

Where,

LR = loan repayment performance, measured as a dichotomous variable with values reflecting the repayment status of the borrowers. It takes the values **0** and **1**, for the borrowers repaying on time and borrower who did not repay on time respectively.

AGE = age of borrower (number of years)

SEX = sex of the borrower

      1 for female, 0 for male

EDUC = Educational level of borrower
      1 = Illiterate
      2 = Grade 1-8
      3 = Grade 9-12
      4 = above grade 12

TIMELIN = Timeliness of release of loan (measured as a dummy, 1 for loans released at the right time and 0 for loans not released at the right time)

DEPRATIO = Dependency ratio (inactive children and aged above 65 years of age as percentage

of total household size)

CREDEXPR = borrowing experience (number of years)

REPSIZ = monthly loan repayment of the borrower (birr)

SALES = monthly sales of the business from the business undertaking (birr)

BUSEXPR = experience in the business (number of years)

INCOME = income from other activities or sources

1 = have other source of income

0 = no other income source

LOANSIZE = adequacy of loan taken

1 = if adequate 0 = otherwise

SUPERV = adequacy of supervision visits made to a borrower
1 = if adequate 0 = otherwise

TRAINING = adequacy training on loan use

1 = if adequate 0 = otherwise

The explanatory variables that would be used to explain repayment performance can be categorized into three major classes. First, is the set of borrowers' characteristics. This includes AGE, SEX, EDUC, INCOME, HHSIZE, DEPRATIO and MARTIAL. Second, is the set of loan and lender characteristics such as CREDEXPR, REPSIZE, TIMELIN, CREDSIZ, TRAINING, and SUPERV. And third, is set of business related characteristics; such as SALES and BUSEXPR.

3.8.1 Definition of Variables and Hypotheses sign

Factors affecting the repayment performance of borrowers are hypothesized based on empirical evidences. Accordingly, borrowers' socio – economic characteristics, loan and lender

characteristics, and other business and economic conditions are hypothesized to explain loan repayment performance of borrowers.

Socio – economic characteristics

Socio – economic characteristics of borrowers involve sex, age, educational level of borrower, dependency ratio, and credit and business experience.

Age: At younger age, people are likely to be at career stages where higher future incomes are expected. It may also be argued that the growth rate of income increases in the early stage of the earning life cycle but then declines, as one gets older. This result agree with those found by Swain (2007) who stated that with the increase in age, accumulated experience, practical and professional wisdom, increased its income generating capability and demanded more credit to explore capabilities or to spend on consumption. Therefore, this variable is hypothesized to have positive impact on loan repayment performance of respondents.

Sex: There is a belief that among many microfinance specialists female are better payers' than male borrowers, taking in to consideration their being more entrepreneurial that results from assuming more responsibilities in the internal affairs of a household. Moreover, females in urban area are relatively independent than rural area (Vigano, 1993;D' Espallier, 2009). In addition, mostly females are reliable in related to financial aspects. Thus, they can perform their business independently and repay their loan on time.So, the study expects a positive sign for this variable

Educational Level of Borrower (measured in years of schooling). more educated owner is expected to use the loan effectively as compared to a less educated one (Amare and Bekabil, 2008).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, borrowers with higher levels of education may have higher repayment rates. therefore the variable is expected to have positive relation with loan repayment.

Dependency Ratio: Household sizewhich is measured by number of dependents in the borrower's family is another factor that can have a significant impact on micro and small enterprise loan repayment. It tends to squeeze the return from the business from which credit is paid (Miche'al, 2006). Therefore, it is believed to be negatively related with repayment

performance.Besides, because large dependency ratio implies more consumption expenditure hence may erode the fund that will be available for loan repayment. In this case, we expect a negative sign for the variable (Abraham, 2006; Samuel, 2011).

Number of times borrowed/ Credit Experience: If a borrower is a duplicate borrower he/she may have attained more experience on the institution's rules and regulations, and hence could efficiently utilize the credit for the intended purpose. Moreover, as experience in the credit utilization of the borrower increases, the more knowledgeable he/she would be about the usage of the credit as per the credit/loan agreement and the more efficient and profitable it would become in its operation (Samuel, 2011). This is believed to enhance the repayment capacity of the borrower. So, the study expects a positive sign for this variable.

Business Experience: As experience in the business of the borrower increases, the more knowledgeable he/she would be about the business and the more efficient and profitableit would become in its operation. Further, borrowers who acquired extensive experience in similar economic activity before the loan knows how to run a profitable business than new ones hence could have better repayment record (Abraham, 2002). Thus, a positive sign is expected

Loan and lender characteristics

Loan and lender characteristics are composed of loan size, adequacy of supervisory visits, training on loan use, size of repayment and timelines of credit release

Credit/Loan size: The major perspective to this variable was the larger the loan, the higher is the borrower's cost of delaying payment. A larger loan is more difficult to repay if allowed to accumulate especially where there are compounding interest and sanctions. This factor puts pressure on the borrower to reduce his/her repayment performance and leads to serious default problem. Moreover, increasing the loan size increases the loan diversion rate to other unprofitable uses (Abraham, 2002). If amount of credit released is enough for the purposes intended, it will have a positive impact on the borrower's capacity to repay Therefore, in this case, it is believed to be negatively related with repayment performance.

Credit/loan Supervision: This is avariable which takes a value1 if the enterprisehas follow up and supervision by the institution and 0, if the enterprise does not took follow up and supervision. If there is follow up and supervision made by loan officer, measured as a dummy variable, there will be a possibility to remind the obligation and motivate the enterprises for repaying the loan. Norell (2001) stated that quick follow-up and visits ;helps to prevent default rate. Therefore, positive relationship with the dependent variable was expected.

Size of Repayment: The size of repayment increases the amount of money periodically required from the borrower. This is believed to challenge the repayment performance of borrowers and increase their probability of default and delinquency, in which case a negative sign for the variable is expected (Miche'al, 2006).

Training on loan use: This variable is expected to have a positive impact on repayment performance in general. Considering normal circumstances, borrowers who have attended training on loan use is expected to use the loan effectively as compared to those who have not. In this case we expect a positive sign for the variable.

Timeliness of Credit release: If credit is disbursed in time, it is unlikely that it will be diverted to non-intended purposes. Olomola (2000) noted that timeliness of credit disbursement is important when credits are used for seasonal activities such as agriculture. They argued that complicated appraisal and approval procedures, which might delay disbursement, influence a program of seasonal loans for farmers who use to buy inputs. Further they noted that this could in turn worsen the prospects of repayment by diverting loan to non-intended purpose. In such cases a positive sign is expected.

Business Characteristics

Business characteristics that are hypothesized to explain loan repayment performance of borrowers include sales and other sources of income.

sales :is expected to be positively related with repayment performance. As the monthly sales level increases, the amount of fund available for credit repayment also increases enhancing repayment performance. An increase in income from the business activity financed by the loan is assumed to increase repayment (Jemal, 2003). But sometimes success in the business may mean the

beneficiary will no more require credit from the same institution hence reducing the incentive to repay (miche'al, 2006). Therefore, thisis believed to enhance the repayment capacityof the borrower and a positive sign is expected.

Income from other activities or sources: Some borrowers may have other sources of income like income from employment in government or private organizations of the borrower or other members of the family, pension, etc. Such sources of income are expected to have positive contribution towards loan repayment performance. Hence, this variable may assume positive sign.

Chapter four

Results and Discussion

The results of analysis have been conducted to address main and specific objectives of the research; this chapter presents, analyzes and interprets the data gathered from the respondents through survey instruments. From 100 questionnaires distributed for this research, 88 useable questionnaires were returned giving are responses rate of 88%, which was considered satisfactory for subsequent analysis.

To this end, descriptive statistics was used to describe the socio –economic characteristics of respondents; binary logit regression model was applied to analyze the quantitative data collected through questionnaire. Moreover, this chapter presents the marginal effect of each explanatory variable on the discrete dependent variable.

4.1 Descriptive statistics result

Descriptive statistics analysis is made use of tools such as mean, percentage, standard deviation and frequency distribution. In addition, T-test was employed to compare defaulter and non-defaulter group in terms of each explanatory variables.

4.1.1 **Socio-economic characteristics of the respondents**

Table 3: Age of respondents

Variable		Defaulters N=(44)		Non defaulters N=(44)		Total sample N=(88)	
		N	P	N	P	N	P
Age (in years)	25-35	22	50%	12	27%	34	38.5%
	36-46	13	29.5%	17	38.5%	30	34%
	47-57	7	16%	11	25.5%	18	20.7%
	Above 58	2	4.5%	4	9.1%	6	6.8%

Sources: Survey results, 2017

N = Number of respondents   P = Number of respondents' percentage

Table 3 indicate that age of sample respondents ranges from 25 – 66 years. Accordingly,a substantial part of the defaults borrowers 50% ranges from 25-35, the respondents' age range from 36-46 constitutes 29.5%, the age range from 47-57 comprises of 16% and the remaining 4.5% of the respondents were composed the age range of above 58. The proportion of non defaulters' age was highest in range of 25 -35 by constituting 38.5%, and lower in the age range of above 58 representing 6.8%. While the non-defaulters age was highest in range of 36 -46 by constituting20.7%, and lower in the age range of above 58 representing 4%.

Fig. 2: Age range of the defaulters
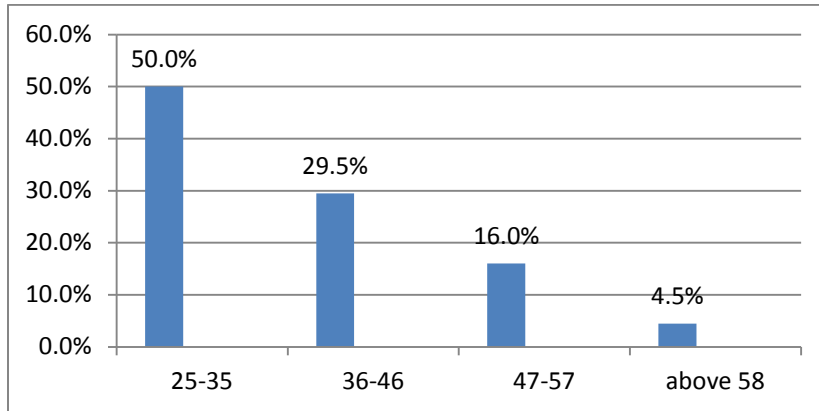
Sources: Survey results

The survey result showed that the borrowers at younger stages become more defaulter than at older age. Because at elder age of borrowers' increases they develop into matured and accumulate wealth, obtain experience in business management and credit use than youngsters. Then these and related positive variables enables elder borrowers to be better payers than youngsters.

Fig. 3: Age range of the non defaulters
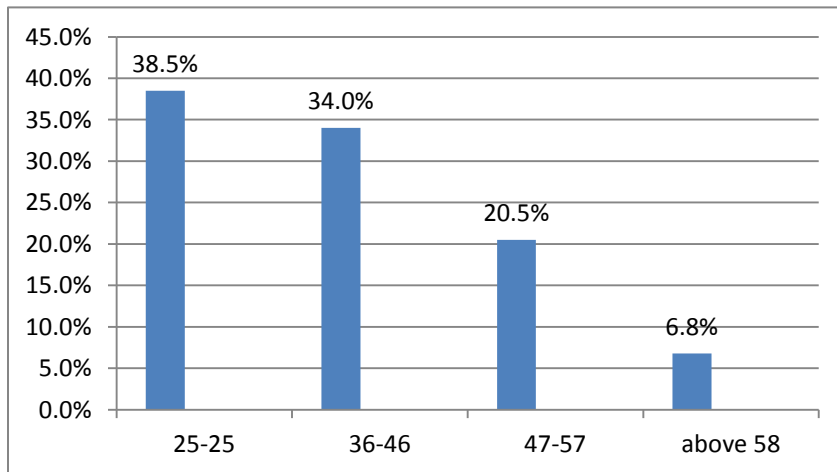
Sources: Survey results

Table 4: Education of respondents

Variable		Defaulters N=(44)		Non defaulters N=(44)		Total sample N=(88)	
		N	P	N	P	N	P
Educattion level	Illiterate	15	34%	9	20.5%	24	27.5%
	Grade 1-8	20	46%	13	29.5%	33	38%
	Grade 9-12	8	18%	18	40%	26	29%
	Above 12	1	2%	4	9%	5	5.5%

Sources: Survey results, 2017

The survey result explained that 88% of the sample respondents were literate with different educational level. Table 4 showed that, from the total respondents 0f defaulters, 34% respondents are illiterate, 46% respondents are primary school (grade 1-8), 18% respondents are high school (9-12), and 2.5% respondents are above grade 12.

Fig. 4: Educational level of defaulters
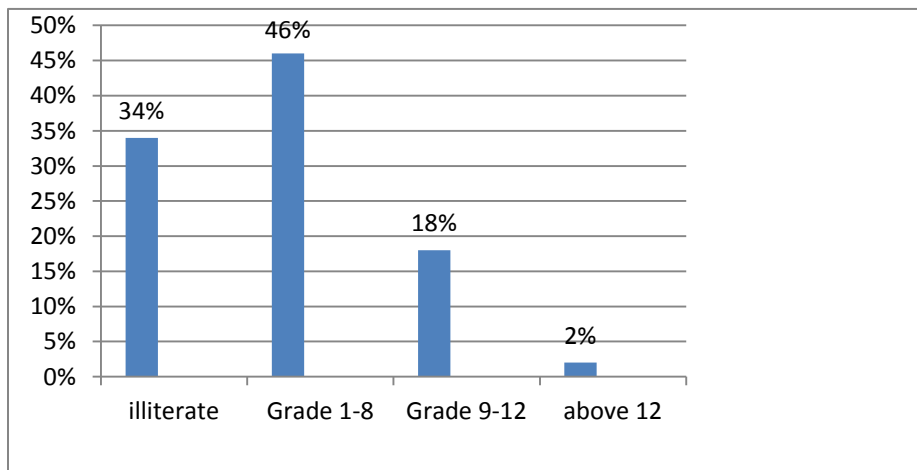
Sources: Survey results

The educational level of non defaulters were: 20.5% respondents illiterates, 29.5% respondents primary school (Grade1-8), 40% respondents high school(Grade 9- 12), and 9% respondents are above 12. While this shows that, the level of education and loan repayment has direct relationship. It has positive implication on loan usage and managing the business or using loan for income generating activities.

Fig. 5: Educational level of non-defaulters
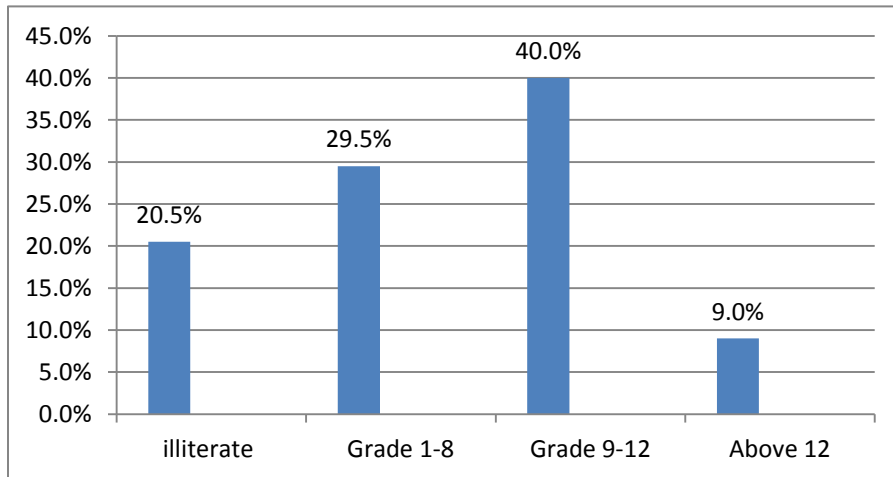
Sources: Survey results

Table 5: marital status of respondents

Variable		Defaulters N=(44)		Non defaulters N=(44)		Total sample N=(88)	
		N	P	N	P	N	P
Marital satatus	single	10	22.7%	12	27.3%	22	25%
	married	21	47.7%	23	52.2%	44	50%
	divorced	11	25.1%	7	16%	18	20%
	widowed	2	4.5%	2	4.5%	4	5%

Sources: Survey results, 2017

As indicaters to martial status, from the above table 5 total sample respondents 22.7%, 47.7%, 25.1% and 4.5% were single, married, divorced and widowed, respectively. The martial status of defaulters was single, married, divorced and widowed 22.7%, 47.7%, 25.1%, and 4.5%,

respectively. Whereas the martial statuses of non-defaulters were married, single, divorced and widowed of 27.3%, 52.2%, 16% and 4.5%, at the same order.

Fig. 6: Marital status of defaulters
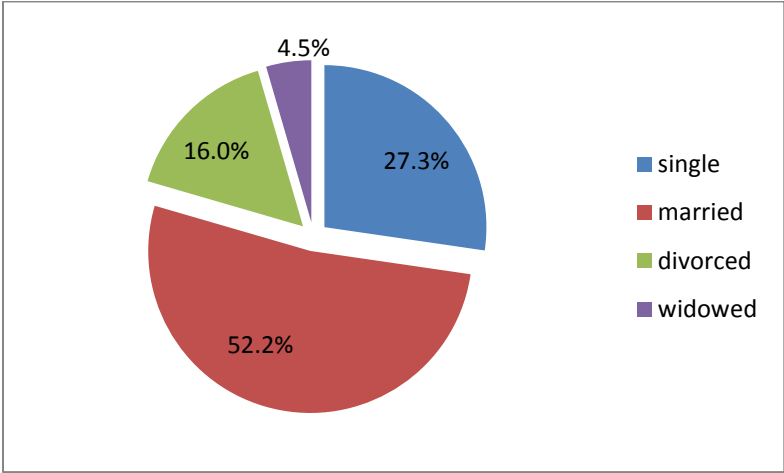
Sources: Survey results

Statistically, it was found that the percentage differences between the two groups were insignificant (Table 5). This indicates that being single, married, divorced, and widowed have the same status either to repay or not to repay.

Fig. 7.Marital status of non-defaulters

Sources: Survey results

4.1.2 Nature of repayment problems

Loan repayment problems in general and default problems in particular are attributed to three categories as summarized below:

Table 6: *Cause of loan repayment problem*

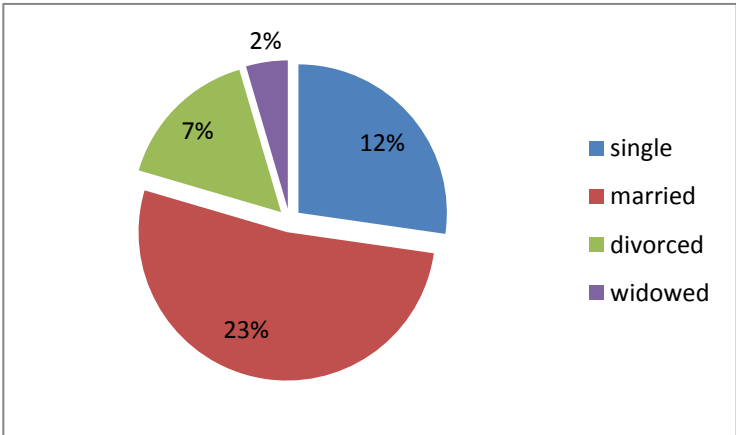| Cause		Respondents
Borrowers related	• Lack of formal education	40%
	• Continuation many dependents	54%
	• Poor business experience	45%
	• Loan spend to other purpose	64%
Business related	• High competition/Low sales	30%
	• Market problem	34%
	• Working capital shortage	23%
	• Lack of business supervision	41%
	• Increase input price	10%
Loan/lender related	• Inadequacy of loan size	32%
	• Loan disbursement lag	36%

Source: from survey result, 2017

Assessment of the loan repayment problems ways a subset of borrowers' related cause such as lack of formal education, existence of many dependents, and lack of adequate business experience and problem of loan spend to other purposes. For the above listed cause is major reason for the borrowers to default, each having a percentage share of loan spend to other purpose 64% and continuation many dependent 54%.

The increment of dependent in the family and credit spent unplanted purpose are one of the negative impact on the borrowed capital and eventually makes the money unavailable for repayment whereby lowering the chance of its being repaid.

be short of of formal education and insufficient business experience, are the major causes of being a defaulter with 40% and 45% of respondents reporting these variables as significant ones making them not to repay the loan on time.

Comparable assessment of business related causes made lack of supervision and market problem as the major reasons for borrowers to default, where out of the total respondents, 41% and 34% of them reporting these variables as an obstacle to repay the loan respectively.Additionaly from these business related factors,high competition 30% and working capital shortage 23% to be among the major reasons making them unable to repay the loan.

With regards to the third category, three loan related causes are listed: loan disbursement lag, smaller loan size and other causes like factors related to the macroeconomic environment. Asked why they default, 42% and 36% of respondents report inadequacy of loan size and loan disbursement lag as the major cause to be a defaulter respectively where as only 17% of them mentioned other causes such as the harsh economic conditions, stiff competition and general rise in price of inputs negatively affecting their repayment performance. Of other causes, changes in the external economic environment, a rise in price of inputs, for instance, accompanied by decline in selling price, and low demand for their products limits their repayment capacity considerably.

The thired category of lending institutions, loan officers were unquestionable in their belief that entertainment of funds to unprofitable uses was an important cause of credit default. Chances of default also increase when credit amounts given are lower than the amounts requested. And lending institutions structure was described as too rigid and thus not responsive to changing client needs. Besides, the length of time it takes for a potential borrower to apply and get the loan has an effect on the use and repayment of the loan. In the selected branches of Addis Credit and Saving Institution program, on average it takes 1.5 months for an applicant to apply and receive a credit. Although the lending institution has computer facilities, those facilities do not contain appropriate software to process borrower's information promptly or to track potential defaulters. Despite the measures, the institutions believed that trends of default are gradually increasing.

Default problems destroy lending capacity as the flow of repayment declines, transforming lenders into welfare agencies, instead of a viable financial institution. Loan default may also deny new applicants access to credit because the micro finance institutions management problems augment in direct proportion to the increasing default problem (Hunte, 1996).

4.1.3 Determinants of loan repayment performance

The binary logistic regression is used to evaluate the variables which significantly show the probability of a borrower belonging to any of the two particular repayment categories defaulter and non defaulter). There are thirteen type of variables hypothesized to determining the repayment status of borrowers. There are two types of tests commonly employed to check the difference, the use of which depends on whether the variables under consideration are continuous or categorical. Then for continuous varible defaulters and nondefaulters employed T-test stastices.

4.1.3.1 Descriptive Statistics of non-categorized determinant variables

The study in this section largely focused on t-test attend is statistically significant difference between the mean of any of the explanatory variables attributed to a defaulter and a non defaulter category. Subsections below give a detailed such tests with some explanations for those variables which are found to be statistically significant.

Table 7: T-tests of Continuous Variables against borrowers' repayment status.

variable	Default N=44		Non default N=44		Total respondents N=88		T-value
	Mean	St.dev	Mean	St.dev	Mean	St.dev	
AGE	38.09	8.58	34.98	7.68	36.58	8.13	1.5
BUSEXPR	2.05	1.77	4.2	2.1	3.57	3.9	-3.25***
DEPRATIO	0.41	1.02	0.32	1.23	0.36	2.25	2.35***
SALES	1198	1521	2363	2242	1775	1631	3.32***
CREDEXP	1.77	1.94	2.6	2.45	2.1	2.14	-2.29*
REPSIZE	800	556	1132	610	562	943	1.80
INCOME	716	634	1258	914	935	745	11.1`0***

Source: Survey result, 2017.

*, **, and *** represent significance at 1%, 5% and 10% levels of significance respectively.

with the six continuous variable of them show to have a statistically significant relationship with the borrower being either a defaulter or a non defaulter. There is, for example, a statistically significant deviation between the dependency ratio borrowers falling in to either category, implying family size matters in the repayment performance of the borrowers. The averages of, business experience, monthly sales, credit experience and other income falling in to both categories as well have some significant statistical deviations.

The average age in years and dependency ratio of borrowers was estimated to be around 36 and 0.36 respectively. This is almost the same with the mean age and dependency ratio of the two repayment categories described on table 7. At this level, dependency ratio does not seem to have the expected direct relationship with repayment performance.

Experience in business engagement indicates, as a whole, close to 4 years but with high standard deviation of 2 years. Therefore, there is high amount of deviation in business experience among borrowers. The categorical table indicates that those non default borrowers are more experienced with average number of years of 4.2 compared to 2.05 years for default borrowers.

The sales variable shows high amount of deviation, both within the same category in all categories and among the two categories. Sales within the non defaulters category shows an average of birr 2,363 and standard variation of birr 2,242. The average sale of default borrowers was 1,198 birr and is below the total average of birr 1,521. At this level sales level does seem to have the expected direct relationship with repayment performance.

Default borrowers' category repays total mean on monthly the smallest amount of birr 800 compared to 1,132 for non default borrowers. This might give an insight about the strength in effect of repayment size as a repayment performance determinant.

The other income variable indicates a total mean of monthly birr 716 but with a standard deviation of birr 634. The large amount of variation in other source of income is indicated in the categorical description as the average amount of other income for non default borrowers is 1258 compared to 914 default borrowers.

4.2. Econometric results

In this section, econometric analysis was carried out in order to identify the most important and significant factors that affect the loan repayment performance of borrowers. From this analysis is Binary logit using maximum likelihood estimation to estimate the parameters of the equation. As of the descriptive statistics information has indicate that there are many variables that affect the probability of a borrower being either a defaulter or non defaulter. The section that follows is devoted to the discussion of the econometric analysis of the impact of those variables on the borrowers' decision to reimburse back their loan or not.

Table8: Binary logit estimates of loan repayment performance

variable	Coefficient(standard error)	variable	Coefficient(standard error)
SEX	-.05998 (.0462641) **	SALES	-.51924 (.0127411) **
AGE	.5103557 (.0500083)	CREDEXP	-.068323 (.0177951) **
EDUC	.811134(.0213128) ***	REPSIZE	.06993120(.0126582) **
CRESIZE	.32304 (.0834841)**	INCOME	-.0995196(.0935749)***
DEPRATIO	.899001 (.0332425) **	SUPERV	-.09022 (.0101121) ***
TIMELINE	.25598(.0364738)	BUSEXPR	-.20562 (.0133512) *
TRAINING	.446542 (.0358466)	cons	**1.7237 (.01685477)**

Source: Survey result, 2017.

*, **, and *** represent significance at 1%, 5% and 10% levels of significance respectively.

As there are two categories in the alternative, we will have only one equation with the one serving as a base category, in our case being a non defaulter is labeled as a reference category, and every coefficient interpretation takes this variable as a reference.

log(P(defaulter=1)/P(non defaulter=0) $= \beta_0 + \beta 1i\ Xi$

log(P(defaulter=1)/P(non defaulter=0) $= \beta_0 + \beta_1$ SEX $+\beta_2$ EDUC $+ \beta_3$ DEPRATIO $+\beta_4$ BUSEXPR $+\beta_5$ CREDEXPR $+\beta_6$ REPSIZ $+ \beta_7$ INCOME $+\beta_8$ SUPERV

Log (P (defaulter=1)/P (non defaulter=0) $= 1.73 - 0.059$ SEX $+ 0.81$ EDUC $+ .899$ DEPRATIO $- 0.205$ BUSEXPR $+-0.519$ SALES $- 0.068$ CREDEXPRE $+ 0.069$ REPSIZ $- 0.099$ INCOME $- 0.0902$ SUPERV

In above table 8, six of the explanatory variables within the defaulters category have negative coefficient while, the remaining seven have positive coefficient. A positive coefficient shows that the variable is associated with a higher probability of being in the defaulters category than that of being in the non-defaulters category. However, the relationship is statistically significant in respect to the education, dependency ratio, credit experience and timeliness of credit release.

On the other hand, a negative coefficient shows that the variable is linked with a lower probability of being in the defaulters' category than that of the non-defaulter category. Judging by statistical significance, having business experience, higher sales volume, credit experience, other income and regular supervisory visits are more likely to be in the non-defaulters' category than the defaulters category.

For that reason, nine of the independent variables included are found to be significant at different p - value and all of them do coincide with our prior expectations though there are yet some variables believed to affect the dependent variable but not supported by the empirical findings of this study. Age and the adequacy of training on loan use are among those variables.

Sex of the borrower was included as one explanatory variable to capture the gender dimension of the loan repayment performance. It was expected that being a female borrower lower the probability of being a defaulter. However, in fact those women having much burden in domestic responsibilities are empirically found to be more efficient and less extravagant than their male counterparts are. Our econometric result indicates that the log of the odds ratio of a defaulter to a non defaulter is lower by about -.05998 (Table 8) for female borrowers as compared to male borrowers, with a significance level of 5% (Table 8). In other words, female borrowers are less likely to be a defaulter and more likely to be a non defaulter than male borrowers.

Based on theory and empirical findings referred in this document, borrowers who are literate are expected to pay their debt on time, lowering their probability of being a defaulter. The result also reveals the same effect witnessed by the log of the odds ratio of a defaulter to a non defaulter for illiterate borrowers being .811134, which is significant at 5% In other words, literate borrowers are less likely to be a defaulter and more likely to be a non defaulter, other things remaining the same. Based on the result as the level of education improved the beneficiary also enhanced the ability to read and write and in the process, improved flexibility in the occupation, which concurrently improved profit and the capacity to repay loans.

When the amount of credit increases, it is expected that the probability of its being repaid declines. The econometric result agree with the expectation with a coefficient magnitude of 0.32404, which is interpreted as a one-unit increment for credit raises the log of the odds ratio of a defaulter to a non defaulter by about .32304, which is significant at 5%.

Because of the number of children and adults not working in a family increases (i.e. dependency ratio increases), there would be an additional burden on the business the loan was taken for where by increasing the probability of the loan not being repaid on time. The result shows a coefficient of magnitude of .899001 which is interpreted as one unit rise in the dependency ratio increases the odds ratio of defaulter to a non defaulter by about .899001, which is significant at 5%. This indicates that as the number of dependents increases, the borrower will need more money to fulfill their requirements in addition to the obligation of credit repayment.

The other variable also affect are income source. It was expected that households who have additional income as remittance or from any other source will have higher chance of being a non defaulter as the additional income would help the household deal with other household issues without putting a pressure on the borrowed money. In the econometric result, it is found that the coefficient for this variable is 0.0999196 which is interpreted as the existence of remittance to the family decreases the log of odds ratio of being a defaulter to a non defaulter by about -0.0999196 which is significant at 10%.

Similarly, business experience, monthly sales amount, credit experience and credit supervision are expected to affect loan repayment performance. The research as well found out that (Table 8)

these variables negatively affect the probability of the borrower falling in to a defaulter category. That is, having one more year business experience, for example, lowers the log of the odds ratio of a defaulter to a non defaulter by 1%. This was because experience provided the capability with which the entrepreneur managed the ever changing business environment and was a critical decision tool. The result and that of Abraham (2002) supported this hypothesis.

4.2.2. Estimation of loan repayment performance

The coefficients need to be adjusted to be marginal effects in the case of the logit model. In other words, the marginal effect, which gives the partial derivatives indicating the change in the probability of the dependent variable relative to a unit change in one of the independent variables, needs to be computed.

For continuous variables, the marginal effect is the probability change in response to a unit change in the value of the independent variable at the mean value. For dummy variables, the marginal effect is computed as the difference in probabilities of the dependent variable between the group with designated value 1 and the base category. Furthermore, it should be noted that the signs of the beta (β) coefficients are not necessarily the same as that of the marginal effects.

The marginal effects for both defaulters and non defaulters were obtained and except monthly sales volume, the marginal effect of all explanatory variables do coincide for both categories i.e. any variable negatively affecting the probability of being a defaulter, positively affects the probability of being a non defaulter, and are statistically significant in both cases though the level of significance differs. In other words, the two are found to be two extremely opposing forces and thus much emphasis has been given to the interpretations of the marginal effect on the probability of being a defaulter, assuming similar arguments and conclusions can be drawn for that of the marginal effect on the probability of being a non defaulter.

4.2.2.1. Marginal effects of borrower characteristics

Table 9: Estimation of marginal effects of loan repayment performance

variable	Default Coefficient(standard error)	Non default Coefficient (standard error)
SEX	-0.040706 (0.00151)**	0.0044783 (0.00203)*
AGE	0.0386759 (0.03952)	-0.0329045 (0.03905)
EDUC	0.0700100 (0.03803)***	-0.0083275 (0.04522) ***
CRESIZE	0.02356729 (0.00166)	0.0100411 (0.00350)
DEPRATIO	0.0148330 (0.05002)***	-0.0050682 (0.04472)**
TIMELINE	0.0149385 (0.01503)	0.0096682 (0.02183)
TRAINING	-0.017543 (0.01663)	0.006675 (0.01661)
SALES	-0.0059955 (0.01404)**	0.0093156 (0.0132)
REPSIZ	0.0022442 (0.17653) **	-0.005477 (0.16186)**
INCOME	-0.0026340 (0.04846) ***	0.0002003 (0.0021)***
BUSEXP	-0.0289345 (0.02091)*	0.0104155 (0.0789)
CREDEXP	-0.08327 (0.09805)**	0.0875546 (0.09872) *
SUPRV	-0.0302965 (0.0526)***	0.0081312 (0.01202) *

Source: Survey result, 2017.

*, **, and *** represent significance at 1%, 5% and 10% levels of significance respectively.

Sex: There is a belief that among many microfinance specialists female are better credit risk than male borrowers, taking in to consideration their being more entrepreneurial that results from assuming more responsibilities in the internal affairs of a household (Vigano,1993). Moreover, females in urban area are relatively independent than rural are and thus mostly females are reliable to financial aspects. Thus they can perform their business independently and repwsay

their loan on time.. According to the result, there is a negative relationship between a borrower being female and the probability of falling in a defaulter category. The marginal effect value of - 0.040706 is thus interpreted as being a female borrower lowers the probability of falling in to a defaulter category by about 4% which is indeed in line with our expectation.

Education: 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, borrowers with higher levels of education may have higher repayment rates. As per the output in Table 9, being a literate borrower as compared to illiterates will have marginally statistical significant, 7% higher chance of falling in to a defaulter category. In other words, literate borrowers do have much higher probability of paying their loan on time as compared to illiterates. more educated owner is expected to use the loan effectively as compared to a less educated one (Amare, 2008).

Household Size/Dependency Ratio: There is a possibility of loans diverted to unintended purposes because of many responsibilities resulting from meeting the needs of many members of the family. Hence, borrowers with large family sizes have lower repayment rates. However, it is not the simple size of the family that puts a pressure on the borrowed loan because of the fact that those family members who are not only dependents but active to assist the business may raise the probability of the loan being repaid where as those family members who are totally dependents (those above the age of 65 and children) lower the probability of the loan being repaid.

However, result of the study dependency ratio was found to be statistically significant with a p value of 1% and a magnitude of 0.014833 (which is interpreted as a one unit increment in the dependency ratio results in a 1.48% marginal increment in the probability of the household head being a defaulter, other things remaining the same. This is so because of the fact that the additional family burden as a result of higher number of dependents above the age of 65 and inactive children, puts a pressure on the borrowed capital whereby decreasing its chance of being repaid within the time frame the institution puts as binding.

Business Experience: As the experience of the borrower in the business increases, the more knowledgeable s/he would be to manage the business and hence the more profitable and efficient it would become in its operation. This is believed to enhance the repayment capacity of the

borrower. The result also coincides with our expectation that it has a negative sign, implying a borrower having one more year business experience lowers his/her chance of falling in to a defaulter category by about -0.2893 whereas it increases that of falling in to a non defaulter category by 0.0104.

Credit Experience: If the borrower is a replicate borrower he/she may have acquired more experience on the institutions rules and regulations, and hence could efficiently utilize the credit for the intended purpose. On the other hand, since such borrowers may have the feeling that after borrowing and effectively using the credit for relatively more years they no longer need the loan from the institutions and may be reluctant in using it as per the agreement. As per the econometric result in Table 9, having one more month credit experience marginally lowers the probability of the borrower to be a defaulter by about -0.08327 % , and marginally increases the probability of the borrower to be a non defaulter by about 0.08755%.

4.2.2.2 Marginal effects of loan and lender's characteristics

Size of Repayment: The size of loan repayment increases the amount of money periodically required from the borrower. This is believed to change the repayment performance of borrowers and increase their probability of default and delinquency. According to the result, the marginal effect 0.0022 which is significant at 5% for both categories is interpreted as a one unit increment in the repayment size makes the borrower 0.22% more likely to be a defaulter and 0.55% less likely to be a non defaulter. These coefficient magnitudes are not too small.

Supervisory Visits: Norell (2001) stated the same thing that frequent follow up and supervision by loan officer help the borrower not to end up being defaulter. This studies shows whether flexible or more constant and frequent visit by loan officer always help to reduce defaulters. the econometric binary logit model reveals that those borrowers receiving adequate supervisory visits by loan officers 3% less likely to fall in to a defaulter category and 0.8% more likely to be a non defaulter.

4.2.2.3 Marginal effects of business characteristics

Other sources of income: Some borrowers may have other sources of income like income from employment other than the business the loan is taken for, remittance, pension payments etc. Hence, the existence of these variables may boost the probability of the loan being repaid on time.

Our result coincides with the theoretical reasoning that a marginal effect value of -0.002637 means the availability of other sources of income, say 100 additional income from other sources, statistically significantly lowers the marginal probability of the borrower being a defaulter by about 2.6% which implies that a non defaulter borrower having 100 more additional income from other business or transfer payments, other things remaining the same, will have a 2.6% lower marginal effect on the probability of the borrower being a defaulter. Thus, a borrower running diversified business other than the business the loan is taken for or having transfer payments from some other sources are more of a non defaulter as compared to those who run only a single business. The same effect, on the other hand, increases the marginal probability of the borrower falling in to a non defaulter category by 0.2%. In same line research, Acquah and Addo (2011) disclose that lack of alternative income generating activity has the probability of high loan default.

Sales: The level of sales may be one factor of loan repayment status of borrowers. Higher monthly sales volume means, the amount of fund available for credit repayment whereby strengthening the repayment performance of the borrower. An increase in income from the business activity financed by the loan is assumed to increase repayment. But sometimes success in the business may mean beneficiary will no more require credit from the same institutions, reducing the incentive to repay. The coefficient interpretation in Table 9 coincides with our expectation in a sense that the coefficient of this variable is negative. The marginal effect, though not necessarily matches in sign with the coefficient, also shows a negative causal effect as depicted in Table 9 with a value of -0.00599, which is interpreted as a non defaulter borrowers having more (say a 100 birr additional income) sales volume, will have a statistically significant lower, i.e. 5% lower, marginal chance of falling in to a defaulter category.

Chapter Five

5. Summary, conclusion and recommendation

5.1 Summary

The objective of the study was to identifing the determinants of credit risk on micro and small enterprises borrowers of lafto branch in Addis credit and saving instilions.

The main problem of borrowers default of small and micro enterprises indeveloping countries were borrowed funds could arise un planed project that may affect the ability of the borrower to repay as pointed out by Stigliz and Weiss (1981). Asymmetric information is also particularly acute for micro and small enterpriseborrowers because there is very little publicly available information that can be used to assess credit quality. On the other hand, there are several factors that have been attributed to the high default rates in small-scale credit. Those who argue that characteristics of micro and small enterprises borrowers make the cost of administering credit very high compared to the return on the loans. Micro and small enterprises possess low management, often with little experience and training; they are usually undiversified, one product firms, they are sometimes new businesses with little track record, and poor financial recording; they may have a new unproven product; they may be unwilling to raise outside equity capital for reasons of expense, loss of control and increased disclosure requirements. These characteristics of micro and small enterprises provide little incentive for any aggressive loan recovery mechanisms (ILO, 2008).

In the current environment characterized by a reduced availability of credit and tighter lending standards, the financing needs of MSEs deserve particular attention. In this regard it is important to recall that MSEs in general are more dependent on their personal savings and relatives than larger firms, which have the expertise, experience, and resources to tap the financial markets.

In developing countries like Ethiopia being one of such countries encounters not control the problem of credit default. The issue is of critical concern in the sense that defaulters apart from negatively affecting the economy of the country puts a long term burden on the social problem prevailing in the country as those defaulters would be trapped in the vicious circle of poverty they had been before the loan and hence would be unable to make ends meet, for the family's needs s/he is responsible for. this study employed a Binary logit model and attempted to assess the major socio-economic variables affecting loan repayment performance of the borrowers.

There are thirteen explanatory variables were entered in to binary logistic model and out of which nine variables were found significant to determine loan repayment performance of borrowers.

5.2 Conclusion

From the study findings it can be fulfilled that even though many factors can lead to loan defaults, some of the factors were regarded to be of higher impact. This is evident from the way respondents replied to questions and the analysis arising there of. This study has shown that most of the factors are borrower and business related.

There are many program design to take women's out of poverty and settled of those programs which goal women and men equally to participated for any work. But there are only little programs giving much emphasis to women as non-defaulters as statistically significantly supported by the result in this study. A finding in this study strengthens the need to treat women as good credit risk than men. The study discloses that female borrowers, other things remaining the same, are less likely to fail in repaying their loan as compared to their male counter parts.

The continuance of family members and dependents would have two impacts on the loan repayment performance. The existence of family members and dependents are affecting the repayment performance of the loan positively when provided that the additional member is active in support the business or get some other income other than the business undertaking with the borrowed capital, if the entrepreneur is able to collection this income definitely. The latter, high number of dependents, on the contrary, affects the loan repayment performance of the borrower negatively while these family members are more of inactive. Though the mere size of the family is not found to be statistically significant in this study, dependency ratio was. That is, entrepreneurs with large number of dependents are more likely to default.

The other finding of the borrowers who support their business by other sources of income (through either remittance or other business activities) or those who have good monthly sales are for more likely to be more of a non defaulter. The existence of these variables help the borrowers loosen other household's burdens on the borrowed capital which raise the available money to repay the loan. As the study under consideration indicates, repayment size has also similar effects where borrowers with higher repayment size are less likely to repay their loan on time.

The findings with respect to the educational status as well as business and credit experience of the borrowers reveal that borrowers who are relatively endowed with these factors are less likely to default. In other words, these three variables make the borrower to be rich on how to effectively

and efficiently manage the borrowed capital (more of a literacy effect), the consequences of not paying back the loan on time (more of credit experience effect), and fight fierce competition to have a good market share (more of business experience effect), the intermingled effect of all of which enabling the borrower to pay the loan on time.

Finaly, the research result assures that frequent follow up and supervision by loan officer help the borrower not to end up being defaulter that means less likely to be a defaulters. Having adequate training on loan use is, however, not of a factor to take the borrower out of a defaulter category. Of course, the effect of the latter variable (trainings on loan use) might be captured in the credit supervision in a sense that all borrowers, regardless of whether they get adequate training on loan use or not, would fill their knowledge gap on loan use after receiving regular credit supervision by loan officers, embodying the effects of training on loan use as well.

5.3 Recommendation

In the borrowes related factors recommendation, illiterate borrowers have lower loan repayment performance,then MFIs should target them differently with prior information that they need intensive training, follow up and monitoring on loan use, which when backed up by adult education can have unquestionable positive effect in increasing the likelihood of timely repayment of the loan. Since most of the clients are adults, trainings through informal means can be a potential area to focus on to mitigate loan repayment problems.

It has been manifestly observed from the result that the existence of many dependents encourage exclusive burden on the borrower and hinder loan repayment performance. Macro-economic variables like family planning programs, as a long term solution, would lower the dependency ratio attributed to clients where by increasing their chance of being a non defaulter.

It has been found that availability of other sources of income as a remittance or by means of other business activities has an interesting implication for borrowers' loan repayment decision. Thus, programs should focus on diversifying business activities of the clients other than the one the loan is taken for.

Finally, the lenders are work hard to provide solution and identify which factors strongly affect borrowers' repayment performance, due to the problem of adverse selection and moral hazard resulting from information asymmetries. Lenders cannot adequately observe the behaviors of their clients if they are honest or not. Rather, they can only observe the outcome of their loans, whether the clients repay it or not. Therefore, to mitigate the repayment problems associated with those variables mentioned in this study, a close relationship between lender and borrower should be maintained through monitoring, supervision and regular review meeting. That is, credit supervision in all stages is compulsory in raising the repayment performance of clients. Besides, strengthening and updating the management information systems of lending institutions should be given much emphasis to produce up-to-date credit/ loan repayment statements for borrowers and to enable early detection of potential default problems.

Refernce

Abraham, G. (2002). Loan repayment and its determinants in small scale enterprises financing in Ethiopia. MSc. Thesis, Department of Economics, Addis Ababa University. Addis Ababa, Ethiopia.

Absanto, G. & Aikaruwa, D. (2013).Credit rationing and loan repayment performance: The case study of victoria savings and credit cooperative society**.** *Global Advanced Research Journal of Management and Business Studies, 2(*6), 328-341. Retrieved from http://garj.org/garjmbs/index.htm

Addis Credit & Saving Institution (ADCSI). (2016). *ADCSI Profile.* Addis Ababa, Ethiopia.

Al- Mamun, A., Wahab, S., Malarvizhi, C. A. & Mariapun, S. (2011) Examining the critical factors affecting the repayment of microcredit provided by Amanah Ikhtiar Malaysia. *International Business Research, 4*(2), 93-102. Retrieved from http://www.ccsenet.org/ibr.doi:10.5539/ibr.v4n2p93

Aquah, H.D. AND Addo, J. (2011). Determinants of loan repayment performance of fishermen: Evidence from Ghana. Department of agricultural economics and extension, University of Cape Coast; Ghana. Vol. XLIV (4). Retrieved from http://www.agris.cz/files.

Berhanu, A. (2005). Determinants of formal source of credit loan repayment performance of smallholder farmers: The case of North Western Ethiopia, North Gondar (Master Thesis). Alemaya University, Ethiopia.

Bichanga, w.&Aseyo, L. (2013).Causes of loan default within microfinance institutions in Kenya. Interdisciplinary Journal of Contemporary Research in Business, Institute of Interdisciplinary Business Research, 4(12), 316-335. Retrieved from http://www. ijcrb.webs.com

C.R.Kothari (1990).research methodology 2nd Revised edition. retrieved from http://www.newagepublishers.com.

Dr. Sue Greener & Dr. Joe Martelli (2015). An introduction to business research method (2nd ed.),book boom.com,ISBN 978-403-0820-4.

Federal Democratic Republic of Ethiopia, Ministry of Trade and Industry. (1997). Micro and small enterprises development strategy. Strategy Document. Addis Ababa, Ethiopia.

Federal Democratic Republic of Ethiopia, Central Statistical Authority. (2003). Report on Urban Informal Sector: Sample Survey. Statistical Bulletin No. 282. Addis Ababa, Ethiopia.

Fikirte, R. (2011). Determinants of loan repayment performance: A case study in the Addis Credit and Saving Institution, Addis Ababa, Ethiopia. MSc Thesis, Department of Development Economics, Wegeningen University, The Netherlands.

Getaneh, G. (2001). Evaluating the potential of microfinance as anti-poverty strategy: A Case study of the Amhara credit & saving institution. Proceeding of Conference on the Microfinance Development in Ethiopia. Association of Ethiopian Microfinance Institutions

George, O. K. (2008). The role of microfinance in finance in fostering women entrepreneurship in Kenya: a qualitative analysis. *Journal of Transformative Entrepreneurship, 1* (2)*, 92-101.*

Hunte, C. K. (1996). Controlling loan default and improving the lending technology in credit institutions: Savings and Development. 20(1), 1-19. Retrieved from http:// www.gdrc.org/icm/grameen-ref.html.

International Labor Office. (2008). know about business: Gender Sensitive Manual, International Training Center of the ILO, Turin, Italy.

Jemal, A. (2003). Microfinance and loan repayment performance: A Case Study of the Oromia Credit and Savings ShareCompany (OCSSCO) in Kuyu. MSc. Thesis, Department of Economics, Addis Ababa University. Addis Ababa, Ethiopia.

Lidgerwood J. (2002). Sustainable banking with the poor: Microfinance Handbook: An Institutional and Financial Perspective. Washington D.C.: IBRD/The World Bank

Meklit Microfinance Institution. (2005). Trends, challenges and other key issues in Microfinance development in Ethiopia: Workshop proceedings. Addis Ababa, Ethiopia: Alisei Publishing.

Mengistu, B. (1997). Determinants of micro enterprises loan repayment and efficacy of screening mechanism in Urban Ethiopia: The Case of Bahir Dar and Hawasa Town. MSc. Thesis, Department of Economics, Addis Ababa, Ethiopia.

Miche'al, A. (2006). Micro-finance repayment problems in the informal sector in Addis Ababa. Occasional paper, Ethiopian Journal of Business & Development. 1(2), 29-50. Addis Ababa, Ethiopia.

National Bank of Ethiopia. (2010). Risk management guidelines for microfinance institutions. Microfinance Institutions Supervision Directorate, Addis Ababa, Ethiopia.

Nawai, N. &Shariff, M. (2013). Loan repayment problems in microfinance programs that use individual lending approach: A qualitative analysis.*Journal of Transformative Entrepreneurship, 1(*2), 93-99. Retrieved from http://www.ijebf.com/

Nguta, M & Huka, S. (2013). Factors Influencing Loan Repayment Default in Micro-Finance Institutions: The Experience of Imenti North District, Kenya. *International Journal of Applied Science and Technology, 3* (3), 80-84. Retrieved from http://www.ijastnet.com/journals.

Nigussie, G. & Mitiku, F. (2013). Filling the breach: Microfinance. Journal of Business and Economic Management. Jima University, Ethiopia: Academia Publishing, 1(1), 010-017. Retrieved fromhttp://www.academiapublishing.org/jbem

Olomola, A.S. (2000). Determinants of smallholder loan repayment performance: evidence from the Nigeria micro-finance system. Retrieved from http://www.economics.ox.nc.uk/CSAEadmin/conferences/2000-oiA/pdfpapers/ olomola.pdf.

Onyeagocha, S. Chidebelu, D. & Okorji, E.(2012). Determinants of loan repayment of microfinance institutions in Southeast States of Nigeria.*International Journal of Agricultural Management & Development, 2(* 3), 167-175.Retrieved from http://www.**i**jamad.com.

Pindyck, R.S. and Rubinfeld, D.L. (1998). Econometric models and economic forecasts (4th ed.). New York, NY: The McGraw-Hill companies.

Rosenberg, R. (2002). Calculating effective interest rates. *Occasional Paper No*. 1

Sally, H. (2011). *Learn the three Cs of credit*. Retrieved from http://www.creditcards.com/credit-card-news/herigstad-three-cs-of-credit-scores.

Samuel, S. (2011). Credit default risk and its determinants of microfinance industry in Ethiopia. MSc. Thesis. Department of Accounting and Finance, Addis Ababa University. Addis Ababa, Ethiopia.

Saunders, A. & Cornett, M. (2001). *Financial markets and institutions*. New York, NY: McGraw – Hill.

The Federal Democratic Republic of Ethiopia, Ministry of Finance and Economic Development. (2010).*Growth and Transformation Plan* (GTP) 2010/11-2014/15. Addis Ababa, Ethiopia

Verbeek, M. (2008). *A Guide to modern econometrics* (3rd ed.). RSM Erasmus University, Rotterdam: John Wiley and Sons, Ltd.

Wolday, A. (2000). Microfinance institutions in Ethiopia: Performance, challenges and role in poverty reduction. *Occasional Paper No*. 7, AddisAbaba, Ethiopia.

Wolday, A. (2005). Managing growth of microfinance institutions: Balancing sustainability and reaching large number of clients in Ethiopia. *Proceeding of the bi-annual conference on microfinance development in Ethiopia.* Addis Ababa, Ethiopia: Association of Ethiopian Microfinance Institutions.

Wongnaa, C. A. & Awunyo-Vitor, D. (2013). Factors affecting loan repayment performance among Yam farmers in the Sene District, Ghana. *Agris on-line Papers in Economics and Informatics, 5(2)*, 111-122. Retrieved from http://www.agris.cz/files.

Wrenn, E. (2005). *Micro-Finance: Literature review*. Retrieved from http://www.bwtp.org/publications.

Appendix I: Survey instrument

Saint Mary's University

School of Business

M.Sc. Program in Accounting and Finance

Major Determinants of Credit default Risk on Micro and small enterprises borrowers: A case of Addis Credit and Saving Institution, Addis Ababa, Ethiopia

Questionnaire

SECTION I: PERSONAL DETAILS

1. Age _____ years
2. What is your gender?
a) Female
b) Male
3. What is your position in marital status?
a) Single
b) Married
c) Divorced
d) Widowed
4. What is your level of education?
a) Illiterate
b) Grade 1-8
c) Grade9-12
d) (above grade 12)
5. Household Size (Number of dependents in the household) _____
6. How many individuals being supported by the borrowers outside household members?
a) One
b) Two
c) Three
d) Four and more (Please describe) _____
7. Was the amount of credit received adequate for the purpose that you projected?

a) Yes

b) No

8. If your response is No for question number 6, what was the amount you request?

_____ETB (Ethiopian Birr).

9. How many years of experience you have (if you are the manager) in running such enterprise? _____ Years

SECTION II: CREDIT/ LOAN UTILIZATION

10. How many times did you take loan from Addis Credit and saving Institution? _____ times

11. Did you get the loan at the right time?

a) Yes

b) No

12. If your answer to question 10 is No, what is the reason for delay?

a) Lengthy period the bank took in processing

b) Failure to timely provide the necessary documents by the promoter

c) Failure of the promoter to timely fulfill the preconditions stipulated on the loan contract

d) Delay in settlement of the previous loan

e) Others (specify) _____

13. How do you get the method of disbursement of the loan?

a) suitable

b) Not suitable

14. If your answer to question 12 is not suitable, what do you think is the suitable form of disbursement?

_____

_____

_____

15. What was the purpose for which the credit was taken?

a) Retail trade

b) Production of construction inputs (materials)

c) Metal and wood work

d) Hotel and catering services

e) Miscellaneous business (please describe others) _____

16. Do you have other source of income?

a) Yes

b) No

17. If your answer to Question 15 is yes, have you paid from the project income or other source of income?

a) Project income only

b) Other income source as well

18. Did you spend the entire loan on purposes specified in the loan agreement?

a) Yes

b) No

19. What was/were the reason(s) for spending part/entire loan on non-intended purposes?

a) The loan amount was not enough for the intended purpose

b) The loan agreement did not coincide with my initial intention

c) Market problem

d) To repay another loan

e) To make a more profitable business

f) Other

(specify)_____

SECTION III: CREDIT/LOAN REPAYMENT

20. What is the status of recent loan?

a) Fully repaid

b) Repayment on schedule

c) Repayment in arrears

21. If in arrears what is the balance remaining?

_____ (Ethiopian Birr)

22. What was the problem for the loan to be in arrears?

a) Loan based business activity was not profitable

b) Used some of the loan for household living expense

c) working capital shortage

d) Loss of assets acquired by the loan

e) Other (specify)_____

23. Do you perceive the cost of default to be high?

a) Yes

b) No

24. If yes, which of the following is the most important in forcing you to repay the loan in time?

a) Claim against personal wealth

b) Claim against guarantors

c) Social sanctions (e.g. loss of social status)

d) Fear of losing another loan in future

e) Other (specify)_____

SECTION IV: SUPERVISION, CONSULTATIVE VISITS AND TRAINING

25. Have you ever been supervised regarding loan utilization by ADCSI staff?

a) Yes

b) No

26. Have you ever been supervised for loan repayment?

a) Yes

b) No

27. If yes to either No. 25 or 26 how many times were you supervised?

28. Do you consider supervision as being important for loan repayment?

a) Yes

b) No

29. Did you get any training before receiving loan?

a) Yes

b) No

30. If yes, what kind of training was it?

a) Business

b) Marketing

c) Saving

d) Book keeping

e) Other (specify)

31. Do you think that the training has helped you increase your income?

a) Yes

b) No

SECTION V: MARKET SITUATION AND CREDIT BENEFIT

32. Please list the major products and/or services produced from your business that is financed by the credit/loan from your customer Microfinance Institution?

_____

_____

_____

_____

_____

_____

33. How was the demand for your product that you produced and/or service rendered?

a) High

b) Average

c) Low

34. What was the trend of profits in the level of your business in the past 5 years?

a) Increased

b) Decreased

c) Stayed the same

35. If your response for question number 55 is increased, what do you think is the reason behind?

a) Sufficient fund

b) Availability of market

c) Quality advantage

d) Favorable price

e) Other (please describe

36. If your response for question number 34 is decreased, what do you think is the reason behind?

a) Increase in input price

b) Lack of business premises

c) High competition/low sales

d) Decline in selling price

SECTION VI: INFORMATION ON OTHER ISSUES

37. Did you have a saving account before participating in this credit and/or microfinance institution scheme?

a) Yes

b) No

38. If your response for question number 33 is yes, what is the average amount that you manage to save monthly? _____ (Ethiopian Birr).

39. Do you keep accounting records for your activities that you take the loan?

a) Yes

b) No

40. If your answer for question number 35 is yes, for what purpose you keep record?

a) To evaluate profit and loss

b) For loan repayment purpose

c) Other (please describe) _____

41. If your answer for question number 36 is No, explain the reason(s) of not keeping records?

a) Lack of knowledge

b) Transaction too small to keep a record

c) Other (please describe)

Appendix II: Survey instrument

SECTION ONE: GENERAL INFORMATION OF ADCSI

1. What is your position in Addis Credit and Saving Institution (ACSI)?

   _____

2. Years of service in the current capacity

   _____

3. About operation of Addis Credit and Saving Institution (ADCSI).

a) Main branch(s) (in number) _____

b) Sub branch (s) (in number) _____

c) Districts (in number) _____

4.	How many Micro and Small Enterprise borrowers are there in this Branch office?		
	Number of Micro and Small Enterprise borrowers in this Branch office		
	Male	Female	Total

SECTION TWO: CREDIT/LOAN DEFAULT

5.	How many of the Micro and Small Enterprise borrowers are paid their credit/loan in full based on the loan/credit repayment agreement?		
	Number of active borrowers in this Branch office		
	Male	Female	Total

6.	How many of the clients are defaulters of loan/credit?

Number of Defaulters in this Branch office		
Male	Female	Total

7. What is your belief regarding the causes of credit/loan default?

a) Failure to prosecute defaulters

b) Lack of proper follow-up due to inadequate funding for operations and maintenance resources

c) When loan amount given are lower than the amounts requested

8. Have you ever observed that the length of time it takes for a potential borrower to apply and get the credit/loan has an effect on the repayment of the credit/loan?

a) Yes

b) No

9. If your answer is yes for question number 7, How long does it take to complete the loan/credit application process?

a) Around One month

b) Up to two months

c) Up to three months

d) More than four months

e) Other (please describe)

10. What is your attitude towards the information system which has been used by Addis Credit and Saving Institution?

a) To record on clients are inadequate

b) Facilities do not contain appropriate software to process borrower information promptly

c) Data related to borrowers are manually kept in files

d) Cases of loan-over and under-repayment exist

e) Properly designed information system is there

f) Other (please describe) _____

11. Which factors could be considered as causes of loan/credit default?

a) Diversion of funds to unprofitable uses

b) Lack of discipline in the use of working capital

c) Poor management skills

d) Poor business performance

e) Other (please describe) _____

12. What measure do you have to deal with various categories of loan/credit default?

a) Sales of defaulter's security to recover the outstanding balance

b) Causes of long-lasting default are forwarded to the state counsel for prosecution

c) Counsel the defaulters on the importance of repaying the loan on time

13. If you believe on the measure of question number 12, what is the trend of default currently?

a) Decreasing

b) Increasing

14. What screening mechanism do you use to identify creditworthy borrowers from non-creditworthy borrowers before credit/loan disbursement?

_____

_____

_____

_____

_____

_____

_____

_____

Thank you for your participation in the study!