FACTORS INFLUENCING LOAN REPAYMENT PERFORMANCE OF MICRO AND SMALL ENTERPRISE BORROWERS FINANCED BY MICROFINANCE INSTITUTION; THE CASE OF OROMIA CREDIT AND SAVING S.C (OCSSCO).

BY

TESFAYE SISAY

ADVISOR

DEGEFE DURESSA (PH.D.)

A THESIS SUBMITTED TO ADDIS ABABA UNIVERSITY COLLEGE OF BUSINESS AND ECONOMICS DEPARTMENT OF ACCOUNTING AND FINANCE IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR DEGREE OF MASTERS OF SCIENCE IN ACCOUNTING AND FINANCE

ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

ACCOUNTING AND FINANCE DEPARTMENT

January 2018
Addis Ababa, Ethiopia

Declaration

I, the undersigned, declare that this thesis is my own work and has never been presented in any other university. I have carried out the research work independently with the support of research advisor. All sources of materials used for this thesis have been duly acknowledged.

Declared by:
Name: Tesfaye Sisay
Signature: _____
Date: 12 th January 2018
Place: Addis Ababa, Ethiopia
Advisor: Degefe Duressa (Dr.)
Signature: _____
Date: _____

Statement of Certification

we certify that we have read and evaluated the thesis prepared by Tesfaye Sisay entitled **Factors Influencing Loan Repayment performance of Micro and Small enterprice borrowers financed by microfinance institution: In the case of Oromia Credit and saving S.C (OCSSCO)** and recommend that it be accepted as fulfilling the thesis requirement for the degree of Master of Science in Accounting and Finance.

……..……	……..	……..
Name of Major Advisor	Signature	Date
……	……..	……..
Name of Internal Examiner	Signature	Date
……..…	……..	……..
Name of External Examiner	Signature	Date

Acknowledgement

First, I would like to praise and thanks to the almighty God for his giving me strengths, joys, and patience in this long journey of the study. My grateful thanks would extend to my advisor, Degefa Duressa (Dr.) for his valuable advisory services and comments at each stage of the study to the paper successfulness. Following this, there are innumerous peoples who have extensively take parts in the achievements of the goal of the study.

My grateful thanks extend to Staff from the sample lending institute, at all level of company structure for their enthusiastic contributions in facilitating and getting informed the major issues of the study. Without their cooperation, the data would not have been collected in time. I would also like to express my sincere appreciation to the clients of the institution for valuable support and cooperation.

Moreover, my sincere thanks and appreciations go to my friends who had taken part in the process by giving financial and other supports.

Finally, great thanks to all my beloved families who had been always beside me in encouraging and supporting in all aspects of the process.

Acronyms and Abbreviations

AEMFI	Associations of Ethiopian Microfinance Institutes
ADCSI	Addis Credit and Saving Institution
CDF	Cumulative Distribution Function
MF	Microfinance
MFI	Microfinance Institutions
MSE	Micro and Small Scale Enterprises
NBE	National Bank of Ethiopia
OCSSCO	Oromia Credit & Saving Share Company
VIF	Variation Inflation Factors

List Of Tables

List Of Figure

I. Abstract

Microfinance institutions in Ethiopia are playing an important role in poverty reduction strategies initiated by the government of Ethiopia. These institutions have a mission of creating and facilitating credit and other financial schemes to enhance self-employment opportunities and poverty reduction. There have been challenges in the microfinance institutions' regarding reducing the high rate of default by their clients specifically with micro and small enterprise borrowers. Thus, the study objective was to identify factors influencing the loan repayment performance of MSE's financed by MFI, in the Case of Oromia Credit and Saving S.C (OCSSCO).To address the main objectives of the study, four zonal offices of Oromia credit and saving Share Company were selected for the study purpose. Accordingly, in order to achieve the objective 329 sample borrowers were selected from the total of MSE borrowers served by those selected MF zonal offices. The data were collected using a structured questionnaires, and interviews. The descriptive statistics analysis and probit regression model were employed to estimate the model and analyze the results of findings. The result shows that eight variables including constant: monitoring utilization of other members in a enterprises, loan disbursement timeliness, repayment schedule suitability, repayment trend on monthly basis, repayment trend in irregular basis supervision on monthly basis and training adequacy are found significantly influence loan repayment performance of borrowers. Thus, it is recommended that the lending institutes need to focus on monitoring loan utilization systems of borrowers and technical support needs of the target borrowers through delivering better awareness creation to organize the more viable borrowers, close supervision, and follow-ups and strengthening their internal and external weaknesses through better training.

Key words: Microfinance, loan repayment, Borrowers, Default

Table of Contents

Chapter One

1. Introduction

1.1 Background of the Study

The proper recovery of loan is not only a prerequisite for rapid expansion of microfinance service but also a question of survival (Dula, 2012).The loan is a single largest asset in microfinance institutions' balance sheet. Thus, it's essential to learn about the factors that affect this asset.

Ethiopia has embarked its march on the achievement of development and transformation plan with a national vision of building a middle-income nation that will ensure social justice. To realize this national vision the country developed different programs which the Micro Small Enterprise Development is one of them. Nowadays MSEs are recognized as vehicles for economic growth and reduce poverty and unemployment. MSEs play an important role in the growth and development of the economies of low income countries like Ethiopia in-terms of employment creation, output (contribution to GDP), export promotion, stimulating the development of innovation, and indigenous skills for sound entrepreneurship, decentralization of industries, industrial linkages, and utilization of resources and transfer of technology. More generally, the development of MSEs is seen as accelerating the achievement of wider economic and socio-economic objectives including poverty alleviation especially for less developed countries like Ethiopia. Although the contribution of the sector is very much important, it is not without problems; MSEs in Ethiopia are confronted with several drawbacks and challenges they have to overcome in order to operate successfully. Major obstacles include access to finance, competition, market access and situations, appropriate technology and access to raw materials Beriru et.al,(2014).However, a peculiar and most critical problem to MSEs in developing countries, like Ethiopia, is lack of access to financial sources both as initial and as working capital as finance is pointed out to be the "glue" that holds together all the diverse aspects involved in MSEs (Green et al., 2002:1). Thus, addressing the most constraining factor, i.e., financial sources can be considered as tackling the other factors. To deal with this issue one

should understand how these enterprises raise finance at the outset or establishment and in their operation. In order to realize the expected results from MSE's the government of Ethiopia extends direct policy support to MSE operators. The direct policy support includes access to markets, access to finance, access to industrial extension, access to training and technological support. So it's the Micro finances' role to provide financial service for MSE's.In this regard, microfinance is expected to play the greater role specifically in providing finance for small and microenterprise which is a core of the development plan of the country.Therefore, to enhance the contribution of microfinance service it's important to ensure the microfinance sustainability which highly depends on portfolio quality. The proper recovery of loan is not only a prerequisite for rapid expansion of microfinance service but also a question of life or death for any credit agency. In Ethiopia, the administrative measures applied to enforce repayment are harsh and did not take into account borrower's circumstances. The system does not accommodate the interests of borrowers who are willing to incur additional interest by delaying crop and other asset sales in hopes that price will be better off later in the year. Defaults in Ethiopia may arise from three major factors. The first is the inability of borrowers to repay the loan as a result of crop and another investment failure for various reasons. Secondly, due to the unwillingness of the borrowers to repay because the loan is sometimes viewed as a grant or as a political patronage. The third factors could be institution and policy problems. The systems of credit delivery and collection mechanisms of the institutions have contributed to poor loan repayment (Zemen, 2005) cited by (Dula, 2012). Loan default is a tragedy because failing to implement appropriate lending strategies and credible policies often result in the demise of credit institutions. Default problems destroy lending capacity as the flow of repayment declines, transforming lenders into welfare, in the head of viable institutions. Loan defaults deny new applicants access to credit. In the context of third world lending programs, the cost of defaulting include not only the loss of future credit but also public embarrassment and the loss of social standing (Belay, 1998) cited by (Dula, 2012).

Despite the above studies identified various factors affecting the repayment performance; there might be differences in livelihoods of the MSE member borrowers and capacity level of the institutions in different Settings. Since the previous studies are not focused on specific to Micro and Small Enterprises rather on all target customers of MFI's by covering specific areas of the

study, the rationale beyond this study was to investigate the factors influence the loan repayment performance of MSE's financed by microfinance institutions: in the case of selected microfinance institutions in Oromia region, in order to enhance the repayment performance and laying strong groundwork in the development of the financial service of the microfinance industry as well.

In this chapter, the overall background of the study, the statement of the problem, the General and specific objective of the study, the significance of the study, the scope of the study and limitations of the study were discussed in details. Furthermore, the views of various authors indicated in this paper were assessed and discussed based on the relevance of their opinion on the subject matters.

1.2 Statement of the Problem

Despite the sustainability of microfinance institutions depends largely on their ability to collect their loans as efficiently and effectively as possible, Microfinance institutions offer loans mostly to community members who cannot afford collaterals to get loans from the main commercial banks. The problem of loan default reduces the lending capacity of the financial institution. It also denies new applicants access to credit as the microfinance institution's cash flow management problems augment in direct proportion to the increasing default problem. That means it may disturb the normal inflow and outflow of the fund as a micro financial institution has to keep staying in sustainable to play their role effectively and efficiently. In other words, to be financially viable or sustainable, microfinance institutions must ensure high portfolio quality, or at worst low delinquency/default, cost recovery, and efficient lending.

As a result, various studies are conducted on factors influencing non-repayment of loans among which (Dula,2012; Nguta and Huka, 2013; Mesele et al., 2016; Angaine and Waari, 2014) are few ones. These studies identified so many factors which could arise from businesses characteristics like type of business, age of the business, number of employees and business profit and the socioeconomic factors like family size, income from other activities, livestock holding, membership duration, loan diversion, loan supervision and monitoring, training on loan use and celebration of social ceremonies are other factors influence loan repayment performance.

However, given the diversified livelihoods of the borrowers and different capacity level of the institutions there have been challenges in the microfinance institutions regarding reducing the high rate of default by their clients; i.e. for the last couple years of operations, that microfinance operating in Ethiopia has been facing a severe decline in repayment recovery rates. For example: According to OCSSCO annual report 2016, despite the over all PAR(portifolio at risk) rate of the company is less 5% which is comply with the NBE requirement, the MSE loan which has been contributing greatly for poor portfolio quality for the past years of operation is still keeping on 10.58% PAR(portfolio at risk) share from the total outstanding loan of the company. Reports show the decline in loan repayment rate is high specifically in MSE borrowers, which is a cause for concern because of its consequences on businesses, individuals, and the economy of the country at large as well as specific to the study area. It is in this regard that this study aims to investigate the factors influencing loan repayment performance of MSE's financed by microfinance in case of OCSSCO. Most of the previous researchers are focused on all target customers of Microfinance, but

this study is focused on MSE's which is their loan repayment performance is low according to the reports of the biggest microfinance institution in the region. Hence, the rationale beyond this study was to investigate the factors that influence the loan repayment performance of MSE's financed by Oromia Credit and Saving S.C (OCSSCO), one of the largest microfinance institutions in the country operating in Oromia region of Ethiopia.

1.3 Objectives of the Study

Financial service providers can be successful if the loan disbursed is healthy and repaid on time, so that the collected cash will be utilized for other borrowers and circulation of the loan will be affected in a manner that assuring the development of the financial industry of the country (Dula, 2016). Accordingly, this study has the following general and specific objectives.

General Objective of the study

The overall objective of this study was to determine factors affecting loan repayment performance of MSE financed by MFI in the case of selected microfinance institution.

Specific Objectives Of the study

I. To obtain the loan repayment performance of selected micro finance;
II. To identify the factors arising from Clients characteristic that affects loan repayment performance Of MSE's;
III. To identify the factors arising from business characteristic that affects loan repayment performance of MSE's;
IV. To identify the factors arising from lenders characteristics that affect loan repayment performance of selected microfinance clients.

1.4 Research Questions

In order to achieve the main objectives of the study, three research questions were developed.

I. What is the default rate from the total sample of MSE borrowers of the Selected MFI's?
II. What factors of clients characteristics that can significantly affect the repayment performance of borrowers in the selected MFI's?
III. What factors arise from business characteristics that can have a significant impact on loan

repayment performance of borrowers in the study area?

IV. What factors arises from lenders characteristics that can have a significant impact on loan repayment performance of lending institutes?

1.5 Hypothesis of the Study

Based on study objectives of this study, the researcher has hypothesized the following factors to evaluate their influences on the loan repayment performances of borrowers.

H_1: The client's characteristics factors (age, Gender & Income) of the borrowers can significantly influence loan repayment performances of borrowers.

H_2: The business characteristics factors (Loan size, peers monitoring, loan utilization, credit timeliness, repayment time suitability, repayment trend on a monthly basis, repayment trend on an irregular basis, conducting supervision on a monthly basis, irregular supervision, business experience, technology and keeping a book of records) can significantly influence the loan repayment performance of borrowers.

H_3: Availability of adequate training and other supports to Microfinance services can significantly influence the loan Repayment rate of MFIs.

1.6 Significance of the Study

The study will have a number of significances. Principally, it contributes to the efforts being made by micro finances as well as a National Bank of Ethiopia in setting appropriate criteria and standard procedures of loan disbursement that will help to improve the loan repayment performance of the microfinance institutions. Accordingly, the result of this study may give insight to micro finances to be aware of the current factors influencing loan repayments and helps in finding relevant recommendations to solve the problem of loan default by clients and help the microfinance institutions to design successful loan programs. Furthermore, the finding of the study may help others, who have intentions to investigate the topic further.

1.7 Scope of the study

The company has three target customers namely self-help group customers, Individual customers, and micro small enterprises that have access to a loan. The study scope is limited to micro and small Enterprises only. Since the recovery rate decline is high in this target customers of the company. This study also focused only on the factors that influence the loan repayment performance of MSE borrowers financed by microfinance institution in cases of selected MFI's.

1.8 Limitations Of the study

The study has a number of limitations, though their impact does not compromise its validity. One of the limitations in this regard is the methodologies used to measure the variables are based on borrowers perception about the issues under investigation, so the reliability of data may be affected by doubtful respondents and their idiosyncratic system. However, greater efforts were exerted to convince the borrowers and the institutions about the objectives of the study and confidentiality of the given information. Finally, as in all case studies, the generalizability of the conclusions is limited to selected microfinance institution and a sample of respondents. Therefore, the study was undertaken to meet the objectives within the revealed limitations.

1.9 Organization of the study

The major sections of this thesis paper have been organized as follows. The first chapter consists of the introduction parts. The second chapter consists of a review of the theoretical and empirical related literature on MFI related factors that can influence repayment performance of borrowers at all. The third chapter describes the methodology of the study. In chapter four the data were collected and descriptive results of the findings were discussed. In chapter five the economic regression results of the findings have been analyzed slightly. Finally, the sixth chapter ends with summary, conclusions, and recommendations of the study in general.

Chapter Two

2. Literature Review

2.1 Theoretical overview of Loan and Microfinance

Despite the fact that the microfinance concept has been used globally for centuries; it's Bangladesh's Muhammad Yunus who is credited with being the pioneer of the modern version of microfinance. Joseph Blatchford is also credited with helping build up the modern-day micro-financing efforts (Chad, 2013).After the concept of the microfinance initiated in Bangladesh, different countries using this concept to fight poverty. They provide the charges free loans to vulnerable people, particularly in rural areas; they also provide loans with cost but collect money in installments. Borrowers are structured into groups which minimize the threat of being defaulter because the members of a group are close to each other and the cost of security is also low. Microfinance is different from conventional financing in that there is no need for collateral security because poor people have no possessions for making as security.

It's obvious that the management of all asset and liabilities is essential if we are to achieve efficiency and effectiveness. The loan is the single largest asset in most of MFI's balance sheet. As the result, it's suggested that management by exception[1] principle be applied. There are several reasons justifying the application of this principle the first factor is its size relative to other assets. The second factor is its implication to the income of MIF's. The third reason is its implication on liquidity. The fourth reason is its implication to the credibility of an MFI as some of these loans are financed out of saving deposits.

According to Sinha (1998) cited in Dula 2012, "microcredit refers to small loans, whereas microfinance is appropriate where NGOs and MFIs supplement the loans with other financial services (savings, insurance, etc)". Therefore, microcredit is a component of microfinance and involves providing credit to the poor, but microfinance involves additional non-credit financial services such as savings, insurance, pensions and payment services (Okiocredit, 2005) cited by (Dula, 2012).

[1] management by exception means that a manager's attention and effort is concentrated on significant deviations from expected results

2.2 Theoretical Arguments on Loan Default Problem

A loan default occurs when a borrower fails to make a payment on time after an agreement has been reached between the lender and the borrower. It also occurs when the borrower does not comply with any other agreement made on the promissory note. Loan default is essential of two basic types. The first and the most common type occur when the debtor defaults on a payment of interest or principle. This might be because the debtor is either unable or unwilling to repay the debt. The second type of default occurs when the debtor violates any of the agreements made on the promissory note either purposely or unintentionally (Dula,2012).

The loan may be either formal or informal one. When we think of small businesses in LDCs, the major source of finance so far is an informal sector. The probability of default of small-scale enterprises loan from informal sources is low because informal financial markets are much closer to their clients and potential clients, and through gossip and daily contact they are much more aware of their activities than a formal banker, thus they know the risks they are exposed to. On the other hand, small-scale credit scheme from formal financial markets has experienced a high rate of default in many developing countries (Dula,2012).

Non-defaulters are those who repaid the loan in due date and the defaulters are those who did not repay the loan within the due date. The proper recovery of loan is not only a prerequisite for rapid expansion of microfinance service but also a question of life or death for any credit agency Dula,(2012).

Loan default is a tragedy because failing to implement appropriate lending strategies and credible policies often result in the demise of credit institutions. Default problems destroy lending capacity as the flow of repayment declines, transforming lenders into welfare, in the head of viable institutions. Loan defaults deny new applicants access to credit. *In the context of third world lending programs, the cost of defaulting include not only the loss of future credit but also public embarrassment and the loss of social standing (Belay, 1998 as cited by Dula,2012).* It is advised that one should pay back a borrowed loan in the shortest time possible as this will avoid him or her paying a lot of unnecessary money in the form of interest. One would borrow money in order to make money**.** There could be thousands of reasons people borrow money. For

consumption, farming activities, cushioning the jolt of temporary shocks, asset buildings like buying a car, a home, to take a vacation, etc.

2.3 Lending Methodology

2.3.1 Group Lending

Group lending is an approach to lending a small amount of money to a large number of borrowers who cannot offer collateral. Group members are jointly accountable for the repayment of each other loans through peer pressure. The entire group members will be disqualified and will not be eligible for further loans, even if one member of the group becomes a defaulter. The size of the group can vary, but most groups have between three to eight members, the group self-selects its members before acquiring a loan (Abdullahi, 2008).

2.3.2 Individual Lending

Individual lending is a methodology in which institution provides credit to the individual borrower. In this approach, traditional or nontraditional collateral or loan co-signer is requested. Traditional collateral includes household and business assets while conventional collateral includes the approach used by commercial banks to screen borrower's proposal, business plan and others (Abdullahi, 2008).

2.3.3 Group Solidarity

According to Abdullahi, (2008) group solidarity is an approach, unconventional policy, in which loan is provided to the individual through the group. A lender does not request group members to meet collateral requirements. The base of this methodology is the mutual trust among the group members and loan is provided just using the five-person guarantee, where the individual borrower is responsible for the repayment of the loan.

2.4 Determinants of Loan Repayment Performance

Arene (1992) outlines the main factors that determine loan repayment performance as loan size, enterprise size, income, age, number of years of business experience, the distance between home and source of the loan, education, house old size, adoption of innovations and credit need. Von, (1980) identified two problems as major causes of poor loan recovery performance: credit design project problem and credit project implementation problems. Credit project design problems include debt versus equity, realism versus aspiration (how realistic the projection of the project

designer is), expected value versus dispersion (detailed consideration of the variety of result which occurs in the field), bookkeeping convenience versus borrower cash flow patterns, collection mechanism, institutional scope or range of services offered and interest rate. Credit project implementation problems include low service levels, coordination, access (i.e. information problem and lack of decision making the experience in lending to specific target groups) and financial recording. The finding above revealed that the probability to loan repayment depends on the borrowers' specific characteristics (age, education, experience, sex, household size, loan utilization),loan contract terms (i.e. repayment installment, collateral, frequency of maturity, grace period, loan volume, interest rate, number of disbursement)and other factors such as technical advice, level of social cohesion(for micro enterprises)

Joint liability Ghatak and Guinnane, (1999) review the key mechanisms proposed by various theories through which joint liability could improve repayment performance rates and the welfare of credit-constrained borrowers. They suggest that to alleviate the problems facing borrowers, mechanisms such as screening, monitoring, auditing, and enforcement can effectively increase repayment. Fischer and Ghatak propose utilizing the local information social capital that exists among borrowers to reduce the prevalence of default (Fischer and Ghatak, 2010).Group lending mechanism has several inherent implicit economies. The cost of screening and monitoring for creditors can be low as a result of close familiarity with borrowers. In this case, information is easy to get because of living near the borrower or being part of the same group. Members know each other's actions, types, and states than outsiders. Furthermore, social pressure among members of the same group may be high and more efficient means of motivating loan repayment. Consequently, many financial institutions apply group lending principles to achieve the advantages of peer groups when extending and recovering credit from clients.

High-frequency repayment Borrowers are typically required to repay their loans in regular installments, soon after loan disbursements. This aspect of the repayment schedule is usually explained as inducing „fiscal discipline‟ among borrowers. Jan and Mansuri (2003) argue that an alternative rationale for this loan structure is reflected in the monitoring of the borrower's actions. The likelihood that a borrower will default pauses a risk which compels MFIs to use innovative mechanisms, which indirectly co-opt the better informed informal lenders (Greg

Fischer and Ghatak, 2009).High frequent repayment though attracts certain costs. It imposes an opportunity cost of meeting attendance on borrowers and direct costs on the lender. It might also distort the investment incentives of borrowers towards projects that generate consistent if meager returns.(Fischer and Ghatak, 2009)

2.5 Empirical Study on Loan Repayment Performance

A set of studies has been conducted in relation to assess the factors affecting loan repayments in different countries which among (Dula, 2012; Nguta and Huka, 2013; Mesele et al., 2016; Angaine and Waari, 2014) should be referred.

According to the study carried out in Kenya by (Florence Angaine and Daniel NderiWaari, 2014) to analyze the factors influencing loan repayment in micro-finance institutions using descriptive survey. The study established that education level, the number of dependents, and hobbies were individual characteristics influencing loan repayment. Business characteristics influencing loan repayment were: length of operation, management, and type of business. While the lender's characteristics were: groups handled, the period taken to qualify new members and the criteria used to evaluate creditworthiness.

Munene, H. NgutaGuyo, S. Huka (2013**)** was carried out a study to establish the causes of such repayment defaults in Imenti North District, Kenya using a descriptive survey design individual microfinance loan beneficiaries and microfinance institution officials. A representative random sample of 400 respondents was selected from the study population using census and cluster sampling procedures for microfinance institutions officers and loan beneficiaries respectively. and the findings of the study revealed that there was a significant relationship between the type of business, the age of the business, the number of employees, business profits, and loan repayment default. The study further indicates a strong link between technical training for loan beneficiaries and the performance of entrepreneurial businesses among the remote communities.

The study conducted by (Dula, 2012) with the objective of analyzing and identifying the socioeconomic factors that affect the loan repayment performance of the clients of Busa Gonofa Microfinance of Ziway branch by a binary logistic regression model to analyze the socio-economic factors that influence loan repayment. A total of sixteen explanatory variables were

included in the regression. Out of these, eight variables were found to be significant for the probability of being a defaulter. These are family size, income from other activities, livestock holding, membership duration, loan diversion, loan supervision and monitoring, training on loan use and celebration of social ceremonies. Regarding the sign of the significant variables, loan diversion, family size, and celebration of social ceremonies have a negative significant effect on loan repayment rate while the remaining five variables have a significant positive effect.

Fikirte (2011) had conducted her studies on determinants of loan repayment performance of borrowers in ADCSI MFI. The researcher revealed that age, family size, business types, sex, dependency ratio and business experience were found to be significant to influence repayment performance. Sex and constant variable have a positive relation to the probability of being defaulters while age, business experience, family size, business type and dependence ratio have a negative relationship to the probability of being defaulters.

Loan utilization supervision, suitable repayment schedule, availability of other sources of income, educational background of the borrower and value of livestock were found to be positively influence borrowers loan repayment performances, while an increase in number of supported dependents, Sex and an intentional diversion of loans from its loan agreements would negatively affect the repayment performance of borrowers (Abafita, 2003).

Abreham (2002) also discussed that loan diversion, featured by factors such as increased loan size, longer grace period and credit experience of the borrower are found to be significant to influence repayment performance of borrowers. In line with this income from other sources, having business experience on related economic activities and education are found to positively influence the repayment performance of borrowers while sex and repayment period is negatively associated with loan repayment performances.

Moreover, the types of business activities that the borrowers engage in were found to be a factor that can influence the repayment performance of borrowers. The researcher reported also that the size of the required collateral value determines the loan rationing mechanism. That is the more the collateral values the borrower pledged, the favor they will be rationed larger sized loan by the lending institutes. To arrive at these results the researcher has employed a Tobit model to

estimate the significance of those explaining variable to Loan repayment performances, loan diversion and credit rationing mechanisms equations (Abreham, 2002).

Firafis (2015) has also been revealed that perception of borrowers towards repayment periods, another source of income, availability of training, business experience, and family size have been found as factors that can influence repayment performance of borrowers and all are significant at 1, 5 and 10%.

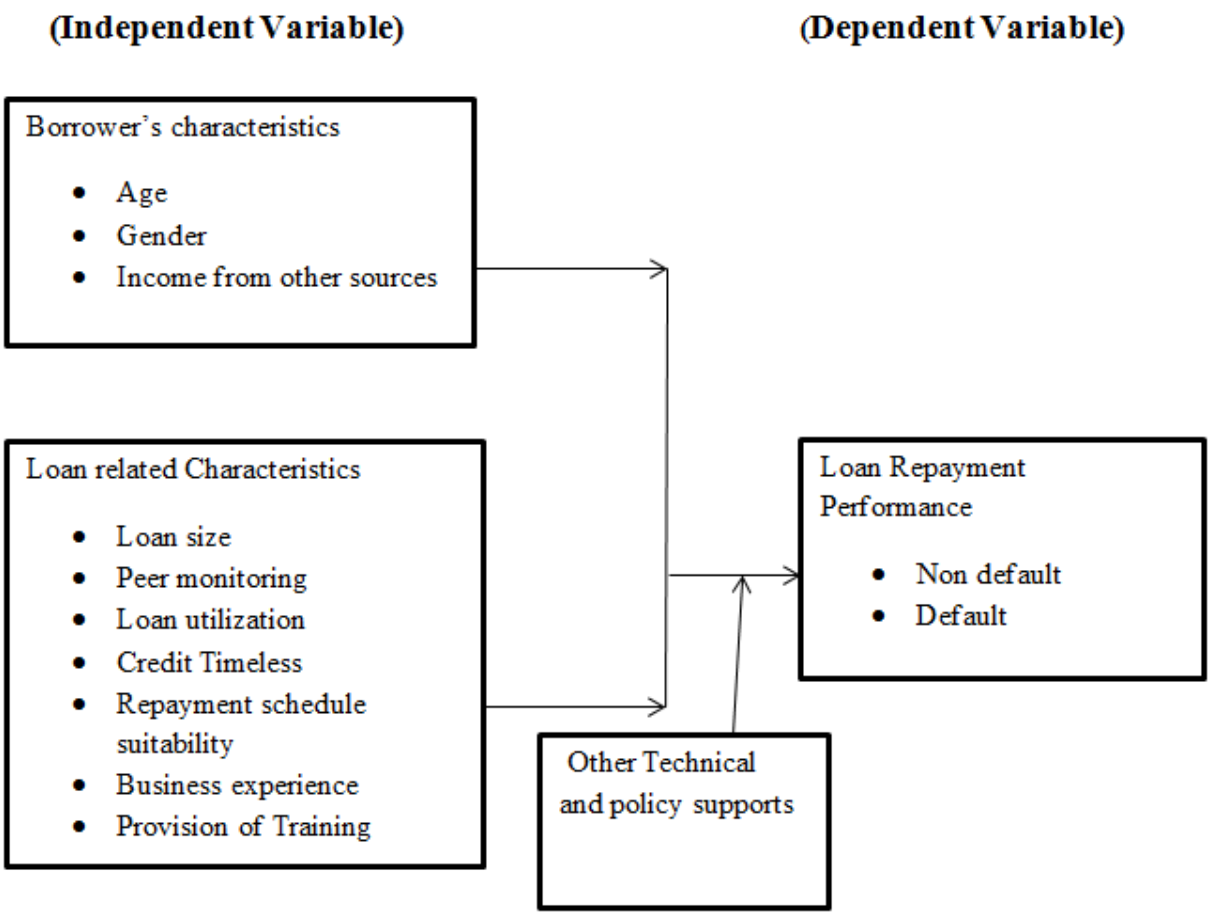
Tolosa (2014) have been conducted his study on the performance of loan repayment determinants in Ethiopian microfinance. The researcher revealed that an increasing age of borrowers can significantly influence repayment performance of borrowers. The elder borrowers have better repayment performance than that of youngsters. Hence age, education, the time lapse between loan application and disbursement, loan size, loan diversion, repayment period, number of dependents, availability of training and supervision and advisory service to borrowers were found significant to influence repayment performance of borrowers at 1 and 5% significance levels. The researcher employed binary logistic regression to estimate the model.

Abraham Garomsa (2016) in the study to assess factors affecting loan repayment performance of borrowers also found sex, income from other sources, monitoring utilization of other members in a group, credit timeliness, repayment time suitability, repayment trend on a monthly basis and training adequacy are significant and positively influence loan repayment performance of the borrower. While loan utilization for the intended purpose, repayment trend on an irregular basis and visit & follow-up on irregular basis was found negatively influence the repayment performance of borrowers. The extensive involvement and interference of third parties on the decisions of loan approval processing to the lending institute were found as a contribution for high defaulting.

Conceptualization of the Study

Business characteristics which include the size, age, type, location of businesses and profits generated from the business may influence the loan repayment default by clients. Consequently, these are operations that ensure the security of the loan such as the loan policies, proper area market analysis, 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: *Adopted by previous Researches, modified by researcher)*

As mentioned above, various studies were conducted on the determinants of loan repayment performance in different countries and studies have basically focused on the investigation of the determinants of loan repayment performance of all target customers of microfinance borrowers. However, there might be differences in livelihoods of MSE member borrowers and capacity level of the institutions in diffident settings. But, nothing was indicated specifically about the factor influencing the loan repayment performance of MSE borrowers in previous studies. So it's important to conduct a further assessment on major factors that can influence loan repayment performance of borrowers specific to Micro and small enterprises and study area may provide an additional picture of the gap for the microfinance practitioners to improve their lending strategies

Chapter Three

3. Methodologies

The researcher has been employed various methodologies which enables the research activities to be attained its results through different techniques specified in this chapter. Those methodologies were discussed and presented as follows.

3.1 Research design and type

The study was conducted on selected microfinance institutions in Oromia region. The study applied mixed research methodologies to analyze and interpret the findings. The descriptive analyses approach were employed to explain the overall primary data collected from the respondents using the structured survey questionnaires. It's important to use the mixed research approach as a means to offset the weaknesses inherent within one method with the strengths of the other method (Creswell, 2009). Accordingly, the mixed research approach was used in this study, because combining both quantitative and qualitative data is better to understand a research and to neutralize limitations of applying any of a single approach.

3.2 Target population

The total populations under study are a total number of members of Micro and Small Enterprise loan borrowers which categorized as defaulters and non-defaulters of Oromia credit and saving Share Company (OCSSCO) which is 5,585 members of MSE as of March 31, 2016, according to the company's Report.

3.3 Sample size and Sampling method

The study adopts multi-stage sampling techniques to arrive at target sample borrowers. As the scope of this study is limited to micro and small enterprise's borrowers which only served by government-owned microfinance institutions, the only microfinance institution serving the MSE -OCSSCO is purposively selected.

As it was indicated in Table-1 below, four Zonal offices (West Shoa, East shoa, East Wellega & Southwest Shoa) were selected for the study purpose from all 18 Zonal offices of the MFI based on the proportional level of their significance in terms of a number of MSE members served by each Zonal Offices.

Table- 1: MSE Outreach performance report From OCSSCO.

S.N	Zone	Number Of MSE	No. of MSE members Served			Percentage Of MSE members Served
			Male	Female	Total	
1	W/Showa	109	330	394	724	12.96 *
2	E/Showa	45	241	305	546	9.78 *
3	E/Wellega	98	367	160	527	9.44 *
4	S/W/Showa	100	247	258	505	9.04 *
5	K/Wellega	65	169	227	396	7.09
6	Special	57	211	143	354	6.34
7	Ilu Aba Bora	52	183	141	324	5.80
8	W/Wellega	72	208	97	305	5.46
9	N/Showa	54	118	178	296	5.30
10	West Arsi	54	210	78	288	5.16
11	Jimma	55	146	63	209	3.74
12	Arsi	57	143	58	201	3.60
13	E/Hararghe	47	86	98	184	3.29
14	Borena	49	119	64	183	3.28
15	H/G/Wellega	36	117	42	159	2.85
16	W/Hararghe	48	103	53	156	2.79
17	Guji	33	59	63	122	2.18
18	Bale	42	60	46	106	1.90
	Total	1073	3117	2468	5585	100.00

Source: OCSSCO third Quarter report for the year ended 2016.

***Sample of Zones Selected for the study**

Table-2 below presents the proportional percentages of each selected sample Zonal office MSE borrowers outreaches to the total MSE borrowers outreaches of the four zonal offices. Accordingly, west Shoa took the majority proportions which is 31.45 percent of the total sample MSE borrowers outreaches, East shoa covers 23.72 percent of the total sample borrowers, east wellega covers 22.89 percent of the total sample borrowers and east Wellega had a proportional sample borrowers percentages of 21.94 percent of the total sample borrowers by all the four Zonal offices of the institution. The total sample size is obtained by the following formula.

$$n = Z^2pq/E^2$$

Where,

n: proposed sample respondents

Z2 Level of confidence interval at 95%; i.e. ~1.96

p: Estimated proportion of sample defaulters

q: Estimated proportion of sample non-defaulters

E^2 Standard Error

n= ((1.96^2) (0.50*0.50)/ (0.05^2) = **384**

Based on the sample size each member of the sample will be selected purposively from the population for the research purpose.

Table- 2: Zonal Offices selected for this study based on the number of clients outreach

S.N	Zone	Number Of MSE	No. of MSE members Served			Percentage Of MSE members Served	Total Sample Size	Sample Proportion
			Male	Female	Total			
1	W/Showa	109	330	394	724	31.45	384	121
2	E/Showa	45	241	305	546	23.72	384	91
3	E/Wellega	98	367	160	527	22.89	384	88
4	K/Wellega	100	247	258	505	21.94	384	84
	Total	352	1185	1117	2302	100.00		384

3.4 Source of data and instrument

The study uses both primary and secondary data sources. The primary data collection is through the interview and self-Administrated survey questioner. The other sources of secondary information were from Articles, magazines and research works. As the issues to be addressed in the study are both qualitative and quantitative, both methods of data collection were used. Data were collected from a sample of MSE member borrowers by using structured questionnaire and interviews key informants to get quantitative and qualitative data.A questionnaire was designed for a response for each selected Enterprise member borrowers based on the information required from them. Moreover, Secondary data was extracted from publications, progress and annual reports of the MFI's, NBE, AEMFI and other sources.

3.5 Data analysis techniques

After data collection, Editing and coding, both quantitative and qualitative data were analyzed. In this study, descriptive and econometric methods were used for data analysis. The descriptive analysis approach was employed to analyze the primary sample data collected from each sample borrowers, lending institutes officers and other sources. This method was also used to explain the observed reflection of borrowers after the credit service during conducting the onsite field visits to the borrower's business territories. The data collected using questionnaire was analyzed through descriptive statistics, frequency distribution, proportions, cross tabulations and the probit regression model is used to identify factors influencing the loan repayment performance of the borrowers. Data are to be collected from the interview and reviews of documents were interpreted qualitatively. The results were presented in descriptive statistics like frequency percentage or number and cross tabulations. Those data which is collected from the target samples were statistically tested using the t-test, Multicollinearity test & chi-square tests.

The Econometrics analysis, the probit regression models were employed to determine the significance of the independent variables in explaining the loan repayment performance of borrowers. The probability values and the significance level of each explanatory variable to influence the dependent variable was explained and analyzed. Moreover, the econometric regressions between the dependent and independent variables were estimated and analyzed using the models specified for this purpose.

Regarding the loan repayment performance of borrowers, several studies have been conducted in many countries by different authors. Accordingly, Loan repayment performance is affected by a number of factors expressed by client characteristics, business characteristics, and lender or loan characteristics. While some of the factors positively influence the loan repayment, the other factors are negatively affecting the repayment rate. This study analysis focused on a number of specific factors. The client characteristics are measured by age, gender, and other socioeconomic factors expressed as client characteristics. Business characteristics relate to the nature and type of the business plus its performance in relation to the others in the environment. They include the size and business experience of the borrowers, location, technology adoption in the business, and bookkeeping activities so that managing the business effectively. Loan characteristics are factors attributed to the loan which can be expressed Monitoring loan utilization, Loan size, Loan

process timeless, repayment suitability, supervision, and training.Accordingly, the variables description and their measurements are presented as follow:

Dependent variable:

The dependent variable is annual loan repayment performance.

The independent variables:

The independent variables that are expected to influence the loan repayment performance of borrowers were selected based on theories and observations on the subject. In addition, efforts have been made to incorporate some factors, which were expected to be feasible and relevant to the loan repayment performance of microfinance institution.

1. **Age**: Some researchers have taken the ages of the borrowers as a variable that can influence the repayment performance of borrowers. Accordingly (Abafita,2003) cited in (Abreham,2016) have revealed that the more youngsters the age of the borrowers the less the repayment recovery rates achieved by the lending institutes; that means the more the aged group borrowers can take the responsibility of being liable and creditworthy than that of the youngsters. (Dula, 2012) Also hypothesized the variable that it influence repayment in the borrowers acquire experience, knowledge of the loan use and accumulate wealth through time which will enable borrowers to effect repayment than younger borrowers. Similarly, the more the older and aged the borrower groups are the more likely they are creditworthy borrowers that have better repayment performances while the young borrowers are more likely to be defaulter borrowers as per (Fikirte, 2011) cited in (Abreham, 2016).Based on the above studies the study cannot pre-determine the signs of the variable to influence the repayment performances.
2. **Gender**: This research considers the gender characteristics of the borrowing groups as an explaining factor to evaluate how the gender probably determines the repayment status of the borrowers. As (Teferi 2000 and Berhanu, 1999 cited by Abafita, 2003), it was argued that female borrowers are more creditworthy than that of male borrowers. The assumption was females took great obligations and sense of responsibilities while managing their households. This study also intends to see the magnitude of these gender characteristics in the cases of MSE borrowers and Individual business loan borrowers.

The expected signs of this gender characteristic groups to the dependent variable could not still pre-determined.

3. **Income from other sources**: Borrowers with some diversified income sources can make repayment performances more successful. An increase in another source of income earned by borrowers might have the possibility that loan could probably repay by respective borrowers on time (Abreham, 2016). Thus, this variable might have an expected value with positive signs to explain the probability of being non-defaulter.
4. **Monitoring others loan utilization:** This refers to the probability of each member in a borrowing enterprise members attempt monitoring the loan utilization statuses of others. As the monitoring for the utilization of the credit for the intended purpose increases, the probability of loan defaulting by enterprise members can be minimized. Thus, the positive coefficient sign is expected.
5. **Loan size sufficient**: According to (Abreham,2016), this refers to the average loan size that the lending institutes approved to the borrowers business appraisals. As it was revealed by some researchers, this factor can negatively or positively influence the repayment performance of borrowers. The assumption is that the more the sufficient loan amount disbursed to the requesters the more they can finance the proposed business and the more they can succeed the business profitably. On the other hand, the less approved loan size below the proposed business plan to the borrower, the higher the possible difficulties they can face while running the business due to the insufficiency of funds available by the lending institutes. On the contrary, the excess loan size approval to the ambitious loan amount requested by borrowers may have imposed the burdensome liabilities on the shoulder of the borrowers. Accordingly, the sign of the coefficient cannot pre-determined by the researcher.
6. **Timeliness of loan released**: This refers to the time lapse that taken from the borrowers screening process to the credit delivery time by the lending institutes. From the fact that some borrowers businesses have seasonal basis nature, the longer time passes by the lending institutes to process the credit can significantly influence the successfulness of that particular business and hence affects the repayment performance of that particular borrower. The assumption is that the more the fastest the credit service is the more the

borrower can utilize the loan for the intended business plan timely and the more the credit would be settled on time profitably. A positive sign is expected for this variable (Abreham, 2016).

7. **Loan Repayment Schedule suitability**: The repayment period suitability for borrowers after the loan disbursement enables the borrowers to have sufficient working capital so that they can run their businesses profitably. Accordingly, the expected sign for this variable is positive.
8. **Repayment schedule on Monthly Basis**: Refers to the frequency of borrowers repayment intervals on monthly basis. Most microfinance institutions usually set the regular repayment schedules to be effected on monthly basis. The more frequent the repayment trends experienced by the borrowers, the better repayment performances to be attained by the microfinance institutions. Accordingly, a positive sign is expected to influence the repayment performance of borrowers (Abreham, 2016).
9. **Repayment on irregular Basis**: Refers to the frequency of borrowers repayment trends on irregular time intervals. Although microfinance institutions set the regular repayment schedules to be effected on monthly basis, some borrowers' arbitrary repays the loan on an irregular basis which leads to passing dues. The more time lags in repayment trends experienced by the borrowers, the less probability of better repayment performances to be attained by the microfinance institutions. Accordingly, a negative sign is expected to influence the repayment performance of borrowers.
10. **Loan Diversion**: Refers to how the borrowers of the lending institutes utilized the loan amounts for the pre-intended business plan based on the loan agreement they are binding to. Some borrowers utilize the loan for some unintended projects that is termed as project diversion. As it is described in the definition of the terms, there are possible causes for the borrowers to use the proceeds received for some other activities. Loan diversion for some activities that can generate better profits could positively influence the repayment performance of borrowers. On the other hand, the utilization of loan diversion that cannot generate returns may negatively influence the repayment performance of borrowers. Accordingly, the expected sign for this variable cannot be pre-determined.

11. **Training**: Borrowers who are equipped with relevant training and skill developments can effectively manage and monitor the day to day operations of their business. Training has an indispensable contribution to the borrower's business success. Training enables the borrower to expand and effectively run the existing business or enhance their capacity of engaging in the new businesses. However, untrained borrowers may change his/her original business without considering worthiness of the business and they may divert the loan to unintended purposes. Training contributes to good credit performance and lack of training on the business plan may result in poor repayment performance. Therefore, delivering an adequate and sufficient training to all borrowers in a consistent manner may increase the repayment performance of borrowers. Accordingly, a positive sign is expected for this variable.
12. **Business Experience**: Borrower who has experience would develop a reputation and might demonstrate creditworthiness and become trustworthy. On the other hand, the less they have experienced the highest the probability of being defaulters they are. Moreover, they may develop skills on how to allocate resources and adopt simple business plans. Therefore, experienced borrowers may settle their debt on time and may positively affect the loan repayment performance (Dula, 2012).
13. **Technology Adoption**: Today businesses equipped with advanced technology do have a high probability of success. Enterprises and individual entrepreneurs who have employed a modern technology while running their respective businesses could have a high possibility of success which in turn enables them to repay the loan timely. On the contrary, borrowers who have not employed the best technology could earn less profit as compared to others. The variable is expected to have a positive sign to explain the probability of being non-defaulters.
14. **Irregular supportive supervision**: Refers to the frequency of lending institutes officers‟ visits to the clients business to monitor the effective utilization of the loan for the intended purpose. The more time gaps between the first visits and the second round visits irregularly or more than the standard visit time which is mostly beyond one month might have a considerable effect on the loan utilization of borrowers which leads for

loan diversion to the unintended project purposes. Accordingly, it is expected to have a negative effect on the probability of borrowers being creditworthy (Abreham, 2016).

15. **Monthly supervision**: Refers to the frequency of lending institutes officers' visits to the clients business to monitor the effective utilization of the loan for the intended purpose. The more frequent the visits and supervision to the client's business territory might help the borrower to utilize the loan for the intended purpose only. Furthermore, the visits to those target borrowers will help in identifying the loops that face the borrowers either technically or financially in order to minimize the risks suffer from defaults. Accordingly, it is expected to have positive effects on the probability of borrowers being creditworthy.
16. **Keeping a book of records:** This refers to borrower's trends of recording the financial transaction to the book of records to monitor and evaluate the profitability and financial position of their respective businesses. The borrowers who manage their expenses and revenues, as well as cash flows, could probably better monitor their loan repayment status than none. Hence, a positive sign is expected.

According to (Abreham, 2016) the loan repayment status (yi) of each individual sample borrowers of (ith) observation is defined as a dependent variable. The loan repayment is the dichotomous variable valued with either 0 or 1; meaning the loan repayment status (y) of the ith borrower have the probability of being valued as either 0 or 1; such that (value 1, if the respondent is creditworthy borrower (fully or progressively repaid) the loan otherwise 0, if the borrower is defaulter.) In order to estimate the model for a dependent variable with a limited range of values, applying the ordinary least square (OLS) may result in biased and inconsistent parameters (Fikirte, 2011). The Common models for estimating such parameters include probit (standard normal), logit (logistic) and Tobit (extreme value) (Maddala, 2005).

The probit model limits the probability value of dependent variables between 0 and 1. The probit model was chosen to be used for the study purpose because it is simple to estimate the probability of each explaining variables to influence the dependent variable using the cumulative distribution function (CDF). Moreover, it is more helpful to determine the marginal effects of coefficients on the dependent variables.

The study adopted the probit model partly because of its ability to constrain the utility value of the ability to pay for loans variable to lie within 0 and 1, and its ability to resolve the problem of heteroscedasticity. The other advantages of the probit model include believable error term distribution as well as realistic probabilities. Following from Madala (2005) and Asante et al (2011),

$$y_i^* = \beta X_i + \varepsilon_i$$

$$y_i = \begin{Bmatrix} 1 & if & y_i^* > 0 \\ 0 & if & y_i^* \leq 0 \end{Bmatrix} \text{.. (1)}$$

Where yi* is the threshold value for yi and is assumed to be normally distributed. Moreover, as Abafita, 2003, stated in his study Maddla, 1983 has employed the model for utility index to estimate the repayment decision of borrowers. The utility index expresses the decisions of borrowers to repay the loan either fully or partially due to some independent factors which related to the repayment performances.

$$\mathbf{Ui = \beta Xi + \varepsilon i} \text{ .... (2)}$$

The unobservable utility index (precisely a utility derived from repaying) to the decision of repaying the loan in full, assuming that:

LRPi=1, if Ui>o (borrower repaid loan in full); or

LRPi=O, if Ui < O (borrower did fail to repay loan in full),

Where LRPi is loan repayment status of the ith borrower.

Assuming Ui are normally distributed with a zero mean and variance δ2, the probability that Ui; >0 can be computed as:

Pi=Prob (Ui>0) = F (Ui) = F (β'Xi)- - - - - ………………………………………….. (3)

Where; F is the CDF (Cumulative distribution function). Moreover, as (Maddala, 1983 were cited by Fikirte, 2011), the normal and logistic CDFs are very close in the mid-range, but the logistic function has slightly fatter tails than the normal function.

yi =* ***β+ βXi*** *+* ***εi*** *……………………………………………………………………….(4)*

Hence, the probability of cumulative distribution function of the repayment performance of borrowers is explained as follows:

LRPyi* = ƒ (AGE, GENDER, INCMOS, MONECHO, LONSZSU, LONTIML, LONDIVR, RPSCSUIT, RPSCMNTL, RPSCIRG, SUPMNTH, SUPIRRG, TRADQU, BUSEXP, TECHADP, BOOKK, ε) **……..…...……. (5)**

Definition of the variables:

Dummy variables have been designed for some factors as follows:

LRPyi The value of repayment status of the *i*th borrowers (i.e either 1 if creditworthy borrower otherwise 0, if defaulter)

β The parameters of the coefficient of the explanatory variables which measures significance

X*i* The value of the explaining variables that determines the probability of repayment of *i*th borrower

ε*i* The level of disturbance (Error terms)

Age (**AGE**): is a discrete variable that valued 0, if the respondent is in the category of young (20-29), otherwise, 1, if adult (greater than 29)

Gender (**GENDER)**: Gender categories of the sample respondents. (0 = if female, otherwise 1 if Male)

Income from another source (***INCMOS***): Income generated from other sources valued 0 if sample borrowers do not have another source of income, otherwise 1, if borrowers have another income sources other than income generated from credit scheme.

Members monitor each other (***MONECHO***): Measures how members of Enterprise borrowers are more likely monitor one another about the effective and efficient utilization of the credit to the intended purposes (1, if members monitor each other, otherwise 0)

Loan Size Sufficiency (***LONSZSU***): The loan amounts disbursed to the respective borrowers based on their work plan.(Valued 0, if loan size did not sufficient, otherwise, 1 if sufficient.)

Loan disbursement Timeliness (***LONTIML***): The appropriateness of loan release by the lending institutes on time (1, if credit has been received on time, otherwise, 0).

Loan diversion ***(LONDIVR)***: Used the proceeds received as loan either fully or partially for the intended purpose only (0, if diverted otherwise, 1).

Repayment schedule suitability ***(RPSCSUIT):*** valued 0, if borrowers assumed repayment time is not suitable, otherwise, 1 if suitable.

Monthly Repayment schedule ***(RPSCMNTL):*** valued 0, if borrowers didn't experience repayment on monthly basis, otherwise, 1 if applicable

Irregular repayment schedule ***(RPSCIRG):*** value 0, if borrowers didn't experience repayment on an irregular basis, otherwise, 1 if applicable.

Monthly supervision ***(SUPMNTH):*** value 0, if borrowers didn't experience monthly supervisions to their business, otherwise, 1 if applicable.

Irregular Supervision (***SUPIRRG):*** value 0, if borrowers didn't experience irregular supervisions to their business, otherwise, 1 if applicable.

Training Adequacy (***TRADQU***): Provision of adequate training by the lending institutes and other concerned bodies (valued 0, if borrowers didn't get adequate and sufficient training, otherwise, 1 if applicable.)

Business Experience ***(BUSEXP):*** valued 0, if sample borrower does not have relevant business experience, otherwise 1, if applicable

Technology Adoption (***TECHADP***): Measures Borrower's advancement in manipulating technologies if it is applicable to the business while running their businesses (1, if applied otherwise 0)

Bookkeeping ***(BOOKK):*** value 0, if borrowers didn't keep a book of records, otherwise, 1 if applicable.

Chapter Four

4. Result and Discussion

4.1 Questionnaire response Rate

The questionnaires were distributed to 384 borrowers of the MFI's based on the sample size. Among those distributed questionnaires 329 questionnaires were returned while 55 questionnaires were not returned or rejected during the data coding because of the vague answers were given by the respondents.

4.2 Borrowers Characteristics

4.2.1 Age

The cross-tabulation shown in Table-3 indicates that the loan repayment performance of borrowers aged in youngster groups which cover 60.40 percent of the total young respondents was the loan defaulter while the remaining 39.60 percent of the total young borrowers were Nondefaulter borrowers. On the other hand, 55.80 percent of the total adult borrowers were the credit defaulters while 44.20 percent of adult respondents were Nondefaulter borrowers. Defaulters represent the majority relative to Nondefaulters in both youngsters and adult grouped sample borrowers.

Table- 3: Repayment performance Versus Ages of the sample Respondent

			Age Catagory		
			Young	Adult	Total
LRP	Defaulter	Count	32	154	186
		% within LRP	17.2%	82.8%	100.0%
		% within age_cat	60.4%	55.8%	56.5%
		% of Total	9.7%	46.8%	56.5%
	Non defaulter	Count	21	122	143
		% within LRP	14.7%	85.3%	100.0%
		% within age_cat	39.6%	44.2%	43.5%
		% of Total	6.4%	37.1%	43.5%
Total		Count	53	276	329
		% within LRP	16.1%	83.9%	100.0%
		% within age_cat	100.0%	100.0%	100.0%
		% of Total	16.1%	83.9%	100.0%

Source: Survey result

4.2.2 Gender

Based on the gender assessment, from the total sample respondents, 137 (41.6%) of them were females while the remaining 192 (58.4%) of them were male. Further, it was evident that 56.50 percent of the total respondents were defaulters and thus the remaining 43.5 percent of the respondents were a Nondefaulter, regardless of sex or any other variable. Cross-tabulation of sex with loan repayment performance, which is being Nondefaulter or defaulter, showed that 55.5 percent of female respondents were defaulter while 57.3 percent of male respondents were defaulters, that means 44.5 percent of female and 42.7 percent of male respondents were Nondefaulter borrowers. The figure shows that male respondent borrowers relatively have less repayment performance than female. The table-4 below shows these and related figures in the detailed cross-tabulation of sex with loan repayment performance.

Table- 4: Gender category of Borrowers with their Repayment performance

			GENDER		
			Female	Male	Total
LRP	Defaulter	Count	76	110	186
		% within LRP	40.9%	59.1%	100.0%
		% within GENDER	55.5%	57.3%	56.5%
		% of Total	23.1%	33.4%	56.5%
	Non Defaulter	Count	61	82	143
		% within LRP	42.7%	57.3%	100.0%
		% within GENDER	44.5%	42.7%	43.5%
		% of Total	18.5%	24.9%	43.5%
Total		Count	137	192	329
		% within LRP	41.6%	58.4%	100.0%
		% within GENDER	100.0%	100.0%	100.0%
		% of Total	41.6%	58.4%	100.0%

Source: Survey Result

4.2.3 Income

Based on the response of the sample respondents, 127(38.60) of the sample respondents had income from other sources while 202(61.40) of the respondents did not have any other source of income.Table-5: Below also shows that from 202 borrowers haven't any income from other sources, 60.9 percent are defaulter while the remaining 39.1 percent were Nondefaulters. On another hand, 50.4 % of the nondefault borrowers have a source of income other than the business from loan proceeds and the remaining 49.60% have a source of income was defaulter which was defaulter represent the majority relative to nondefault borrowers having income from another source.

Table- 5: Cross tabulation Repayment Versus income from other sources of borrowers

			Income from Other sources		
			NO	YES	Total
LRP	Defaulter	Count	123	63	186
		% within LRP	66.1%	33.9%	100.0%
		% within INCOME	60.9%	49.6%	56.5%
		% of Total	37.4%	19.1%	56.5%
	Non Defaulter	Count	79	64	143
		% within LRP	55.2%	44.8%	100.0%
		% within INCOME	39.1%	50.4%	43.5%
		% of Total	24.0%	19.5%	43.5%
Total		Count	202	127	329
		% within LRP	61.4%	38.6%	100.0%
		% within INCOME	100.0%	100.0%	100.0%
		% of Total	61.4%	38.6%	100.0%

Source: survey result

4.3 Loan related characteristics.

In this sub-section, the loan related factors that can influence repayment performance of borrowers have been analyzed and presented as follows.

4.3.1 Loan Size

As presented in Table-6 below,34 percent of the respondents respond the amount received as loan proceed was not sufficient or it's not similar to their intended request, which means the remaining 66 percent of respondents of the total respondent responded the amount received was sufficient and/or similar to their requests.

As it is indicated in the Table-6 below, from the total sample respondents, 217 of them replied that the loan received was sufficient, while 112 of the respondents opposes this by replying not sufficient. Among those found the loan received was not sufficient, most of them (55.36 percent) were found to be defaulters while only 44.64 percent of them were Nondeafulter. On the other hand, among those who said the loan received was sufficient, 57.14 percent of them were defaulters while 42.86 percent of them were a Nondefaulter.This result shows that whether the loan received is sufficient or not, most of the respondent in each response category were defaulters.

Table- 6: Cross Tabulation of Borrowers response whether the loan received is sufficient or not versus loan repayment Performance**.**

			Loan Sufficient		
			NO	YES	Total
LRP	Defaulter	Count	62	124	186
		% within LRP	33.3%	66.7%	100.0%
		% within Lnsufct	55.4%	57.1%	56.5%
		% of Total	18.8%	37.7%	56.5%
	Non Defaulter	Count	50	93	143
		% within LRP	35.0%	65.0%	100.0%
		% within Lnsufct	44.6%	42.9%	43.5%
		% of Total	15.2%	28.3%	43.5%
Total		Count	112	217	329
		% within LRP	34.0%	66.0%	100.0%
		% within Lnsufct	100.0%	100.0%	100.0%
		% of Total	34.0%	66.0%	100.0%

4.3.2 Loan Utilization

The purpose of the loan and its utilization related issues are more important to be assessed for its relation to the repayment performance of sample borrowers. The first discussion focuses on whether the loan received is utilized for which the loan was borrowed or diverted. This is explained with the support of tables as follows.

Based on the assessment loan utilization, from the total sample respondents, 98 (29.8) of them were not spend the loan for the purpose agreed on loan agreement while the remaining 231 (70.2 %) of them were utilized as per the agreement).

The cross-tabulation shown in Table-7 indicates that the loan repayment performance of borrowers who utilized loan for the purpose, which covers 82.7 percent of the total respondents was defaulter while the remaining 17.3 percent of the total Loan diverted borrowers were nondefault borrowers. On the other hand, 45.5 percent of the total, borrowers whose utilized loan for the purpose were the defaulters while 54.55 percent of them were nondefault borrowers. Defaulters represent the majority relative to nondefault in loan diverted sample borrowers.

Table- 7: Cross-Tabulation Loan utilization versus Loan repayment Performance.

			Loan Utilized for the loan Purpose?		
			NO	YES	Total
LRP	Default	Count	81	105	186
		% within LRP	43.5%	56.5%	100.0%
		% within Utilized	82.7%	45.5%	56.5%
		% of Total	24.6%	31.9%	56.5%
	Non Default	Count	17	126	143
		% within LRP	11.9%	88.1%	100.0%
		% within Utilized	17.3%	54.5%	43.5%
		% of Total	5.2%	38.3%	43.5%
Total		Count	98	231	329
		% within LRP	29.8%	70.2%	100.0%
		% within Utilized	100.0%	100.0%	100.0%
		% of Total	29.8%	70.2%	100.0%

Source: Survey Result

4.3.3 Credit Timeless

Data was collected to identify whether the loan was issued to the respondent timely or not. Accordingly, the response of sample shown in table-11 that, 290 respondents (88.1 percent) of the total sample respondents were reported that the loan was issued on time; while for the remaining 39 respondents (11.9 percent) were not.

The cross-tabulation below in Table-8 shows, From those respondents who said the loan is issued timely, 52.1% is the defaulter while the remaining 47.9% is non-defaulter and from those respondents who said the loan is not issued timely, 89.7 % is the defaulter while the remaining 10.3% is non-defaulter. Despite the default rate in both response category is high, the default rate is greater in the respondent's response “no” not timely issued relative to those responding “yes” the loan is issued timely. The factor is significant at p-value =1%, (Chi2=23.13) to influence repayment performances.

Table- 8: Cross-tabulation loan repayment performance versus Credit Timeless

			Credit Timeless		
			NO	YES	Total
LRP	Default	Count	35	151	186
		% within LRP	18.8%	81.2%	100.0%
		% within Creditimeless	89.7%	52.1%	56.5%
		% of Total	10.6%	45.9%	56.5%
	Non Default	Count	4	139	143
		% within LRP	2.8%	97.2%	100.0%
		% within Creditimeless	10.3%	47.9%	43.5%
		% of Total	1.2%	42.2%	43.5%
Total		Count	39	290	329
		% within LRP	11.9%	88.1%	100.0%
		% within Creditimeless	100.0%	100.0%	100.0%
		% of Total	11.9%	88.1%	100.0%

Source: Survey Result

4.3.4 Repayment Suit

As it is shown in Table-9 below, questions forwarded to assess the suitability of the repayment schedule showed that it was suitable for 63.5 percent of the respondent while not suitable for the remaining 36.5 percent of the respondents.

Based on the borrowers response whether the repayment schedule is suitable or not, the cross-tabulation result shows from 329, 120(36.47) said the repayment schedule is suitable while the remaining 63.53 was said the repayment schedule is not suitable.from those who said the schedule is not suitable 109 (90.83%) was a defaulter and the remaining 11 (9.17%) were a nondefaulter.Contrary to these, those said the repayment schedule is suitable (209) the majority which covers 63.16% borrowers are a non-defaulter, while the remaining 36.84% a defaulter.Accordingly, the defaulters are high in the borrower groups who didn't agree on the suitability of the repayment schedule relative to the borrower groups who agreed the repayment schedule is suitable.

Table- 9: Cross-tabulation of Loan repayment performance versus Repayment suitability.

			Repayment Suit		
			NO	YES	Total
LRP	Default	Count	109	77	186
		% within LRP	58.6%	41.4%	100.0%
		% within Repaymentsuit	90.8%	36.8%	56.5%
		% of Total	33.1%	23.4%	56.5%
	Non Default	Count	11	132	143
		% within LRP	7.7%	92.3%	100.0%
		% within Repaymentsuit	9.2%	63.2%	43.5%
		% of Total	3.3%	40.1%	43.5%
Total		Count	120	209	329
		% within LRP	36.5%	63.5%	100.0%
		% within Repaymentsuit	100.0%	100.0%	100.0%
		% of Total	36.5%	63.5%	100.0%

Source: Survey result

4.3.5 Peers monitoring

Table-10 below shows that from the total sample respondents 19.1 percent (63 respondents) did not know all (most) of the members in their enterprise, while 80.90 percent (266 respondents) knows almost all or most of the members in their respective enterprise.

Considering loan repayment performance, 85.7%, and 14.3% respondents out of 63 respondents of those who did not know all or most of the members were defaulters and Nondefault respectively. In line with this, 49.6% and 50.4% out of 266 respondents of those who did know all or most of the members were defaulters and Nondefault respectively.The default rate is higher for respondents who didn't know each other relative to those who did know all (most) of the members of their enterprise.The factor is significant at p-value =1%, (Chi2=30.04) to influence repayment performances.

Table- 10: Cross Tabulation of responses of members know each other with Repayment performance.

			Do you know each other?		
			NO	YES	Total
LRP	Default	Count	54	132	186
		% within LRP	29.0%	71.0%	100.0%
		% within Know each other	85.7%	49.6%	56.5%
		% of Total	16.4%	40.1%	56.5%
	Non default	Count	9	134	143
		% within LRP	6.3%	93.7%	100.0%
		% within Know each other	14.3%	50.4%	43.5%
		% of Total	2.7%	40.7%	43.5%
Total		Count	63	266	329
		% within LRP	19.1%	80.9%	100.0%
		% within Know each other	100.0%	100.0%	100.0%
		% of Total	19.1%	80.9%	100.0%

4.4 Business Characteristics

4.4.1 Availability of Market

Market demand for products to consumers is considered as a major factor for borrowers to sale the end products to their loan on the proper time. Accordingly, the assessment shown above stated that from the total respondents, 10.8 percent of them measured their product market demand as high, while 59.7 and 29.6 of them measured as medium and low respectively. From those responding as having high market demand, majorities (71.8 percent) of the sample respondents were a Nondefaulters, while those responding having medium and low market demand, the majority were (55.5 and 94.8 percent respectively) found to be defaulters. Having high and low market demand for the end products are significantly influence the repayment performance of as shown in detail in the below Table-11

Table- 11: Cross-Tabulation of respondent's response to their product Market demand versus Repayment Performance

			Market Demand			
			High	Low	Medium	Total
LRP	Default	Count	20	55	111	186
		% within LRP	10.8%	29.6%	59.7%	100.0%
		% within Market Demand	28.2%	94.8%	55.5%	56.5%
		% of Total	6.1%	16.7%	33.7%	56.5%
	Non Default	Count	51	3	89	143
		% within LRP	35.7%	2.1%	62.2%	100.0%
		% within Market Demand	71.8%	5.2%	44.5%	43.5%
		% of Total	15.5%	.9%	27.1%	43.5%
Total		Count	71	58	200	329
		% within LRP	21.6%	17.6%	60.8%	100.0%
		% within Market Demand	100.0%	100.0%	100.0%	100.0%
		% of Total	21.6%	17.6%	60.8%	100.0%

Source: Survey result

4.4.2 Technology Adoption

Adopting technology while running the business was assumed to be a major factor input that enables borrowers to get successful business which in turn could enhance borrower's repayment performances. Accordingly, only 87 (26.4 percent) of the valid respondents replied as they were adopting new technologies in running their business, while the majority 242 (73.6 percent) of the respondents did not utilize the updated technologies to run their business.

According to the data collected from the sample respondents shown in the table-18 below, from those who adopt technology for their businesses, 46 percent of them were defaulters while the others who are slightly higher in percent, 54 percent, were non-defaulter. But, from those who did not adopt technology in their business, the majority of them were found as credit defaulters which represent 60.3 percent, while the remaining which represents 39.7 percent were Nondefaulter.Accordingly, the default rate is higher in respondents who didn't adopt technology relative to those adopt technology in their business activity.

Table- 12: Cross-Tabulation of Technology adoption versus Loan repayment performance

			Technology Adoption		
			NO	YES	Total
LRP	Defaulter	Count	146	40	186
		% within LRP	78.5%	21.5%	100.0%
		%within technology	60.3%	46.0%	56.5%
		% of Total	44.4%	12.2%	56.5%
	Non Defaulter	Count	96	47	143
		% within LRP	67.1%	32.9%	100.0%
		%within technology	39.7%	54.0%	43.5%
		% of Total	29.2%	14.3%	43.5%
Total		Count	242	87	329
		% within LRP	73.6%	26.4%	100.0%
		%within technology	100.0%	100.0%	100.0%
		% of Total	73.6%	26.4%	100.0%

Source: Survey result

4.4.3 Business Experience

Business experience before the credit scheme was considered in this research and the response of the respondents shown in Table-13 below that 171 respondents (52 percent) of them replied "yes" we had relevant business experience before the credit scheme, while the remaining 158 respondents (48 percent) of the total respondents replied "No" we did not have any relevant business experiences before the credit scheme. Among the sample borrowers who had a relevant experience, 47.4 percent of them is credit defaulter while the remaining which is slightly higher in percent, 52.6 percent is non-defaulter. But, among the sample borrowers who didn't have relevant experience before the credit scheme, the higher percentage which represents 66.5% of them are defaulter while the remaining 33.5 percent were non-defaulter. Accordingly, the default rate is higher for borrowers who didn't have relevant work experience relative to the borrowers who had relevant work experience.

Table- 13: Cross-tabulation of Loan repayment performance versus Business Experience.

			Business Exprience		
			NO	YES	Total
LRP	Default	Count	105	81	186
		% within LRP	56.5%	43.5%	100.0%
		% within Business Expr.	66.5%	47.4%	56.5%
		% of Total	31.9%	24.6%	56.5%
	Non Default	Count	53	90	143
		% within LRP	37.1%	62.9%	100.0%
		% within Business Expr.	33.5%	52.6%	43.5%
		% of Total	16.1%	27.4%	43.5%
Total		Count	158	171	329
		% within LRP	48.0%	52.0%	100.0%
		% within Business Expr.	100.0%	100.0%	100.0%
		% of Total	48.0%	52.0%	100.0%

Source: Survey result

4.4.4 Keeping book of record

According to the data collected from the sample respondents shown in the Table-14 below, from those who kept a book of records for their financial transactions, 40 percent of them were defaulters while the others who are slightly higher in percent, 60 percent, were nondefaulter. But, from those who did not have a book of records to handle their financial transactions, the majority of them were found as credit defaulters which represent 75.30 percent, while the remaining which represents 24.7 percent was Nondefault. However, regardless of their repayment status majority of the sample borrowers (53.2 percent) experienced with keeping a book of record to evaluate the financial position and performances of their respective businesses. The factor is significant at 1% (Chi2=42.81) in influencing loan repayment performance.

Table- 14: Sample respondents with having book of records (Cross tabulation)

			Do you have any book of records?		
			NO	YES	Total
LRP	Default	Count	116	70	186
		% within LRP	62.4%	37.6%	100.0%
		% within Book keeping	75.3%	40.0%	56.5%
		% of Total	35.3%	21.3%	56.5%
	Non default	Count	38	105	143
		% within LRP	26.6%	73.4%	100.0%
		% within Book keeping	24.7%	60.0%	43.5%
		% of Total	11.6%	31.9%	43.5%
Total		Count	154	175	329
		% within LRP	46.8%	53.2%	100.0%
		% within Book keeping	100.0%	100.0%	100.0%
		% of Total	46.8%	53.2%	100.0%

Source: Survey result

4.5 Lending Institutes Supervision and other supports

4.5.1 Loan Utilization Supervision

In order to ensure efficient utilization of the loan, loan utilization supervision by lenders is vital. According to the survey result, Out of the total respondents, 91.20% of them had been supervised monthly whereas 8.8% of the borrowers were not supervised for loan utilization. From the total of the borrowers whose disclose that they were not supervised regarding their loan utilization 82.8% of them were defaulter whereas only 17.2% of them is creditworthy.

Table- 15: Cross tabulation of loan Utilization supervision versus Loan repayment performance

			Have you ever been supervised for loan Utilization?		
			NO	YES	Total
LRP	Default	Count	24	162	186
		% within LRP	12.9%	87.1%	100.0%
		% withinUtilizationsup	82.8%	54.0%	56.5%
		% of Total	7.3%	49.2%	56.5%
	Non Default	Count	5	138	143
		% within LRP	3.5%	96.5%	100.0%
		% withinUtilizationsup	17.2%	46.0%	43.5%
		% of Total	1.5%	41.9%	43.5%
Total		Count	29	300	329
		% within LRP	8.8%	91.2%	100.0%
		% withinUtilizationsup	100.0%	100.0%	100.0%
		% of Total	8.8%	91.2%	100.0%

Source: Survey result

4.5.2 Loan Repayment Supervision

It's also important to supervise the loan repayment in order to ensure loan repayment performance. According to the survey result, monitoring by the loan officers or Branch Manager at least once in a month was important. Out of the total respondents, 78.4 % of them had been supervised whereas 21.6 % of the borrowers were not supervised or monitored for loan repayment. From the total borrowers not supervised for loan repayment 95.8 % of them defaulters whereas only 4.2 % of the borrowers were creditworthy borrowers.

Table- 16: Cross-Tabulation of Repayment supervision versus Loan repayment performance

			Have you ever been supervised for Loan Repayment?		
			NO	YES	Total
LRP	Default	Count	68	118	186
		% within LRP	36.6%	63.4%	100.0%
		% within RepaymentSup	95.8%	45.7%	56.5%
		% of Total	20.7%	35.9%	56.5%
	Non Default	Count	3	140	143
		% within LRP	2.1%	97.9%	100.0%
		% within RepaymentSup	4.2%	54.3%	43.5%
		% of Total	.9%	42.6%	43.5%
Total		Count	71	258	329
		% within LRP	21.6%	78.4%	100.0%
		% within RepaymentSup	100.0%	100.0%	100.0%
		% of Total	21.6%	78.4%	100.0%

Source: Survey result

4.5.3 Training Adequacy

Almost all respondent replied that they had got training. However, the borrower's perception of training adequacy differs. Accordingly, from total 329 respondents, 217 respondents replied that they had got adequate training while the remaining 112 respondents replied that they didn't take adequate training.The loan repayment performance, from those who replied the training, is adequate 127 which represent 58.50% is nondefaulter while the remaining 90(41.5%) defaulter, from those who replied the training, is not adequate (96) 85.7% is defaulter while the remaining 16(14.3) is nondefaulter.The default rate is higher in respondents who respond the training adequate relative to in respondents who respond the training is inadequate.The factor is significant at 1% (Chi2=64.10).

Table- 17: Cross-Tabulation of training adequacy versus loan repayment performance

			Do you think the training you took is adequate?		
			NO	YES	Total
LRP	Default	Count	96	90	186
		% within LRP	51.6%	48.4%	100.0%
		% within TrainingAdeq	85.7%	41.5%	56.5%
		% of Total	29.2%	27.4%	56.5%
	Non Default	Count	16	127	143
		% within LRP	11.2%	88.8%	100.0%
		% within TrainingAdeq	14.3%	58.5%	43.5%
		% of Total	4.9%	38.6%	43.5%
Total		Count	112	217	329
		% within LRP	34.0%	66.0%	100.0%
		% within TrainingAdeq	100.0%	100.0%	100.0%
		% of Total	34.0%	66.0%	100.0%

Source: Survey result

Finally, the researcher interviewed some officials of the MFI, MSE's operators and other stakeholders regarding the major reasons for low repayment performance of MSE loan. Accordingly, the reasons for low MSE loan repayment rate are; from OCSSCO side, lack of proper follow up and controlling of the ongoing works of MSE operator's such as urging and enforcing the repayment on the agreed installments; from MSE operators' part, unwillingness of effecting the outstanding loans on the set schedules that means sense dependency has been growing as if it is the obligations of the guarantor; from MSE Agency and other MSE implementers, insufficient assistance on the strengthening the marketing efforts, production/service efforts and other technical assistance to MSE operators are the major ones. The other reasons for low repayment performance for Global Fund loan which is one of the programs under MSE loan are absence of proper screening and organizing of clients, Wrong perception about the loan- considering it as aid, Business failure, Death of the clients and unable to work - being illness, and Market problem (lack of working premises) or their cash flow does not match with repayment schedule), can be mentioned.

Chapter Five

5. Econometric Analysis

The econometric analysis of repayment performance of borrowers uses a model where the loan repayment-LRP (yi) = [1, if the respondent is creditworthy borrower otherwise 0, if the borrower is defaulter] is regressed on possible explanatory variables. The probit regressions model was employed for the estimation and marginal effects of each significant explanatory variables.

5.1 Factors influencing Loan repayment

The overall significance of the model has been assessed by considering chi-square test at the given degree of freedom. As shown in the below probit regression, the chi-square test is showing a statistically significant result at 95 percent confidence level, p-values are less than 5 percent. Therefore, it is evident that the model is good to fit the data than no model.

Table- 18 Maximum likelihood estimate of a probit model for loan repayment performance

Probit regression — Number of obs = 329; LR chi2(16) = 296.46; Prob > chi2 = 0.0000; Log likelihood = -76.996381; Pseudo R2 = 0.6581

LRP	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]	
GENDER	-.4076472	.2619282	-1.56	0.120	-.9210169	.1057226	
AGE	.5774203	.300399	1.92	0.055	-.011351	1.166192	
MONECHO	1.908221	.384427	4.96	0.000	1.154757	2.661684	*
LONDIVR	-.5172797	.3625159	-1.43	0.154	-1.227798	.1932384	
SUPMNTH	.6862243	.3022078	2.27	0.023	.093908	1.278541	**
SUPIRRG	-.5537628	.3137588	-1.76	0.078	-1.168719	.0611932	
RPSCSUIT	1.32874	.3274607	4.06	0.000	.6869288	1.970551	*
RPSCMNTL	.9532947	.3051345	3.12	0.002	.3552421	1.551347	*
RPSCIRG	-1.015069	.3628928	-2.80	0.005	-1.726326	-.3038123	*
TRADQU	.8724302	.2834362	3.08	0.002	.3169055	1.427955	*
INCMOS	.5101188	.2784105	1.83	0.067	-.0355558	1.055793	
TECHADP	.1432779	.2810388	0.51	0.610	-.4075481	.6941038	
BUSEXP	.0248728	.2530132	0.10	0.922	-.471024	.5207696	
LONTIML	1.064752	.5030839	2.12	0.034	.078726	2.050779	**
BOOKK	.2687653	.2786284	0.96	0.335	-.2773364	.8148669	
LONSZSU	-.4024613	.2562934	-1.57	0.116	-.9047871	.0998644	
_cons	-4.497131	.7681818	-5.85	0.000	-6.00274	-2.991522	*

Source: Survey date *,** the variables are significant at 1% and 5% respectively

Accordingly, it is important to identify the statistical significance of each explanatory variable. As shown in the regression table in the above, out of sixteen independent variables regressed in the model, the constant variable and other seven coefficients of the explanatory variables were found to be statistically significant at 95 percent confidence level.

The explanatory variables such as MONECHO (Monitor the utilization of other members in the enterprise), LONTIML (Loan disbursement timely released), RPSCSUIT (Repayment schedule Suitability), RPSCMNTHL (repayment schedule on monthly interval), RPSCIRG (repayment schedule on irregular time interval), SUPMNTH (Supervision on monthly basis) and TRADQU (Adequate and sufficient training) are found to be statistically significant to influence repayment performance of borrowers.

The variables such as MONECHO, RPSCSUIT, RPSCMNTHL, and TRADQU were found to positively influence the repayment performances at 1% significance level, while irregular repayment (RPSCIRG) and constant have been found as negatively influence the repayment performance of borrowers at 1% significance level. The timely loan disbursement (LONTIML) and Supervision on monthly basis (SUPMNTH) variables positively influence the repayment performances at 5% significance level.

Regarding the sign of the variables, all explanatory variables found to be significant in influencing loan repayment performance of MSE borrowers were coincided with the prior expectation.

According to the study findings as the monitoring for the utilization of the credit for the intended purpose increases, the probability of loan defaulting by enterprise members can be minimized. Thus, the variable MONECHO positively influence the loan repayments performance at 1% significance level.

Regarding the time lapse that taken from the borrowers screening process to the credit delivery time by the lending institutes, the longer time passes by the lending institutes to process the credit can significantly influence the successfulness of that particular business and hence affects the repayment performance of that particular borrower. So the more the fastest the credit service is the more the borrower can utilize the loan for the intended business plan timely and the more the credit would be settled on time profitably. Thus, the variable LONTIML positively influence the loan repayment performance of the borrowers at 5% significance level.

The Other significant factor that can influence the loan repayment performance is loan repayment schedule suitability. Accordingly, it's found that the repayment period suitability for borrowers after the loan disbursement enables the borrowers to have sufficient working capital so that they can run their businesses profitably and repay their loan on time. And also the frequency of borrowers' repayment intervals on monthly basis, the more frequent the repayment trends experienced by the borrowers, the better repayment performances to be attained by the microfinance institutions. Thus, both variables RPSCSUIT and RPSCMNTL positively influence the loan repayment performance of borrowers at 1% significance level. Whereas, repayment trends on irregular time intervals, the more time lags in repayment trends experienced by the borrowers, the less probability of better repayment performances to be attained by the microfinance institutions. Thus, the variable RPSCIRG negatively influence the loan repayment performance of borrowers at 1% significance level.

In monthly supervision, the more frequent the visits and supervision to the client's business territory might help the borrower to utilize the loan for the intended purpose only. Furthermore, the visits to those target borrowers will help in identifying the loops that face the borrowers either technically or financially in order to minimize the risks suffer from defaults. Accordingly, the variable monthly supervision positively influences the he probability of borrowers being creditworthy at 5% significance level.

The study also reveals that the borrowers who are equipped with relevant training and skill developments can effectively manage and monitor the day to day operations of their business. Training has an indispensable contribution to the borrower's business success. Training enables the borrower to expand and effectively run the existing business or enhance their capacity of engaging in the new businesses. However, untrained borrowers may change his/her original business without considering worthiness of the business and they may divert the loan to unintended purposes. Training contributes to good credit performance and lack of training on the business plan may result in poor repayment performance. Therefore, delivering an adequate and sufficient training to all borrowers in a consistent manner may increase the repayment performance of borrowers. Thus, the variable training adequacy positively influences the repayment performances at 1% significance level.

The other important thing is a post-estimation test for multicollinearity among the variables identified as an explanatory. Multicollinearity problem is identified when the independent variables have a linear combination of each other. A common rule to use can be either VIF (Variance Inflation Factor) or tolerance. The STATA collinearity test results are shown below in the table. Accordingly; VIF greater than 10 is considered as an indicator of multicollinearity or collinearity in short. As shown in the below table, the independent variables in the model have all less than 10 VIF. Thus, there is no possible serious threat of multicollinearity problem to the model.

```
. vif
```

Variable	VIF	1/VIF
RPSCMNTL	2.11	0.474615
RPSCIRG	1.96	0.509112
SUPMNTH	1.83	0.546952
SUPIRRG	1.77	0.563398
BOOKK	1.42	0.706257
LONDIVR	1.38	0.723112
RPSCSUIT	1.38	0.724913
MONECHO	1.33	0.751405
TRADQU	1.25	0.801013
TECHADP	1.16	0.860228
LONTIML	1.16	0.862530
LONSZSU	1.16	0.863274
BUSEXP	1.15	0.866373
AGE	1.14	0.880564
INCMOS	1.13	0.888676
GENDER	1.11	0.903261
Mean VIF	1.40	

The above discussion presents a probit regression and thus the coefficients explain that the increase in these statistically significant variables will also increase the predicted probability of the dependent variable, loan repayment performance of the borrower. In line with this, it is important to compute the marginal effects, which are presented below.

Table- 19: The maximum likelihoods marginal effects of probit regression to Loan repayment performance

Marginal effects after probit
y = Pr(LRP) (predict)
= .22010543

variable	dy/dx	Std. Err.	z	P>|z|	[95% C.I.]		X
GENDER*	-.1234895	.0785	-1.57	0.116	-.277353	.030374	.583587
AGE*	.1441118	.06481	2.22	0.026	.017081	.271143	.838906
MONECHO*	.4020409	.05714	7.04	0.000	.290041	.514041	.702128
LONDIVR*	-.164158	.12026	-1.36	0.172	-.399873	.071557	.702128
SUPMNTH*	.2194469	.10508	2.09	0.037	.013496	.425398	.319149
SUPIRRG*	-.1590985	.08515	-1.87	0.062	-.325986	.007789	.440729
RPSCSUIT*	.3339286	.06561	5.09	0.000	.205328	.46253	.635258
RPSCMNTL*	.2895946	.09618	3.01	0.003	.101088	.478101	.43769
RPSCIRG*	-.2663835	.0802	-3.32	0.001	-.423565	-.109202	.367781
TRADQU*	.228504	.06665	3.43	0.001	.097881	.359127	.659574
INCMOS*	.1569143	.08663	1.81	0.070	-.012871	.326699	.386018
TECHADP*	.0435135	.08766	0.50	0.620	-.128304	.215331	.264438
BUSEXP*	.0073638	.07481	0.10	0.922	-.13926	.153987	.519757
LONTIML*	.2156641	.06682	3.23	0.001	.084704	.346624	.881459
BOOKK*	.0789803	.08066	0.98	0.328	-.079114	.237075	.531915
LONSZSU*	-.1245777	.08221	-1.52	0.130	-.285708	.036553	.659574

(*) dy/dx is for discrete change of dummy variable from 0 to 1

The marginal effect computation for statistically significant coefficients shows the change in probability of being non-defaulter for a unit change in the discrete explanatory variables. Hence, for a change from 0 to 1 in MONECHO, the probability of being Non defaulter increases by 0.40204 at 1% significance level, other things held constant. The probability effects of this variable predetermined as positive in the hypothesis. The borrowers who monitor each other are more creditworthy than the borrowers who do not monitor each other.

For the change from 0 to 1 in LONTIML (Loan disbursement timely released), the probability of being creditworthy increases by 0.2156641 at 1% significance level, other things held constant. This have also similar coefficient sign with what was expected in the hypothesis; Meaning that as the requested loan is released by the MFIs to the borrower on time, there is a possibility that borrowers become successfully finance their business so that they are less likely to become defaulters. This argues with what was expected in the hypothesis, and similarly coincide with the study by Abreham (2016).Similarly, for the change from 0 to 1 in RPSCSUIT (Repayment schedule

suitability), the probability of being creditworthy increases by 0.3339286 at 1% significance level being other things held constant.

The other important thing to be regressed was repayment interval trends of sample borrowers. Accordingly, the result shows that for the change from 0 to 1 in RPSCMNTHL (repayment schedule on monthly basis), the probability of being creditworthy increases by 0.2895946 at 1% significance level, other things held constant. This is also agreed with what was expected to influence the dependent variable in the hypothesis. Meaning borrowers who have repayment trends on a monthly basis could have high repayment performances as compared to other repayment trends as shown in descriptive analysis. On the other hand, for the change from 0 to 1 in RPSCIRG (repayment Schedule on irregular time interval), the probability of being creditworthy decreases by 0.2663835 at 1% significance level, being other things held constant. Hence again this variable have similar coefficient with what was hypothesized. Meaning borrowers with high trends in repayment schedule on irregular basis or beyond a month could possibly fail to repay the loan on time or defaulters.

Regarding frequency of supervision to client's business territory, further effects of visit on monthly and irregularly basis were evaluated. Accordingly, for the change from 0 to 1 in SUPMNTH (Supervision on monthly basis), the probability of being creditworthy increases by 0.2194669 at 5% significance level, being other things held constant. This variable also has similar significance level with what was expected to influence the repayment performances, positively.

The study also reveals that for the change from 0 to 1 in TRADQU (Adequate and sufficient training), the probability of being creditworthy increases by 0.228504 at 1% significance level, being other factors held constant. Meaning that borrowers who have got sufficient and adequate training have high possibility of being creditworthy borrowers than others who did not.

Chapter Six

6. Summary, Conclusion, and Recommendations

The chapter summarizes the overall findings and conclusions of the study withdrawing the possible recommendations to be addressed by the concerned bodies. Accordingly, the summary report will be presented below and followed with the conclusion and recommendations for policymakers, lending institutes management and other stakeholders decision makings

6.1 Summary

Loan repayment performance is affected by a number of factors expressed by client characteristics, business characteristics, and lender characteristics. While some of the factors positively influence the loan repayment, the other factors are negatively affecting the repayment rate. This study analysis focused on a number of specific factors which are categorized under client characteristics, loan characteristics and business characteristics. Regarding the client's characteristics, there are variables measured by age, Sex, another source of income gained by borrowers. Lenders characteristics are factors attributed to the lender which means loans officers, company attributes, MFIs policies, and objectives as well as the performance of work. The MFIs should be in a position to provide guidance to the stakeholders relating to loan processes and procedures for better repayment and overall portfolio performance. Effective lending procedures have far-reaching consequences on the loan repayment. The Business characteristics relate to the nature and type of the business plus its performance in relation to the others in the environment. They include the size and age of the business, location, income, and profits generated from the business. For instance, at higher levels of income, businesses make some savings and purchase assets which can be used as loan securities. Such securities can be sold to repay loans. The control variables consist of the various operations that ensure the security of the loans such as proper market analysis, 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.

In light of this, the study was intended to extend its investigation on factors that possibly affect loan repayment performance of microfinance institutes MSE borrowers that are operating in Oromia regional states. Accordingly, sample MSE borrowers were selected based on Zonal office client outreaches. Accordingly, the Oromia Credit & Saving Share Company (OCSSCO) which is the sole provider of MSE loan in the region was included as the study area. A total of 329 sample respondents were selected from respective Zonal offices. The samples were allocated to those Zonal offices based on their respective MSE client's outreaches proportional percentages.

In order to identify those relevant factors, primary data were collected from sample respondents. The descriptive analysis was employed to predict the effects of those independent variables to the loan repayment performances using the Cross tabulations and Chi-square test.

The study revealed that the proportion of female and male defaulters was found as male borrowers are relatively higher defaulters than that of female borrowers which is consistent with Abafita (2003), Abreham (2016), Dula (2016) and other finding. Borrower's ages with the age category of 30 and above had less likely to be defaulters than that of youngsters (less than 29) which is significant at 10%. It's also consistent with Fikirte (2011), Abafita (2003) and Abreham(2016) study results. On the other hand, monitoring the loan utilization of other members within the enterprises' was observed as slightly higher monitoring actions were implemented by the defaulter to another member in their respective enterprise and significant at 1%. While a higher portion of the creditworthy borrowers conducts the monitoring activities. Majority numbers of the respondent have no other source of income before engaging in the credit schemes. While some others who have a diversified source of income have a higher probability of being creditworthy.

From the survey result again it was found that majority of sample borrowers which represent 66% were received an equivalent amount of loan requested. The repayment time set by the lending institutes was more suitable for the majority of the sample borrowers which represent 63.5 percent of the total sample respondents. Majority of the defaulting borrowers were from those borrowers responding the repayment schedule is not suitable. In other words, the higher portions of the creditworthy client were responding the repayment schedule is suitable.

The timeliness of loan disbursement was one of the study areas to be assessed. Accordingly, almost higher numbers of the samples were financed on time. Majority of the sample respondents were found defaulters of the loan. The highest portion of the sample respondents had received the requested loan fund that is sufficient enough to finance their respective projects. Based on the decision of diverting the loan from the intended project to another by the defaulters, the major reasoning for diverting the loan was found as the unstable market demand change to borrower's end product over time.

Provision of appropriate and sufficient training on relevant issues on the subject matter of financial service is very crucial to the success of microfinance activities. Accordingly, regardless of its training natures, almost all sample borrowers had got the training provided by the institutions as well as sector training providers which is significant at 1%. In light of these, a higher number of the creditworthy borrowers had got adequate training, while on the contrary higher proportion of the defaulters was not trained very well.

Higher numbers of borrowers have faced the problem of unsuitable marketplace although higher numbers of sample borrowers have an accessible and sufficient input to run their businesses. Among the sample borrowers, the slightly higher number of borrowers had relevant business experiences. The proportional higher numbers of sample defaulters have experienced a medium range of market demand to their end products. Moreover, the highest proportion of the defaulted sample borrowers have not kept a book of records while the greatest portion of the sample creditworthy borrowers does.

6.2 Conclusions

In conclusion, the Borrowers characteristics like Age, Gender and having other sources of income are the variables that can influence loan repayment performance of the borrowers. According to the study, finding defaulters represent the majority of youngsters relative to adult borrowers. The gender analysis showed that male borrowers have less repayment performance than female borrowers. Regarding income from other sources, the defaulters represent the majority relative to non-default borrowers having another source of income.

The loan related characteristics are one of the study areas. Accordingly, the variables loan size, loan utilization, credit timeless, repayment suit, peer monitoring are considered in the study. In

loan utilization analysis defaulters are representing the majority relative to non-defaulter in loan diverted borrowers. The credit timeless factor also significant in influencing repayment performance in that the defaulters are high in the borrowers whose their repayment schedule is not suitable relative to the borrower's repayment schedule is suitable. And also the default rate is higher in borrowers did not know the members in their enterprise than in those borrowers know all (most) of their enterprise members.

Finally, business characteristic related variables are analyzed. Thus, having high and low market demand for the end products is significantly influence the repayment performance of borrowers. The variables like Technology adoption, business experience, keeping a book of records, supervision and training are also found to be factors influencing loan repayment performance of members of SME borrowers.

6.3 Recommendations

Based on the results of the study the possible recommendations that emanate from this study are presented as follows.

The time lag between loan application and disbursement should be reduced to increase repayment rate. The complicated loan processing procedures, which might lead to delay in disbursement, further, it will increase default rate. The supervision made by the loan officers and borrowers ratio should be reduced and it leads to increase follow-up services. However, it is recommended that institution should compute thoroughly the borrowers' business proposal loan size before approving and sanctioning.

Repayment period is also found to be a significant determinant of loan repayment performance of borrowers. Suitability of loan repayment period for borrowers was found to significantly increase the probability of repaying the loan. Therefore, the institution has to give enough time to clients so that they will be able to work with the loans they have borrowed and arranged the time to collect loan that will be suitable for them to sell their business output.

Finally, the study highly recommends interested researchers to extend further investigation on the variables related to the enterprises rather than individual members in the Enterprises that can affect loan repayment performance like the market situation, size of the enterprise, and the overall social interaction between the enterprise members.

Reference

Abafita, J. (2003), "Microfinance and loan repayment performance: A Case Study of the Oromia Credit and Savings Share Company (OCSSCO) in Kuyu", MSc thesis, Addis Ababa University, Addis Ababa.

Abdillahi Farah, 2008. The Impact of Microfinance on Poverty Alleviation in the Case of Dire Microfinance in Dire Dawa City. An MSc Thesis Submitted to Ethiopian Civil Service College.

Abreham Gebeyehu (2002), "Loan repayment and its Determinants in Small-Scale Enterprises Financing in Ethiopia: Case of private borrowers Around Zeway Area", M. Sc. Thesis, AAU.

Abreham Garomsa (2016), "Assessment of factors affecting loan repayment performance of borrowers: an empirical study on selected microfinance institutions Oromia region", M.Sc Thesis, AAU.

Dula Abebe (2012), "Socioeconomic factors influencing loan repayment performance of microfinance clients: the Case of Busa Gonofa microfinance institution", MA Thesis, Indira Gandhi National Open University, (IGNOU).

Amha, W. (2000) 'Review of Microfinance Industry in Ethiopia: Regulatory framework and performance,'Association of Ethiopian Microfinance Institution (AEMI), Addis Ababa, Ethiopia.

Arene. A. (1992), Loan repayment and technical assistance among smallholder maize farmers in Nigeria, African review of money, Finance, and Banking.

Asante, B. O., Sefa, V. A., Sarpong, D. B. Determinants of small-scale farmers' decision to join farmer-based organizations in Ghana. African Journal of Agricultural Research, 2011, 6 (10), p. 2273-2279.

Berihu Assefa, et.al (2014).Identifying key success factors and constraints in Ethiopia's MSE development: An exploratory research, Ethiopian Development Research Institute, pp. 19-22.

Creswell, JW. (2009), `Editorial: Mapping the field of mixed methods research', Journals of Mixed Methods Research Vol.3, No.95, pp.95-109

Chad Brooks, 2013, History of microfinance, viewed 30 April 2016,

http://www.businessnewsdaily.com/4286-microfinance.html

Fikirte K. (2011), „Determinants of loan repayment performance", a case study on Addis Credit and Saving Institution, Addis Ababa, Ethiopia

Firafis H. (2015), „Determinants of loan repayment performance: Case Study of Harari Microfinance Institutions), Ambo, Ethiopia.

Florence Angaine, Daniel NderiWaari (2014), "factors influencing loan Repayment in Micro-Finance Institutions in Kenya", IOSR-journal of business and management

Gebrehiwot, et al, (2013), "The Development of the Microfinance industry in Ethiopia: performance, problems, and prospects" viewed 30 April 2016

https://www.eeaecon.org/node/5310

Green, E., Kimuyo K., and Murinda (2002), "How do Firms in Developing Countries Raise Capital? Finance and Development Research Program", Working Paper, London.

Gobezie, Getaneh,(2005), "Regulating Microfinance in Ethiopia: Making it more Effective", Amhara Credit and Saving Institution (ACSI) Essay No. 3

Greg Fischer (2010), spanning the chasm: ''Uniting theory and Empirics in microfinance research".

Israel, G.D.(1992).Determining the sample size. Revised 2009. The University of Florida, Retrievedfromhttp://www.psycholosphere.com/Determining%20sample%20size%20by%20Glen%20Israel.pdf on 12/04/2017

Maddala, G. S. Introduction to Econometrics. 3rd Edition, John Wiley & Sons Ltd, the Atrium, Southern Gate, England, 2005, 318-323.

Mesele Kebede, Tesfahun Tegegn and Tadele Tafese,(2016).'Factors Affecting Loan Repayment performance of small-scale enterprises financed by microfinance institutions: study on private borrowers around wolaita and dawuro Zone', Global Inc.(USA), Volume 16

Munene, H. Nguta, Guyo, S. Huka, (2013).'Factors Influencing Loan Repayment Default in Micro-Finance Institutions: The Experience of Imenti North District, Kenya, International', Journal of Applied Science and Technology Vol. 3 No. 3; March 2013

Tolosa Negese (2014), Performance of Loan Repayment Determinants in Ethiopian Microfinance

Stephen M. etl.(2014) 'Factors influencing loan repayment performance among group borrowers in Bungoma West District, Bungoma County' IOSR Journal of Business and Management (IOSR-JBM),e-ISSN: 2278-487X,p-ISSN:2319-7668. Volume 16, Issue 7. Ver. IV, PP 24-28 http://www.iosrjournals.org/iosr-jbm/papers/Vol16-issue7/Version-4/D016742428.pdf

Von P. J.D. (1980), Finance at the Frontier, debt capacity and the role of credit in the private economy. The World Bank Washington DC

Annex-1: Questionnaire for Borrowers

Addis Ababa University

College of Business and Economics

Accounting and Finance Department

Graduate Program (MSC) in Accounting and Finance

Questionnaire

Dear Sir/Madam.

I am undertaking a research on factors influencing loan repayment performance of microfinance institutions, Knowing the determinants of successful loan repayment will have a paramount importance to the MFI, to borrowers, to government and others. Moreover, the result of this study will be used as an additional reference for those who want to conduct detailed research on the area.

To this end, I have prepared a self – administered questioner to help me gather the pertinent information from the selected private borrowers. The quality of the result of this research is based on the accuracy of the information you provided. Eventually, I promise you, the information you will provide me is going to be reported and communicated in aggregate and utmost care will be taken for its confidentiality.

Thank you for your cooperation,

1. **Borrower's characteristics**

1.1. Age_____

1.2. Sex_____ 0. Female 1. Male

1.3. Marital Status_____ 1. Single 2. Married 3.divorced 4. Widowed

1.4. Education_____ 1. Illiterate 2.) primary (1-8) 3. Secondary (9-12) 4. tertiary (Above 12th) 5.Others (please specify) _____

2. **Business Formation information**

2.1. How many members do the enterprise in which you a member have? _____

2.2. Do you know all of the members of your enterprise? ___ 1.Yes 0.No

2.3. Do you attempt to know or monitor the loan utilization of the other members of your enterprise? __ 1. Yes 0. No

3. **Loan Related characteristics**

3.1. How much money did you receive as a loan from your respective lender recently? _____

3.2. Do you think that the amount you received is similar to your intended request? _____ 1.Yes 0.No

3.3. Is the repayment period set by the lender is suitable in your opinion? ___1.Yes 0. No

3.4. What is your repayment frequency?

1. Weekly 2.monthly 3.Quertarly 4.half yearly 5.Yearly 6.Other (irregular)

3.5. Was the loan issued timely? _____ 1. Yes 0. No

3.6. If no, what was the impact of the delay? _____

3.7. What is the status of the recent loan? __1. Repaid as scheduled 0. Defaulted

3.8. What was the cause for the loan to be in arrears?

1. A beliefs/attitudes that loan based business activities were worthless to generate profit
2. Used some of the loans to finance household living expense
3. Sold on credit but receivables did not get paid back on time
4. Bankruptcy of the business
5. Loss of assets acquired by the loan
6. Perceived the loan as if it is a donation, a grant by the Government bodies
7. Other (specify)_____

4. Loan purpose and Utilization

4.1 Was the amount of loan you took enough for the purpose intended? ____ 1. Yes 0. No

4.2 Did you spend the entire loan for purposes specified in the loan agreement?___ 1.Yes 0. No

4.3 If no, What was/were the reason(s) for spending part/entire loan for non-intended purposes?_____

1. The loan amount was not enough for the intended purpose
2. The loan agreement did not coincide with my initial intention
3. The proceeds received from the loan is exceeder than my actual costs
4. The change in Market demand
5. To settle another credit
6. To make a better profitable business
7. Other (specify)_____

5. Supervision and Training

5.1 Have you ever been supervised for loan utilization by Lender MFI staffs? __1. Yes 0. No

5.2 Have you ever been supervised for loan repayment? ___ 1. Yes 0. No

5.3 If yes to either on. No. 5.1 or 5.2, in what time interval does the officer supervised your businesses?

1. Weekly 2.Monthly 3. Bi-weekly 4. Quarterly 5. Other (Specify)

5.4 Do you consider supervision as being important for loan repayment? ___ 1.Yes0. No

5.5 Did you get any training before receiving a loan? _____ 1.Yes 0.No

5.6 If yes, what kind of training did you take? _____

1. Business (Entrepreneurial, Innovative skill development)
2. Marketing
3. Saving culture
4. Bookkeeping
5. Other (specify)_____

5.7 Do you think the training you took is adequate and sufficient enough? ___1. Yes 0.No

5.8 Do you think that the training you took has helped you to enhance your knowledge about credits, mechanisms of asset management's and increasing your income? ___ 1.Yes 0.No

5.9 If no, what do you expect to be improved? _____

6. Income level

6.1. Currently, do you have any other/new sources of income? ___ 1. Yes 0. No

6.2. If yes, what are those other sources and your annual income from them?

Source	Annual Income
_____	_____
_____	_____

7. Production Location, Market Place and Technology Adoption

7.1 Do you think that you have sufficient inputs around your business? _____ 1. Yes 0. No

7.2 Does your business have a suitable production place? ___ 1. Yes 0. No

7.3 Do you think that your production or market place is accessible for consumers? _____1.Yes 2.No

7.4 Do your businesses adopt an advanced technology while running the business _____ 1.Yes 0.No

7.5 If yes, what type of technology do you use? _____

8. Business Experience and Market Situation

8.1. Do you have any similar business experience before engaging in this credit scheme? 1. Yes 0. No

8.2. If your answer is yes, for how long did you involve in?

a) Below 3years b) 3-5years C) Above 5years

8.2 How was the market demand status of your product? ___

1. High 2. Average 3. Low

8.3 If it is low, have you ever been assessed the feasibility of your business before starting operations? _____ 1. Yes 0. No

Annex - II Interview questions:

Sample Borrowers

1. What factors other than those indicated in the questionnaires had seriously undermines your repayment performances?

Sample MFIs staffs:

2. What factors do think that undermines the lending institutes' repayment recovery rates?