Determinants of Loan Repayment Performance: A Study on Oromia Credit and Saving Share Company Clients' in Kersa/Jimma Branch

A Research Paper Submitted to the School of Graduate Studies of Jimma University in Partial Fulfillment of the Requirements for the Degree of Master of Science in Accounting and Finance

By:

Yeshi Mersha Under the Guidance of Dr. Arega Seyoum And

Mr. Monanol Terfa



Jimma University

School of Graduate Studies

M. Sc. In Accounting and Finance

May, 2020 Jimma, Ethiopia

Abstract

The major objective of this study is to identify the determinants of loan repayment performance in OCSSCO, Kersa/Jimma branch which is found in Serbo town, the capital of Kersa district. To achieve the objective, sample borrowers including both defaulters and non-defaulters were selected using stratified systematic sampling. A sample of 330 was selected using stratified and systematic sampling of 2400 population in the branch from which only 220 of them participated in the study. Interview questionnaire, secondary data and key informant interview were used to collect relevant data for the study. Both descriptive and inferential statistics were used to analyze the collected data. The study found that marital status, ownership of fixed assets, loan diversion, supervision, mode of lending and repayment period were found to significantly affect loan repayment by clients. Therefore, the branch should give due attention to this factors while giving credit.

Keywords: Default, Determinants, Jimma, Kersa, Loan Repayment, OCSSCO

Acknowledgements

My special thanks and appreciations are to my advisors Dr. Arega Seyoum and Mr Monanol Terfa for their constructive and valuable comments on this thesis work. I also would like to thank all other individuals who gave me constructive comments and support in my research.

DECLARATION

I hereby declare that the thesis entitled "Determinants of Loan Repayment Performance: A Study on Oromia Credit and Saving Share Company Clients' of Kersa/Jimma Branch", has been carried out by me under the guidance and supervision of Dr. Arega Seyoum and Mr. Monanol Terfa. The paper is original and has not been submitted to any university or institution. All sources are duly acknowledged.

Researcher's Name	Date	Signature
Yeshi Mersha	June 2020	

CERTIFICATE

This is to certify that the Thesis entitled "Determinants of Loan Repayment Performance: A Study on Oromia Credit and Saving Share Company Clients' of Kersa/Jimma Branch", was prepared by student Yeshi Mersha under our Guidance and supervision

	Name	Signature	Date
1.	Dr, Arega Seyoum		
r	Mu Monanol Toufa		

AB	STRA	CT	II
AC	CKNOV	VLEDGEMENTS	
DF	ECLAR	ATION	IV
CE	ERTIFI	САТЕ	IV
TA	BLE C	OF CONTENTS	V
LI	ST OF	TABLES	VII
LI	ST OF	FIGURES	VII
A(CRONY	/MS	VIII
	1.1	BACKGROUND OF THE STUDY	9
	1.2	STATEMENT OF THE PROBLEM	10
	1.3	OBJECTIVE OF THE STUDY	12
	1.4	SIGNIFICANCE OF THE STUDY	12
	1.5	SCOPE OF THE STUDY	12
	1.6	ORGANIZATION OF THE STUDY	13
CF	IAPTE	R TWO: REVIEW OF RELATED LITERATURE	14
	2.1	THEORETICAL LITERATURE	14
	2.1.1	Micro Financing in Ethiopia	14
	2.1.2	Micro Financing and Microcredit	
	2.1.3	Credit Policy and Loan Repayment	20
	2.2	EMPIRICAL LITERATURE	24
	2.2.1	Borrower's Demographic Characteristic:	26
	2.2.2	Borrowers' Economic Characteristics	28
	2.2.3	Institution Specific Characteristics	
	2.3	LITERATURE GAPS	32
	2.4	CONCEPTUAL FRAMEWORK	32
CF	IAPTE	R THREE: RESEARCH DESIGN AND METHODOLOGY	34
	3.2	RESEARCH DESIGN	35
	3.3	DATA SOURCE AND METHODS OF DATA COLLECTION	
	3.4	POPULATION, SAMPLE SIZE AND SAMPLING TECHNIQUE	
	3.5	RESEARCH HYPOTHESIS	37
	3.6	DESCRIPTION OF VARIABLES AND MODEL SPECIFICATION	
CF	IAPTE	R FOUR: RESULTS AND DISCUSSIONS	43
	4.1	DESCRIPTIVE DATA ANALYSIS	43
	4.1.1	Loan Repayment / Default	43
	4.1.2	Borrowers Demographic Characteristics	46
	4.1.3	Borrowers Economic Characteristics	
	4.1.4	Institutional Characteristics	51
	4.2	INFERENTIAL ANALYSIS	53
	4.2.1	Regression Assumptions	53

Table of Contents

4.2.2	2 Binary Logistic Regression Result	55
СНАРТЕ	R FIVE: CONCLUSIONS AND RECOMMENDATIONS	60
5.1	SUMMERY	60
5.2	CONCLUSIONS	61
5.3	RECOMMENDATIONS	62
5.4	LIMITATION OF THE STUDY	63
5.5	FUTURE RESEARCH	63
REFERE	NCES	64
APPEND	IX: INTERVIEW QUESTIONNAIRE	68

List of Tables

Table 1:Types of Loan and Their Characteristics	. 16
Table 2: Standard for non-performing loan in Ethiopia	. 23
Table 3: Variables, Symbol and their Measurement	. 39
Table 4: Trend of Loan Default in Kersa/Jimma Branch	. 43
Table 5:Borrowers' Demographic factors	. 47
Table 6: Borrowers' Economic Factors	. 49
Table 7: Institutional Related Factors	. 52
Table 8: Correlation Matrix among Independent Variables	. 54
Table 9: Omnibus Test of Model Coefficients	. 55
Table 10: Hosmer and Lemeshow Test	. 55
Table 11: Model Summery	. 56
Table12: Determinants of Loan Repayment Performance	56
Table 13: Summery of Hypothesis testing	. 59

List of Figures

Figure 1: Conceptual Model	33
Figure 2: Map of the Study Area	34
Figure 3: Source of Income to Repay the loan	45
Figure 4: Reasons for Loan Default	46
Figure 5: Type of Assets possessed by the clients	50

Acronyms

BL	Business Loan
ETB	Ethiopian Birr
GPL	General Purpose Loan
HL	Housing Loan
MFIs	Microfinance Institutions
MSE	Micro and Small Enterprises
MSEL	Micro and Small enterprise Loan
NBE	National Bank of Ethiopia
OCSRSDP	Oromia Credit and Saving Rural Schema Development Program
OCSSCO	Oromia Credit and saving Share Company
OSHO	Oromia Self-help Organization
SGBL	Solidarity Group Based Loan
WEDPL	Woman Entrepreneur Development Program Loan

Chapter One: Introduction

1.1 Background of the Study

The majority of the world's population earns their livelihoods by being self-employed in their own microenterprises. These micro enterprises make a wide range of goods in small workshops; engage in small trading and retail activities; make pots, pans and furniture; or sell fruits and vegetables. Yet these poor households often fail to secure the finance they need and miss opportunities for growth because they do not have access to loans or a safe place to hold savings. Banks fail to provide the credit needed by theses micro enterprises mainly due to their lending terms and conditions. It is generally the rules and regulations of the big banks that the poor are not bankable. Since they can't afford the required collateral, they are considered as highly risky (Mohammed, 2014).

The expression 'microfinance' denotes the offer of modest financial services to low income clients. Thus, any microenterprise activity characterized by limited funds and low-income beneficiaries may fall into the field of microfinance. Microfinance has emerged as a growing industry to provide financial services to very poor people. Now at national level in Ethiopia, there is recognition that poor people need a variety of financial services, not just credit. Currently, microfinance institutions has therefore moved towards providing a full range of financial services, including credit & savings to poor enterprises and households. Providing access for loan especially to micro and small business has been given due attention by the government at national level (Meron, 2008).

Microfinance institutions are regarded as the motor for enhancing income to the population at urban and rural areas, especially to the people who are regarded as poor. However, loan repayment is now becoming the major problem that hinders sustainability of MFIs in Ethiopia. Specifically, MFIs are not recollecting loan given for the youth out of the 10 billion revolving fund implemented before two years. Page | 9

Therefore, this study is aimed at investigating the determinants of loan repayment performance in Oromia credit and saving share Company, Kersa/Jimma Branch.

1.2 Statement of the Problem

Majority of world's poor are living in third world countries. Ethiopia contributes for that a lot. The government is taking several actions to eradicate poverty and reduce the number of poor population. Micro and Small enterprises (MSEs) are among the vital and critical vehicles in this regard. Credit is very important for these MSEs. MFIs are the main source of credit for these MSEs (Mohammed, 2014).

Micro Finance Institutions (MFIs) help those who have no access to the financial services of formal financial institutions. In addition, they contribute a lot to reduce the negative impact of local money lenders in areas they operate. However, it is encircled by so many deep-rooted problems. A number of studies on MFIs in many places have shown that the majority of those MFIs have encountered serious loan recovery problems (Mohammed, 2014; Meron, 2008; Abafita, 2003).

It is generally accepted that credit, which is put to productive use, results in good returns. But credit provision is such a risky business that, in addition to other reasons of varied nature, it may involve fraudulent and opportunistic behavior. The lender in the formal financial system is at a disadvantage of information on the burrower's behavior. Fortunately, group based micro financing system that involves peer pressure and joint liability has evolved to solve the problems of a conventional bank that provides a collateral backed credit alienating the poor (Mengistu, 1997). Hunte (1996) argues that default problems destroy lending capacity as the flow of repayment declines, transforming lenders into welfare agencies, instead of a viable financial institution. It incorrectly penalizes creditworthy borrowers whenever the screening mechanism is not efficient. Loan default may also deny new applicants access to credit as the Financial Institution's cash-flow management problems augment in direct proportion to the increasing default problem.

The question of repayment (collection) of microcredit loan is one of an important question in microfinance since the borrowers are predominantly the poor and the low income group, where most of them are self-employed and without having any collateral assets. Their lack of financial records, limited credit history and lack of assets for collateral has made lending to them not only costly but also very risky since it involves high screening, monitoring and enforcement costs. These explain why it is almost impossible for them to obtain credit from the formal financial institutions (Roslan and Karim, 2009).

Although the performance of the MFIs in Ethiopia has been impressive since their establishment, they are not free of default problems. Default problems destroy lending capacity as the flow of repayment declines, transforming lenders into welfare agencies, instead of a viable financial institution. Loan default may also deny new applicants access to credit as the microfinance institutions management problems augment in direct proportion to the increasing default problem. Studies on loan repayment are not a new research area. In fact, various researches have conducted in loan repayment performance in different time, but the results of findings are still debatable among different researchers. The findings show there is inconsistency of result regarding the determinant factor variables (Mohammed, 2014; Meron, 2008; Abafita, 2003).

Although OCSSCO Kersa Jimma branch was established to provide credit and saving service to the poor found in Kersa Woreda, loan repayment is a big problem in this branch. Especially, the credit provided out of the revolving fund to the youths is not collected per the agreement. Though there are different studies on the same topic in different parts of the country, to the knowledge of the student researcher, it appears that no attempt has been made to investigate the determinants of loan repayment performance in Jimma zone especially in Kersa woreda. Therefore, this study is aimed to identify the determinants of loan repayment performance in Oromia Credit and Saving Share Company, Kersa district, Jimma Zone. The study tries to give answer to the following research questions:

- 1. What are the borrowers' demographic related factors that affect loan repayment?
- 2. What are the borrowers' economic related factors that affect loan repayment?
- 3. What are the major institutional factors that affect loan repayment?

1.3 Objective of the Study

1.4.1 General Objective

The main objective of the study is to investigate determinants of Loan Repayment Performance in Oromia Credit and Saving Share Company, Kersa/Jimma Branch,

1.4.2 Specific Objectives

Specifically, the study is aimed to

- 1. Identify borrower's demographic related factors that affect loan repayment performance
- 2. Find out Borrower's Economic related factors that affect loan repayment performance
- 3. Investigate institutional related factors that affect loan repayment performance

1.4 Significance of the Study

The significances of this study includes: To shed light on of MFIs in relation with collection performance and default, to add a little knowledge in the literature in this regard. To draw solution for the problem found and finally to be useful as a reference for further research on the area.

1.5 Scope of the Study

This study is limited to the clients of Oromia Credit and Savings Share Company in Kersa/Jimma branch. It is also limited to determinants of loan repayment performance. It does not incorporate other performance yardsticks. Further, the study is delimited to investigate the effect of borrowers' demographic factors, Borrowers' economic factors and institutional related factors on loan repayment performance of clients of OCSSCO in Kersa/Jimma Branch and other macroeconomics factors were not considered.

1.6 Organization of the Study

The paper is divided into five chapters. Chapter one presents introductory information about the study. It contains statement of the problem, objectives of the study, research questions, hypothesis, scope of the study and significance of the study. Chapter two deals with the key concepts that are used in the paper to place the problem in a broader perspective of literature. Chapter three presents methodology, chapter four presents the analysis and discussions of the data. Finally, chapter five draws conclusions of the findings and provides some recommendations as a way forwarded.

Chapter Two: Review of Related Literature

This chapter presents literatures related to this study. It reviews both theoretical and empirical literature. The chapter is divided into four sections. Section one reviews theoretical literature by providing description on theories concerning loan Microfinance, default and conclude with theoretical justification. Section two provides brief overview empirical evidence on the topic. Section three presents the knowledge and research gap and finally, section four presents the conceptual framework for the study.

2.1 Theoretical Literature

2.1.1 Micro Financing in Ethiopia

Poverty is the main challenge and a critical issue of economic development in Ethiopia. The solutions to poverty are multifaceted as are its causes. It is clear that inadequate supply of credit affects struggle for poverty alleviation negatively. Providing adequate credit to micro entrepreneurs is the vital issue when we think about poverty alleviation.

As tried to point out earlier, the formal financial sector has failed to reach the majority of the rural as well as urban poor. This has forced the poor to turn to the informal and semi-formal financial sources. However, credit from such sources is not only inadequate, but also exploitative and costly. Non-Governmental Organizations (NGOs), with a strong welfare and relief orientation towards the poor population, entered into the micro credit sector to provide credit services to poor rural households and urban micro entrepreneurs under programs supported by donors and international NGOs. However, the outreach of the NGOs' schemes was limited in that it only reached a very small proportion of rural households.

Since Proclamation No. 40/1996 for licensing and supervision of MFIs came into effect in July 1996, 38 MFIs have been registered and licensed by the National Bank

of Ethiopia (NBE). The majority of the regions now have their own MFIs. The Ethiopia's 1996 law on Licensing and Supervision of Micro-Financing Institutions evidently shifted the basis of microfinance from humanitarian-oriented projects to a more commercial orientation as incorporated financial intermediaries. Despite the limited format permitted by the regulatory framework, Ethiopia has a relatively large number of licensed MFIs, with strong rural penetration and high operational efficiency; some reaching significant scale (Obo, 2009).

OCSSCO provides diversified loan products to its customers. Solidarity group based loan, MSE Loan, Business loan, WDEP Loan, General purpose loan, Business Loan, Housing loan and Interest Free Finance are the major loan products of the company (OCSSCO, 2020). Each of these products was briefly discussed as follows.

Solidarity Group Based Loan (SGBL):- SGBL is a microloan that self-organized groups in rural and urban settings are eligible to borrow through group liability. It targets all segments of low income population but mainly women and unemployed youths.

Micro and Small Enterprise Loan (MSEL):- MSEL targets higher education institution graduates as well as other unemployed youths or individuals who establish one of business entities such as *Cooperatives, Sole proprietorship, Partnership, Share Company and Private Limited Company.*

Business Loan (BL):- BL is a loan type that offered to individual or group business runners. The operators need to present matching collateral for their loan request i.e. obviously legal urban house.

Women Entrepreneurs Development Program Loan (WEDP):- WEDP loan intends to enhance women owned individual businesses or enterprises through ensuring financial support. The main targets are individual businesses owned by women and of organized women enterprises that are in operation for at least 6 months.

General Purpose Loan (GPL):- GPL is a loan product for permanent employees of government and non-government organizations that borrowed for any personal affairs through presenting equivalent salary guarantee.

Housing Loan (HL):- This is a housing loan for employees to contribute toward the efforts that have been made by government in reducing the housing problems in towns. HL is provided to permanent government and non-government employees, police forces and government appointee officials who can present required guarantee or collateral.

Interest Free Finance (IFF):- IFF is finance services delivered to clients who don't want to borrow with interest due to their religion. The service is offered in consistent with Islamic (Sheria) finance principles. OCSSCO provides interest free finance known as Murabaha Financing which is an asset-based sale transaction used to finance goods.

The characteristics of these different types of loans were summarized in the table below

No	Product Type	Modalit y	Maximum Loan Size	Maximum Loan Term	Interest Rate	Service Charge	Collateral/ Guarantee
1.	Rural Solidarity Group Based Loan	In group	15,000 ETB	1 yrs	17 %	3%	Group liability
2.	Urban Solidarity Group Based Loan	In group	15,000 ETB	1 yrs	17 % Decline	3%	Group liability
3.	Micro & Small Enterprise	As business entity	Depends on business plan & collateral	Up to 5 yrs depends on cash flow	13 % Decline	3%	House, Salary, land certificate, vehicle, institutional guarantee
4.	Business Loan	As business entity	Depends on business plan & collateral	Up to 3 yrs depends on cash flow	17 % Decline	3%	Legal Urban House

Table 1:Types of Loan and Their Characteristics

5.	WEDP Loan	As business entity	Depends on business plan & collateral	Up to 3 yrs depends on cash flow	13 % Decline	3%	Legal Urban House
6.	General Purpose Loan	Individua 1	Depends on borrower's salary	2 yrs	17 % Decline	3%	Salary or House Guarantee
7.	Housing Loan	Individua 1	Depends on borrower's salary	5 yrs	17 % Decline	3%	Salary or House Guarantee
8.	Murabaha MSE Finance	As business entity	Depends on business plan & collateral	Up to 5 yrs depends on cash flow	Markup	NO	Group liability
9.	Murabaha Individual Finance	As business entity	Depends on business plan & collateral	Up to 3 yrs depends on cash flow	Markup	NO	Legal Urban House
10.	Murabaha Group Based Finance	In group	15,000 ETB	1 yrs	Markup	NO	Group liability

Source: OCSSCO, 2020

2.1.2 Micro Financing and Microcredit

Microfinance refers to the provision of financial services to low - income clients, including consumers and the self - employed, who traditionally lack access to banking and related services (Gonzalez, 2008). Microfinance is a place for the poor and near poor clients to get access to a high quality financial service, which include not just credit but also savings, insurance and fund transfer. According to Ledgerwood (1999), microfinance is the provision of a broad range of financial services such as savings, credit, insurance and payment services to the poor or low-income group who are excluded from the normal banking sectors.

The definition of microfinance differs from one scholar to another. Their differences based on type of financial services and loan provided to clients; and kind of people receiving the service. For instance: Quayel and Hartarska, (2016) define Microfinance as the provision of financial services including, savings, micro-credit, micro insurance, micro leasing and transfers in relatively small transactions designed to be accessible to micro enterprise and to low income households. These scholars thought

that MFIs may be complemented by non-financial services such as training to improve the loan repayment performance.

The World Bank defines microfinance as Small-scale financial services –primarily credit and savings –provided to people who farm or fish and who operate small enterprises or microenterprises where goods are produced, recycled, repaired, or sold; who provide services; who work for wages or commissions; who gain income from renting out small amounts of land, vehicles, draft animals, or machinery and tools; and to other individuals and groups at the local levels of developing countries, both rural and urban (Robinson, 2001).

Microcredit, also known as micro lending, refers to an extremely small loan, given to impoverished people to help them become self-employed. Microcredit was given to the poor individuals for income-generating activities that will improve the borrowers' living standards. The loans characteristics are, too small, short -term credit (a year or less), no collateral, required weekly repayment, poor borrower and mostly women who are not qualified for a conventional bank loan. Usually the loan pays high interest rates because of the high cost in running microcredit program.

Microcredit is also used as the extension of very small loans to those who are in poverty that are designed to spur entrepreneurship and help them out from poverty group. These individuals lack collateral, steady employment and verifiable credit history, which therefore, cannot even meet the most minimal qualifications to gain access to traditional credit. The Grameen Bank defined microcredit as small loans given to the poor for undertaking self-employment projects that would generate income and enable them to provide for themselves and their families. The target population comprising women microenterprises from the low-income households and the loans have no collateral (Esty, 2011).

Against the advice of banks and government, Professor Muhammad Yunus a Bangladeshi economist gave out 'micro -loans' to 17 to 42 poor basket weavers from his pocket. He found that it was possible with this tiny amount not only to help them survive, but also to create the spark of personal initiative and enterprise necessary to pull themselves out of poverty and in 1983 he formed the Grameen Bank, meaning 'village bank' founded on principles of trust and solidarity. In Bangladesh today, Grameen has 2,564 branches, with 19,800 staff serving 8.29 million borrowers in 81,367 villages. On any working day Grameen collects an average of \$1.5 million in weekly installments (Esty,2011).

When MFIs disburse funds to the clients, they are expected to repay the loans in a specified period of time as agreed upon in the loan agreement. Repayment usually takes the form of periodic payments that includes principal plus interest in each installment payment (Ifeanyi & Ojiako, 2014). Before disbursing the loan sums to clients, MFIs through their loan officers screen their clients (borrowers) characteristics in terms of their demographics, ability to pay and assets owned. In addition, they explain to these clients about the terms and conditions governing the loan in terms of interest rate, collateral and loan period (credit terms). This is done to ensure that only clients who qualify for the loan receive it after understanding their obligations to ensure that loans are repaid on time, loan default has continued to increase.

Lending models refers to the methodologies used by MFIs to grant loans to the clients. The most common lending methodologies are Individual and Group lending models.

In Individual lending model, loan is given directly to the borrower and therefore it is the sole duty of a borrower to make full payments of the principal amount plus interest without financial support from a group in case he/she defaults. Technical assistance, payment schedules and business management training is generally provided to the borrowers by the MFI (Obo, 2009). There is a huge risk in granting loan to individual borrowers because in case these individuals default to make repayment, institutions cannot compel other individuals to make repayments for the defaulters. Lending involves a lender providing a loan in return for a promise of interest and principal repayment in future (Obo, 2009). Due to this risk of default in loan repayment, lenders need to assemble all the relevant information of individual borrowers to make a proper screening of the credit worth borrowers. Some of the factors that the MFIs consider before granting loans include: character of the borrower , amount being requested by the client, purpose of the loan, ability of the borrower to manage business successfully, income source of repayment and insurance. Thus, this model is reported to be very cost-full and require large number of loan officers who closely monitor individual borrowers who do not possess tangible collateral (s) or credit history

Joint Liability Group model is also called "peer lending groups" or "Solidarity groups". Normally it consists of four to five individuals grouped together to borrow a loan in solidarity. Members who form these groups are self –selected based on their reputation and relationship to each other. It is the responsibility of the entire group to make every payment on time according to a predefined repayment schedule. This implies that, the whole group suffers possible consequences in case of loan default. However, the discussed models are not the only microfinance models. The other lending models are modified and adapted according to the needs of the poor Clients in different developing countries and their credit policy

2.1.3 Credit Policy and Loan Repayment

Credit policies are set of objectives, standards and parameters to guide financial officers who offer loans and control the loan portfolio. They provide set of procedures, guidelines and rules which are designed to minimize costs associated with

credit while maximizing the benefit from it (Ahimbishwe, 2002). The main objective of credit policy is to minimize the number of default loans which are bad debt, hence ensuring profitability and sustainability of microfinance institutions

The credit policy of an organization may be stringent or lenient depending on the manager's regulation of variables that come with credit policy, there are three main variables (elements of credit policy) namely; Credit terms , credit standards and credit procedures (Hulmes et al.,1996). Managers use these variables to evaluate client's credit worthiness, repayment period and interest on loan, collection methods and procedures to take in case of loan default. A stringent credit policy is a selective policy because only customers who have proven creditworthiness and strong financial base are given loans. This credit policy aims to minimize the cost of collection, bad debts and unnecessary legal costs (Pandey, 2001).

Unlikely Stringent credit policy, lenient credit policy offers loans to customers using simple loan terms and conditions. This policy targets to increase profitability of financial institution by providing more loans to the customers (Pandey, 2001). Therefore financial institutions are encouraged to formulate credit policy which balances between stringent and lenient terms and conditions in order to improve the performance of loan portfolio

In addition, financial institutions should assess credit risk management adequately using collateral, condition, characters, capacity and capital measurement to control delinquency rate

Loan default has many definitions depending on the MFIs policies. Obo (2009) explained default as a risk threshold that describes the point in the borrower's repayment history where he or /she missed to repay at least 3 installments within a month period. This represents a point in time and an indicator of behavior, wherein

there is a demonstrable increase in the risk that the borrower eventually will truly default, by ceasing all repayments

Similarly Ameyaw, (2011) defines Default as Inability of a borrower to pay the interest or principal on a debt when it is due. If a person or institution responsible for repaying a loan or making an interest payment fails to meet that obligation on time, that person or institution is in default. In default, an individual may lose any property kept as collateral to get the loan. Defaulting has a negative impact on credit history and credit score, which generally makes it difficult to borrow again in the future

Loan default is one of the critical issues of Micro finance institutions (MFIs) that concern all stakeholders where the high loan default rate is the primary cause of the failure of MFIs. High levels of default have caused increased amounts of nonperforming loans in the books of many financial institutions.

Loan repayment performance of MFIs is a measure of whether the loans are repaid in full according to the loan contract. The higher the loan repayment performance, the higher the probability of the MFI collecting interest revenues and lower the loan losses (through negligible write-off of bad debts), both of which enhance sustainability. High repayment rates are indeed largely associated with benefits both for the financial institution and the borrower.

They enable the financial institution to cut the interest rate it charges to the borrowers, thus reducing the financial cost of credit and allowing more borrowers to have access to it (Kon & Storey, 2003). Improving repayment rates also help reduce the dependence on subsidies of the financial institution which would improve sustainability. It is also argued that high repayment rates reflect the adequacy of financial institutions services to client's needs. They limit the incidence of cross subvention across the borrowers. Repayment performance is also a key variable for

donors and international funding agencies on which many financial institutions still depend for their access to funds. The first-best level of repayment performance is a perfect (100%) on-time repayment rate (Ongena and David, 2001). If the maximum repayment rate the financial institution can reach given its lending methodology is lower than the targeted 100%, the financial institution will use second-level strategies to increase its repayment performance. Such strategies include the allocation of larger loans to borrowers with lower default probability and attempt to reduce the delay in repayment. The National Bank of Ethiopian Directive No/52/2012 put a guideline for non-performing loan to be used by financial sector in Ethiopia as shown in the table below.

Classification	Type of Loan	Criteria	Percentage
	Short term Loan	less 30 days past due	
	Medium and Long Term Loan	Less than 6 months past due	
Pass	Any Type of Loan	Full Secured Loan	0 %
Special Mention	Short term Loan	30 - 90 days past due	
1	Medium and Long Term Loan	6 - 12 Months	3%
Substandard	Short term Loan	90 -180 days	
	Medium and Long Term Loan	12 - 18 Months	20%
Doubtful	Short term Loan	180 - 360 days	
	Medium and Long Term Loan	18 - 35 months	65%
Loss	Short term Loan	Above 1 Years	
	Medium and Long Term Loan	Above 3 years	100%

 Table 2: Standard for non-performing loan in Ethiopia

Source: NBE's Directive No/52/2012

In order to increase loan repayment most of the micro financing schemes in Ethiopia provide loans to organized members, who are not required to put up physical collateral but operate in a group mechanism in which risks of non-repayment are transferred to the group. Essentially, most micro financing schemes in Ethiopia have, with slight modifications, adopted the Grameen Bank micro credit mechanisms (Fantahun, 2000). The Group Model's basic philosophy lies in the fact that shortcomings and weaknesses at the individual level are overcome by the collective responsibility and security afforded by the formation of a group of such individuals. The collective coming together of individual members is used for a number of purposes: educating and awareness building, collective bargaining power, peer pressure etc

2.2 Empirical Literature

The topic loan repayment performance has got great attention in finance research. Specifically, there are several research works on determinants of loan repayment. According to many of these literatures, the determinants of loan repayment are either related to the borrower themselves or the financial institution granting the credit.

Godquin (2004) found that the provision of non-financial services has a positive impact on repayment performance. This provides arguments in favor of the integrated development strategies. The results also show that MFIs allocate larger loans to borrowers as the age of their borrowing group increases. This can be justified by the use of dynamic incentives, as the number of allocated loans is likely to grow with the age of the group. The age of the group was also found to have a negative impact on the repayment. This raises the need to develop new incentives for experienced borrowers to avoid decreasing repayment performance and negative effects as the clientele of the MFI becomes more mature. Another important point that emerged from the study is that MFIs tend to attribute larger loans to homogeneous groups in terms of age. Group homogeneity was not, however, found to affect the repayment performance in a significant way.

Looking at the situation of Ethiopia, empirical studies on the analysis of determinants of loan repayment are also there. Regarding loan repayment an econometric estimation was conducted by Mengistu (1997) taking the case of micro enterprises in Awasa and Bahir Dar towns. The analysis consisted of estimating two equations, one for loan repayment and the other for loan rationing. According to the estimation results (employing binomial probit model for loans repayment) he reported that the number of workers employed has positive relation with full loan repayment for both towns, while loan size and loan diversion were

negatively related. Age and weekly repayment period had positive relation with repaying loan in full for Awasa. In the case of Bahir Dar, loan expectation and number of workers employed have a positive relation with full repayment, while loan diversion and availability of other sources of credit have a negative impact. The predicted probabilities of full loan repayment were 53% and 78% for Awasa and Bahir Dar respectively.

The borrowers' characteristics in regard to repayment of the borrowed funds play a big role in ensuring changes occurring in the household's incomes. According to Jain et al. (2005) for any credit scheme to operate effectively; it is important to know the character of borrowers' in relation to payment. This calls for investing in information gathering by MFIs on their potential borrowers' and always be mindful when setting performance targets against giving credit to borrowers'. The pay period and method of paying back should be determined early and understood by both parties (lender & borrower) since the payback period can be used as decision criterion to accept or reject the investment proposals (Mohammad, 2014). Bhatt and Tang (2011) looked at the borrower's socio economic variables for their influence on loan repayment. The borrower's socioeconomic variables included gender, educational level, household income and characteristics of the business (type of business, years in business, etc.). In their study, they found that a higher education level was significant and positively related to better repayment performance. Conversely, female borrowers, level of household income, type of business and borrower's experience had no significant effect on repayment performance.

Whereas Roslan and Abdulkarim (2009) investigated microcredit loan repayment in Malaysia and in their research, they found that male borrowers who had a longer duration for repayments had a higher probability of defaulting. Borrowers involved in non-production oriented business activities such as in the service or the support sectors, who had training in their particular business and who borrowed higher loans had lower probabilities of defaulting.

Abafita (2002), employed both probit and logit model to study determinants of loan payment performance in case of Oromiya saving and credit share company in Kuyu Branch. Factors that are found to be significant determinants of loan repayment performance were education, loan size, and loan diversion, availability of other credit sources, loan supervision, and suitability of loan repayment period, income and value of livestock.

Mohammed (2014) also found that the probability for default is influenced by Age, Gender, Marital status and experience of the borrower. The study also reviled that revenue from the project, type of rode accessible to the market place, type of the project, Visiting of the project site before approval by the microfinance institution and visiting of the microfinance institution after approval explains the probability of default. Household Size, Loan taking frequency, Use of financial records, Availability of utilities in the project area, Accessibility of transportation to the market place, Level of education of borrowers do not explain the probability of default.

Different researchers use different ways of classifying determinants of loan repayment performance. In this study, three ways of classification including; Borrower demographic characteristics, borrowers' economic characteristics and institutional characteristics and business related factors were used. The following commonly used determinants of loan repayment performance were identified from earlier research for further investigation in this study.

2.2.1 Borrower's Demographic Characteristic:

Borrowers' demographic characteristics include age, Gender, family size, marital status and educational level. The impact of these demographic variables on loan repayment performance were reviewed from different literatures and presented as follows.

a. Age of the borrowers

Age measured as the borrower's age in years is an important aspect in MFIs because it determines the ability to take risk, mobility, mental maturity and life experience particularly in financial management. It is argued that older borrowers are wiser and more responsible than younger borrowers. On the other hand, younger borrowers are argued to be more knowledgeable and more independent. Hence, age might have positive or negative effect on loan repayment rates. Vasanthi and Raja (2006) showed that the age of the head of the household is significant in determining the probability of loan default. That is, the younger households tend to be adversely affected by the increasing burden of repayments. Old age can also be associated to higher experience in business or any other occupation. Borrowers who have been in business longer are expected to be more successful with their enterprise. They have more stable sales and cash flows than those who have just started. Thus, those who are old and more experienced have high repayment rates (Mohammed, 2014).

b. Gender of the borrowers

Researches showed that gender of the borrowers plays vital role in loan repayment performance. In relation to this, Sulaya et al. (2012) indicated that the probability of a loan default was higher for males than for females. They found that, male borrowers were less responsible and disciplined in repaying their microcredit loans than female borrowers since male borrowers have a higher problem in repaying their loan. Roslan and Abdukerim's (2009) finding also revealed that the probability to default is lower among female borrowers as compared to male borrowers. This implies that lending to women can lead to their economic empowerment and inculcate in them a culture of hard work and financial discipline, which can leads to high loan repayment rates. Thus, women borrowers have high loan repayment rates.

c. Dependent Family Size:

It is argued that as house hold dependent family size increase the capacity of repayment of loan gets decrease and vice versa. This might be because most of the borrowed money can be spent for daily consumption especially if most of the family members are dependents (Mohammed, 2014).

d. Marital Status:

The marital status of the borrower is usually used to determine the stability of a household in Ethiopian families. It is normally believed that married household heads tend to be more responsible in business activities than single head of households. It is through this assumption that the marital status of borrowers in MFIs will have an effect on loan repayment (Mosha, 2016). It is argued that when a borrower gets married he/she become more responsible so it will reduce the probability of default.

e. Level of Education:

As education gets higher and higher that enables borrowers to comprehend more complex information, keep business records, conduct basic cash flow analysis and generally speaking, make the right business decisions. Pasha and Negese (2014) carried out research in Ethiopia to determine the factors affecting loan repayment among MFIs and found out that the education level was positively and significantly influencing loan repayment at 1% significance level. An increase in one year schooling increases the probability of the loan repayment rate by 4.939%. This figure revels that the borrowers whose educational level increased have the probability of increasing the loan repayment four times more than the borrowers who have lesser education level/ illiterates. This suggests that more educated borrower may have access to business information. Hence, borrowers with higher levels of education may have higher repayment rates.

2.2.2 Borrowers' Economic Characteristics

Borrower's economic characteristics include income, occupation, ownership of collateral, amount of loan and loan diversion. The effect of the factors on loan repayment performance was reviewed from different literatures and presented as follows.

a. Borrowers' Income

Borrowers usually take loan for certain purpose. The most common includes running business and for purchase of household appliance. It is argued that as revenue from the business for which loan is taken gets higher and higher, loan repayment capacity also gets high. In other words, as revenue from the business gets higher the probability of default gets lower. Income as economic variable showed to have a significant effect, and that low income contributes to default (Vasanthi and Raja, 2006).

b. Types of Business or Occupation

It is argued that different types of occupations have different level of risks hence their profitability or productivity is different. Thus, borrowers with different types of jobs might have different default rates. Therefore, it can be argued that the type or the nature of the occupation in which the borrowers are involved is also an important variable to be taken into consideration for an effective understanding of the determinant of loan repayment. In this connection, Roslan and Abdu Kerim (2009) found that borrowers who are involved in services and trading activities have a lower probability to default compared to those in production and agricultural activities. This might be related to the fact that businesses in the services/support sector probably incur less risk than businesses in manufacturing and agricultural sectors.

c. Ownership of Collateral

Assets are pledged as security for a loan to be forfeited in the event of any loan repayment defaulting. It is apparent that ownership of collateral is an important criterion or factor for one to qualify for a loan especially for individual borrowers. This is because, at time of loan repayment if the borrowed money was lost in some way, the client can sell the collateral to pay back the loan or else the MFIs will forfeit the asset (Mohammed, 2014).

d. Amount of Loan

The amount of loan taken from financial institutions determines the investment choice of borrowers. If the loan is significant enough, borrowers can purchase fixed assets which they can sustainably use to generate revenue for a long period of time. On the other hand, when the loan amount is small, this amount can be spent for daily consumption purpose and the probability of being defaulted is very high. In this connection, Roslan and Abdu Kerimt (2009) also found that, the larger the size of the loan, the lower the probability for default.

e. Loan Diversion

Loan diversion is the use of borrowed money for other issues than the intended purpose. Clients can use the borrowed money for daily consumption than the purpose for which they have taken the loan. This can affect the loan repayment performance of the client. The study by Mosha (2016) showed that the use of loan for non-business purposes is likely to increase loan default compared to business uses. Borrowers, who use the loan for business purpose, reduce loan default likelihood by 79.6% compared to those who use loan for other non-business purposes. The study revealed that most borrowers use loan to finance food, shelter, clothes and to meet their basic needs rather than for business activities (Abafita, 2002).

2.2.3 Institution Specific Characteristics

The effect of Institutional factors including Proximity to clients, provision of training, follow-up and supervision, model of lending and repayment period on loan repayment performance were reviewed and presented below.

a. Proximity to Clients

The distance of the MFIs is believed to be one of the basic factors that lead to loan default. This is because; a client that resides very far from the MFIs office should travel long distance to pay his obligations. He/she will not have the option of saving in MFIs for making loan repayment latter on. The MFIs can also loss contact of its

clients that are found at far distance as compared to those who are found at nearby distance (Mohammed, 2014).

b. Provision of training

The service rendered at MFIs is another factor that affects loan repayment. Enhancing the financial literacy and knowledge of borrowers are believed to enhance business performance. Specifically, borrowers need to get training on how to effectively utilize loans. In this connection, the study of Roslan and Abdu Kerim (2009) found that training is also an important determinant of loan repayment. Their study showed that borrowers that did not have any training (in relation to their business/ activity) are found to have a higher probability to default compared to those borrowers who had some training.

c. Supervision

It is advised to the microfinance institutions to visit the project site before approval of the loan. It is argued that it has a positive effect in reducing default. Regular visit of the project site after approval of the loan has positive effect in reducing default. If there is no regular visit it will encourage borrowers for moral hazard and enhance the probability of default (Abafita, 2002).

d. Model of Lending

In microfinance theory, group lending is believed to reduce loan default as compared to loan to single individual on the base of collateral. This is because if one of the members is unable to repay the loan, the other group members have the responsibility to repay the loan. In addition, the social contract created among the group member will prevent each and every member of the group from acts that lead to loan default (Abafita, 2002; Mohammed, 2014).

e. Repayment period

Roslan and Abdu Kerim (2009) found that the probability to default is higher, the longer the repayment period. They investigated microcredit loan repayment in Malaysia and in their research; they found that male borrowers who had a longer duration for repayments had a higher probability of defaulting. Thus, while shorter repayment period would dampen loan repayment default, longer repayment period would deepen it.

2.3 Literature Gaps

The review of literature showed that MFIs are established to provide loan to the poor section of the society. On the other hand MFIs should also maintain sustainability of their services. Therefore, timely collecting loan provided to clients plays vital role for their sustainability. But several studies showed that loan default is the main challenges of MFIs in developing country like Ethiopia. There are several studies on the determinants of loan repayment performance in the literature. However, most previous studies focus on MFIs and their branches in big towns whose clients are mainly urban residence who depends on microenterprises. There are limited studies in Jimma zone rural areas especially, in Kersa Woreda. The second limitation of earlier researches is the limited number of independent variables used in the analysis. This study included about 15 independent variables categorized in three groups including Borrowers demographic characteristics, economic related characteristics and MFIs related characteristics. The third important issues that this study resolves are the inconsistent finding in earlier research. In previous studies, the effect of the major determinants factors is inconsistent which means in some studies, they show positive effect and at other times, they show negative effect. Finally, previous research depends on survey questionnaire only and this study tries to triangulate the issue indepth using interview and secondary data in addition to survey questionnaire.

2.4 Conceptual Framework

Conceptual framework involves forming ideas about relationships between variables in the study and showing these relationships systematically. This study adopted the framework as shown in the figure below which demonstrates the conceptual framework of the relationship between the dependent variable (loan repayment) and the independent variables (the determinant factors affecting loan repayment performance of Microfinance institution's loan beneficiaries).



Source: Constructed by the researcher from different literature

Figure 2: Conceptual Model

Chapter Three: Research Design and Methodology

3.1 Background of the study Area

Oromia Credit and saving share company (OCSSCO) is a legally registered and licensed micro-finance institution. It is registered by Ministry of Trade and licensed by National Bank of Ethiopia (NBE). OCSSCO has more than 384 branchs throughout Oromia regional state and Addis Ababa city administration. Jimma district is one among the districts which controls about 24 branches found in different Woredas' in Jimma Zone. This study focuses on Kersa/Jimma Branch which is found in serbo town, the capital of Kersa woreda. This branch was established in 1998EC to provide financial service to clients in Kersa Woreda as shown in the map below.





Figure 1.1: Map of the Study Area

Kersa is one of the woredas in the Jimma Zone of the Oromia Region of Ethiopia. It is bordered on the south by Dedo, on the southwest by Seka Chekorsa, on the west by Mana, on the north by Limmu Kosa, on the northeast by Tiro Afeta, and on the southeast by Omo Nada. Kersa Woreda has one urban center – serbo and 30 peasant associations. Agriculture is the major economic activity in the woreda. But there are traders and small Industries in the woreda including also. The 2007 national census reported a total population for this woreda of 165,391, of whom 83,579 were men and 81,812 were women; 5,426 or 3.28% of its population were urban dwellers. The majority of the inhabitants were Muslim, with 88.87% of the population reporting they observed this belief, while 10% of the population said they practiced Ethiopian Orthodox Christianity (Kersa District office of Fin & Econ Development, 2005).

3.2 Research Design

The formidable problem that follows the task of defining the research problem is the preparation and design of the research project, popularly known as the "research design". Decisions regarding what, where, when, how much, by what means concerning an inquiry or a research study constitute a research design. A research design is the arrangement of conditions for the collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure (Kothari, 2004).

There are two different logical scientific reasoning important for any type of scientific research, deductive reasoning and inductive reasoning. Induction moves forward from particular to the general. Deduction is backward movement from general to particular. Quantitative researchers primarily follow a deductive route. Quantitative research is based on the measurement of quantity or amount. Quantitative research involves analysis of numerical data. Qualitative researchers primarily follow inductive route. Qualitative route. Qualitative route.

This study is quantitative by its very nature, because there is much emphasis on precise measurement of variables and the testing of hypothesis gathered from empirical studies. In addition, the study tries to examine causality and measure the relationship among variables quantitatively by using some statistical techniques. Since the study is concerned with and description of facts, it used descriptive research approach. In addition, it also used explanatory research design since cause and effect relationship between probability of default and its determinants has been made.

3.3 Data Source and Methods of Data Collection

The study used both primary and secondary data. Primary data were collected using structured cross sectional questionnaire and Interview. Questionnaires were distributed to borrowers of the Institution. Trained data collectors who read and writes Afan Oromo (the local Language) were used. In-depth interview were conducted with Manager and Customer service employees of the Institution. Secondary data were collected from different documents of the institution. Annual report and different records of the clients were intensively used.

3.4 Population, Sample size and Sampling Technique

All borrowers of the institution were the target populations. Reliability and cost are taken into consideration in the sample size determination for the study. At the end of 2019, there were about 2,400 borrowers in Kersa Woreda being served by the institution. In order to determine sample size for this study, the following estimates were made. In business research, researchers usually take a confidence level of 95% (Zukmand, et al., 2009). Therefore, this value is also taken for this study so as to determine the sample size. The acceptable error is estimated to be \pm 5% from the mean for this study. A response rate of 50% is assumed for this study as this provides the maximum possible sample size. This average response rate is taken as the probability of success in collecting back the questionnaires for this study. Hence, the sample size for this study is determined using the following formula (Kothari, 2004).

$$n = \frac{z^2 x N x p x q}{E^2 x (N-1) + z^2 x p x q}$$
$$n = \frac{1.96^2 x 2400 x 0.5 x 0.5}{0.05^2 x (2400-1) + 1.96^2 x 0.5 x 0.5}$$
$$n = 330$$

The sampling methods used were stratified and systematic sampling methods. First, the population was divided in to two groups (Defaulters and non-defaulters). While applying binary logistic regression, Pallent (2005) warned that, if there are small sample with a large number of predictors, there might be problems with the analysis (including the problem of the solution failing to converge). This is particularly a problem when we have categorical predictors with limited cases in each category. Therefore, considering the low response rate of defaulter clients as well as to provide equal chance to both groups, equal numbers of respondents were selected. Hence 165 Defaulters clients and 165 Non-defaulter clients were selected from records of the branch using systematic sampling method.

3.5 Research Hypothesis

In order to achieve the above three specific objectives of the study, the following fifteen hypotheses were formulated and tested using binary logistic regression model:

- H₁: Age of the borrowers has statistically significant effect on loan repayment performance
- H₂: Gender of the borrowers has statistically significant effect on loan repayment performance
- H₃: Family size of the borrowers has statistically significant effect on loan repayment performance
- H₄: Marital status of the borrowers has statistically significant effect on loan repayment performance
- H₅: Education level of the borrowers has statistically significant effect on loan repayment performance
- H₆: Ownership of long term assets by the borrower has statistically significant effect on loan repayment performance
- H₇: Occupation of the borrowers has statistically significant effect on loan repayment performance
- H₈: Amount of loan taken by the borrowers has statistically significant effect on loan

repayment performance

- H₉: Loan Diversion by the borrowers has statistically significant effect on loan repayment performance
- H₁₀: Income level of the borrowers has statistically significant effect on loan repayment performance
- H₁₁: Proximity of MFIs to borrowers has statistically significant effect on loan repayment performance
- H₁₂: Arrangement of training by MFIs to the borrowers has statistically significant effect on loan repayment performance
- H₁₃: MFIs supervision of the borrowers has statistically significant effect on loan repayment performance
- H₁₄: Model of lending to the borrowers has statistically significant effect on loan repayment performance
- H₁₅: Repayment period given to the borrowers has statistically significant effect on loan repayment performance

3.6 Description of Variables and Model Specification

To analyze the determinants of loan collection performance inferential statistics were used. The probability of default depends on the following independent variables which are categorized in to three (I) Borrowers demographic Characteristics which include; Age, Gender, Family size, Marital Status, Level of education (II) Borrowers economic characteristics including monthly income, occupation, collateral, amount borrowed and loan diversion (III) MFI's Related factors including Proximity, Arranging training, supervision, Model of lending and loan repayment period. All the variables used in the study, their symbols and measurement are presented in the table below.

No	Variables	Symbol	Measurement
1	Loan Repayment Performance	LRP	0 = Defaulted
			1= Non defaulted
2	Age of the Borrower	AGE	Age in Years
3	Gender of the Borrower	GDR	0=Male
			1= Female
4	Dependent Family Size	FMS	No of dependent family size
5	Marital Status	MRS	0 = Single
			1= Married
6	Education level	EDL	Grade level Attained
7	Monthly Income	INC	Income in birr
8	Occupation	OCP	1=Trader
	_		2= Farmer
			3= Employee
			4= Others
9	Ownership of collateral	COL	0= No Collateral
			1= Have Collateral
10	Loan Size	LSZ	Amount of Loan taken recently
11	Loan diversion	LDV	1= Diverted the loan totally
			2= Diverted the loan partially
			3 =Not Diverted the loan at all
12	Distance from MFIs	DST	Estimated distance of the client
			from Branch in Kilometer
13	Provision of Training	PRT	1= Poor
			2= Satisfactory
			3= Good
			4= Very Good
			5= Excellent
14	Follow up and Supervision	SPV	1= Poor
			2= Satisfactory
			3= Good
			4= Very Good
			5= Excellent
15	Model of Lending	MLD	0= Individual Loan
			1= Group Loan
16	Repayment Period	RPD	0= Short Period
			1= Long Period

Table 3: Variables, Symbol and their Measurement

Descriptive statistics and hypothesis testing are the two main methods of data analysis that are suitable to this research. Descriptive statistics were applied to describe issues related to Loan repayment performance and other independent variables. Some of the descriptive statistical tools used in this study are: Averages, frequency distributions, percentage distributions, tabulations & cross tabulations, graphs etc. In addition, other tools for test of hypothesis and measures of association such as binary logistic regression analysis were used to identify factors that determine loan repayment performance.

There are several methods to analyze data involving binary outcomes. However, for this particular study, Logit model was selected. Hosmer and Lemeshew (1989) pointed out that the logistic distribution (logit) has got advantage over the others in the analysis of dichotomous outcome variable in that it is extremely flexible and easily used model from mathematical point of view and results in a meaningful interpretation. Hence, the binary logistic regression model was selected for this study. The general functional relationship between the dependent variable and the 15 independent variables can be given as follows.

Repayment Performance = f (Borrowers demographic Characteristics, Borrowers' Economic factors, Institution Specific characteristics).

LRP = f (AGE, GDR, FMS, MRS, EDL, INC, OCP, COL, LSZ, LDV, DST, PRT, SPV, MLD, RPD)

Binary Logit regression model was selected for this study because; the dependent variable "Loan Repayment performance" is discreet in nature and has two values (Default and Non-default). The general logit model can be given as follows (Gujirati, 2004).

$$Z_i = \beta_0 + \sum_{j=1}^n \beta_i x_i + U_i$$

Where Z_i is the dependent variable with a value "0" when firm *i* have defaulted and "1" when firm *i* did not defaulted, x_i is a vector of explanatory variables and U_i is the discrepancy term. Using the 15 independent variables and the general logit model above, the following regression equation were used to empirically identify the determinant factors.

$$L_{i} = \beta_{0} + \beta_{1}AGE + \beta_{2}GDR + \beta_{3}FMS + \beta_{4}MRS + \beta_{5}EDL + \beta_{6}INC + \beta_{7}OCP + \beta_{8}COL + \beta_{9}LSZ + \beta_{10}LDV + \beta_{11}DST + \beta_{12}PRT + \beta_{13}SPV + \beta_{14}MLD + \beta_{15}RPD + u_{i}$$

Where:

 $L_i = \log$ of the odds ratio of Non-Default to Default

 $\beta_0 =$ the intercept of the regression equation

 β_i = the coefficients of each independent variables

 $u_i = the \; error \; term$

Chapter Four: Results and Discussions

This Chapter presents the analysis, results and interpretation of the data in line with the objective of the study set at the beginning. Hence, the chapter was structured in to two broad sections, each having many subsections. The first section focuses on the descriptive analysis of the collected data and the second part focuses on inferential analysis of the data which includes testing assumptions, regression analysis and hypothesis testing.

4.1 Descriptive Data Analysis

The descriptive analysis include trend analysis for loan default at Kersa/Jimma branch, description of borrowers' demographic characters, description of Borrowers economic characters and description of institutional characteristics of OCSSCO.

4.1.1 Loan Repayment / Default

Loan default arises when a client is unable to pay both the principal and interest per the agreement. The length of period for loan default depends on whether the credit is short term or long term. Per directive No. 52/2012 of National Bank of Ethiopia, a short term loan is said to be defaulted when the time period for the payment of principal and interest exceeds a maximum of one year and for a long term loan, the time period is a maximum of three years. The table below summarizes the percentage of loan default at Kersa/Jimma branch in the last three years.

Tuble 4. Henu	Tuble if frend of Louis Deliuit in Herbu/Shining Drunen						
Year	Defaulters	Non-	Total	Default			
		Defaulters		Percentage			
2017	315	1647	1962	16%			
2018	215	1641	1856	12%			
2019	363	2035	2398	15%			
Average	298	1774	2072	14.4			

Table 4: Trend of Loan Default in Kersa/Jimma Branch

Source: Kersa/Jimma branch, 2019

As can be seen from the table 4 above, the default rate was 16% (315/1962x100) in the year 2017. This has reduced to 12% (215/1856) in 2018, but again tend to increase to 15% (363/2398x100) in 2019. This implies, on average, about 14.4% (298/1774x100) of the clients defaulted on their loan in the last three years.

In order to achieve the objective of the study, it was planned to collect about 330 responses from both defaulters and non-defaulters together in equal proportion (165 respondents from each group). However, only 222 completed questionnaire consisting 67 from defaulters and 155 from non-defaulters was collected back which implies a response rate of 67% on average. Baruch and Holtom (2008) suggest a minimum response rate of above 50% for survey research. Therefore, the response rate for this specific study is well above the minimum requirement to undertake analysis. The data collected from defaulters is relatively less because they were unavailable in the residence place they have registered on the contract with the branch at the beginning. May be they have left their original residence place because of different reasons.

Loan repayment per the credit agreement is an important issue for MFIs. However, sometimes borrower may not necessarily repay the loan from income generated from use of the credit. It is common practice to spend the loan on something else and repay the loan from another source. The 155 non defaulters were asked about the source of income to repay the principal and interest of loan. For this question, some respondents have given more than one sources and the bar graph below summerizes the sources of income to repay the loan.



Figure 3: Source of Income to repay the loan

As can be seen from the bar graph above, the most common source of income to repay the loan is agricultural income. This might be because the majority of the clients are engaged in agricultural activities. The next sources of income includes Income from trading activities, combinations of sources of income, monthly salary, wage from daily labor work and borrowing from friends and families in the given order.

Out of 222 respondents, 67 of them were defaulters. This implies, they did not pay their credit in line with the terms and agreement made between then and Kersa/Jimma branch. These defaulters were asked the reason for not paying per the agreement. Some respondents have given more than one reasons and the factors for not paying loan per their opinion are summarized using barograph as shown below.



Figure 4: Reasons for Loan Default

As can be seen from the barograph above, the most common reasons for not repaying loan are poor credit administration, short repayment period, loss Incurred, lack of supervision and long distance from the branch in the given order. The detail characteristics of the respondents were discussed in the following sections.

4.1.2 Borrowers Demographic Characteristics

Borrowers' demographic factors are characteristics of the clients that are assumed to affect loan repayment performance. The following table 5 summarizes the five borrowers' demographic factors including: gender, marital status, Age, education level and family size of the respondents.

Variables		Frequency	Percent	Valid Percent	Cumulative Percent
	Male	168	75.7	75.7	75.7
Gender	Female	54	24.3	24.3	100.0
	Total	222	100.0	100.0	
	Unmarried	32	14.4	14.4	14.4
Marital Status	Married	190	85.6	85.6	100.0
	Total	222	100.0	100.0	
	<u><</u> 30	29	13.1	13.1	13.1
	31 – 40	119	53.6	53.6	66.7
Age	41 – 50	63	28.4	28.4	95.0
5	>50	11	5.0	5.0	100.0
	Total	222	100.0	100.0	
	Illiterate	72	32.4	32.4	32.4
	<u><</u> 6 Grade	89	40.1	40.1	72.5
	7 – 10 Grade	23	10.4	10.4	82.9
Education	TVET and PPC	22	9.9	9.9	92.8
	BA Degree	16	7.2	7.2	100.0
	Total	222	100.0	100.0	
	<u><</u> 2	91	41.0	41.0	41.0
	3 – 5	107	48.2	48.2	89.2
Family size	<u>></u> 6	24	10.8	10.8	100.0
	Total	222	100.0	100.0	

 Table 5:Borrowers' Demographic factors

Source: Survey Questionnaire

Table 5 above shows that about 75.7% of the respondents were males and the remaining 24.3% of the respondents were females. This implies the majority of the respondents to this study were male clients and females account less than a quarter of the total respondents.

With respect to marital status, about 14.4% of the respondents were unmarried and 85.6% of the respondents were married. This shows the majority of the respondents to this study have established family and only small portion of the respondents either did not established family at all or divorced.

The age of the respondents ranges from a minimum of 25 years to a maximum of 58 years with an average age of 37 years old. Further, age wise classification of the respondents shows that 13.1% of the respondents are below 31 years old. About 53.4% of the respondents have age ranging from 31 to 40 years old. About 28.4% have age ranging from 41 to 50 years and only about 5% of the respondents are above

50 years old. In general about two third of the respondents are below 41 years old and about 95% were below or equal to 50 years old. Only small portion of the respondents were above 50 years old.

Table 5 further shows the education level of the respondents. About 32.4% of the respondents were illiterate who cannot read and write. 40.1% of the respondents have educational level ranging from grade one to six. Additional 10.4% of the respondents have educational level ranging from grade seven to grade ten. 9.9% of the respondents have completed preparatory class or Technical and vocational training (TVET). Finally, only 7.2% of the respondents have university degree. This implies that almost one third of the respondents to this study were illiterate and the remaining two third are literate who will at least read and write.

Finally, the family size of the respondents' ranges from one to seven family members with an average family size of three. The classification of respondents based on family size indicates that about 41% of the respondents have two or less family size. About 48.2% have families ranging from three to five and finally only 10.8% of the respondents have family size above five.

4.1.3 Borrowers Economic Characteristics

The second groups of factors that are believed to affect loan repayment performance are borrowers' economic related factors including: monthly income, occupation, ownership of collateral, amount borrowed and loan diversion. The table 6 below summarizes these factors in detail.

		Frequency	Percent	Valid Percent	Cumulative Percent
	<u><</u> 1000 ETB	131	59.0	60.9	60.9
	1001 -2000 ETB	45	20.3	20.9	81.9
	2001 – 3000 ETB	11	5.0	5.1	87.0
Monthly Income	3001 -4000 ETB	8	3.6	3.7	90.7
	>4000 ETB	20	9.0	9.3	100.0
	Total	215	96.8	100.0	
	Missing System	7	3.2		
Tot	al	222	100.0		
	Traders	69	31.1	31.1	31.1
	Farmers	109	49.1	49.1	80.2
Occupation	Employee	37	16.7	16.7	96.8
	Manufacturing	7	3.2	3.2	100.0
	Total	222	100.0	100.0	
	Not have collateral	63	28.4	28.4	28.4
Ownership of collateral	Have Collateral	159	71.6	71.6	100.0
	Total	222	100.0	100.0	
	<u><</u> 2000 ETB	1	.5	.5	.5
	2001 -20,000 ETB	173	77.9	77.9	78.4
Loon Sizo	20,001 -50,000 ETB	36	16.2	16.2	94.6
Loan Size	50,001 -100,000 ETB	11	5.0	5.0	99.5
	>100,000 ETB	1	.5	.5	100.0
	Total	222	100.0	100.0	
	Totally diverted	34	15.3	15.3	15.3
Loan Diversion	Partially Diverted Not Diverted	59 129	26.6 58.1	26.6 58.1	41.9 100.0
	Total	222	100.0	100.0	

 Table 6: Borrowers' Economic Factors

Source: Survey data analysis

For people living in rural area engaged in different sectors, it is a tough job to estimate monthly income. Because some people such as traders have daily income where as others such as farmers do have annual income. Despite, this limitation, all respondents were asked to estimate their monthly income. The response showed that the monthly income ranges from a minimum of Birr 100 to a maximum of Birr 15,000 with an average monthly income of Br. 1,454. Further classification of the monthly income of less than Br. 1000. About 20.9% earn a monthly income between 1000 to 2000 Birr. The remaining earns a monthly income greater than 2,000 birr a month. This implies the monthly income of the majority of the clients is very low.

With respect to occupation of the respondents, 31.1% were engaged in trading business, 49.1% of the respondents were farmers, 16.1% of the respondents were employees in public organizations and the remaining 3.2% were engaged in woodwork and metal work industries. One can see that, almost half of the respondents were smallholder farmers.

Microfinance institutions do not strictly require collateral for providing loan. But, sometimes, OCSSCO registers the long term assets the clients are having at the time of credit provision. Specially, when the amount of loan is large and individual credit, collateral is mandatory. Respondents were asked whether they do have any long term asset that can serve as collateral for OCSSCO. 28.4% of the respondents replayed that they do not have any fixed or movable asset that can serve as collateral where as 71.6% of the respondents mentioned that they do have some assets including land, livestock, Residence home etc. The detail of long term asset possessed by the clients is summarized using bar graph as shown below. As can be shown in the graph, the most common type of assets possessed is residence house, the next type of asset is land, the third type of asset is livestock and finally the last one is shop.



Figure 5: Type of Assets possessed by the clients

The amount of loan given to clients depends on several factors. The loan taken by the clients ranges from a minimum of Birr 2000 to a maximum of Birr 300,000 with an average amount of Birr 17, 745.5. The classification in table 6 above shows that 78.3% of the respondents have taken a loan less than Birr 20, 000. About 16.2% of the respondents have taken loan ranging from birr 20,000 to Birr 50,000. And the remaining 5.5% of them have taken loan above birr 50,000. Usually, farmers are taking loan for purchase of agricultural inputs; traders will take loan for working capital purpose, Employees are taking loan for purchase of house facilities and those engaged in industry sector will take loan for expansion of their workshop and purchase of inputs.

Normally, clients are expected to use the loan taken from OCSSCO for the purpose they have planned at the beginning. However, clients may divert the loan to other purpose after some time due to different reasons. Table 6 showed that 15.3% of the respondents have totally diverted the loan to other purposes. About 26.6% have partially diverted the use of loan where as 58.1% of the respondents used the loan for the purpose they have planned at the beginning. This implies that the majority of the respondents have used the loan they have taken for their initial plan at least partially.

4.1.4 Institutional Characteristics

The third groups of variables are those related to Institutional factors. This include: proximity to clients, Provision of training, Follow-up and supervision, model of lending and repayment period. The result of the survey is summarized in the table 7 below.

Variables		Frequency	Percent	Valid Percent	Cumulative Percent
	<u><</u> 5KM	171	77.0	77.0	77.0
	6 – 10 KM	4	1.8	1.8	78.8
Distance from MFIs	11 – 15 KM	23	10.4	10.4	89.2
	<u>></u> 16 KM	24	10.8	10.8	100.0
	Total	222	100.0	100.0	
	Poor	20	9.0	9.0	9.0
	Satisfactory	27	12.2	12.2	21.2
D	Good	68	30.6	30.6	51.8
Provision of Training	V. Good	87	39.2	39.2	91.0
	Excellent	20	9.0	9.0	100.0
	Total	222	100.0	100.0	
	Poor	29	13.1	13.1	13.1
	Satisfactory	47	21.2	21.2	34.2
Follow up and	Good	47	21.2	21.2	55.4
Supervision	V. Good	88	39.6	39.6	95.0
	Excellent	11	5.0	5.0	100.0
	Total	222	100.0	100.0	
	Individual based	38	17.1	17.1	17.1
Model of Lending	Group Based	184	82.9	82.9	100.0
-	Total	222	100.0	100.0	
	Short	102	45.9	45.9	45.9
Repayment Period	Long	120	54.1	54.1	100.0
	Total	222	100.0	100.0	

 Table 7: Institutional Related Factors

Source: Survey Data Analysis

Proximity to clients was measured by the distance in KM of the clients from the branch. The distance in KM of the clients from the MFIs ranges from 1KM to 20KM with an average of 6KM. Further classification of the distance shows that 77% of the clients are less than 5KM away from the MFIs. The remaining 23% are greater than 5KM far away from the MFI. From this, one can see that the majority of the respondents are living with in Serbo town or surrounding kebeles of Kersa woreda.

One of the services that MFIs are giving is training on how to use the borrowed fund. With this respects, clients were asked the extent of the training provision by Kersa/Jimma branch. Table 7 showed that 9% of the respondents rated the training given as poor, 12.2% of the respondents rated it as satisfactory, 30.6% of them rated the training provided as good, 39.2% of the respondents rated the training as Very good and finally the remaining 9% rated the training as Excellent. From this, one can see

that the majority (78.8%) of the respondents are satisfied by the training to some extent.

In addition to training, respondents were asked about the extent of follow-up and supervision made by Kersa/Jimma branch officers on the proper usage of the credit rendered. The above table 7 showed that 13.1% of the respondents rated the supervision as poor, 21.2% of the respondents rated as satisfactory, 21.2% of the respondents rated the supervision as good, 39.6% of the respondents rated as very good and the remaining 5% rated the supervision as excellent. So still, the majority of the respondents are satisfied with the follow-up and supervision made by the employees of Kersa Jimma branch at least to some extent.

The last two institutional related variables were model of lending and opinion on repayment period. The result of table 7 above shows that 82.9% of the clients have borrowed on group bases and the remaining 17.1% borrowed independently alone using assets as a collateral. In addition, 45.9% of the respondents complained that the repayment period is too short whereas the majority of the respondents were ok with the repayment period.

4.2Inferential Analysis

The inferential statistical analysis too used in this study is binary logistic regression. Before, running the regression, one must check the related assumptions and it was done for this study as follows.

4.2.1 Regression Assumptions

As it was explained in chapter three, binary logistic regression was used to identify the determinant factors that affect loan repayment performance of clients since the dependent variable is categorical with two values (Default and Non Default). Further, Binary Logistic regression does not make many of the key assumptions of multiple linear regressions that are based on ordinary least square algorithms particularly regarding linearity, normality and homoscedasticity (Tabachnick & Fidell, 2007; Pallent, 2005). However, some other assumptions still apply which includes large sample size and multicollinearity. Therefore, these two assumptions were checked before the binary logistic regression is run.

Different authors tend to give different guidelines concerning the number of samples required for the regression result to be reliable. For instance, Tabachnick and Fidell (2001) gave formula for calculating sample size required, taking into account the number of independent variables to be used as: N > 50 + 8m (where m = number of independent variables). Applying this formula and using 15 independent variables, the number of required samples should be a minimum of 170 (50 + 8x15). The 222 responses used in this study are well above the minimum required under the above formulas and satisfies sample size requirement for this specific regression model.

Another assumption is absence of multicollinearity which refers to the relationship among the independent variables. Since multiple regressions don't like multicollinearity, checking of this assumption is important before starting the analysis (Pallent, 2005). In order to check existence of multicollinearity among the 15 independent variables, correlation coefficients among the variables were calculated and presented in a matrix as shown in table 8 below.

Table 8: Correlation Matrix among Independent Variables

					-	-									
	AGE	GDR	FMS	MRS	EDL	INC	OCP	COL	LSZ	LDV	DST	PRT	SPV	MLD	RPD
AGE	1														
GDR	203**	1													
FMS	.291**	200**	1												
MRS	.257**	216**	.505**	1											
EDL	$.178^{**}$.023	397**	339**	1										
INC	.141*	104	162*	172*	$.658^{**}$	1									
OCP	.108	239**	070	192**	.604**	.456**	1								
COL	.009	179**	$.520^{**}$.396**	342**	021	170^{*}	1							
LSZ	001	103	244**	338**	$.558^{**}$	$.778^{**}$	$.504^{**}$	143*	1						
LDV	145*	129	.373**	.237**	071	.095	.108	$.578^{**}$.036	1					
DST	- 131	- 141 [*]	382**	2/11**	- 175**	- 133	015	356**	- 192**	365**	1				
MFIs	151	141	.302	.241	175	155	.015	.550	172	.505	1				
PRT	137*	103	.565	.270**	189**	.027	.032	.612**	002	.638	.524**	1			
SPV	216**	130	.560**	.275**	193**	.041	.048	.593**	008	.610**	.553**	.793**	1		
MLD	257**	021	$.270^{**}$.188**	821**	-	620**	.324**	566**	.085	.276**	.203**	.196**	1	
DDD	2 20**	170*	410**	0.55**	470**	./3/	0.60	400**	154*	450**	40.2**	505**	50.4**	1 < 0 **	1
RPD	239	173	.412	.265	470	174	062	.482	154	.458	.483	.525	.536	.469	1
		Car	waar C.			1 :	~								
		SOU	rce: si	irvev L	<i>յ</i> αιά ΑΙ	านเงรเ	S								

According to Pallent (2005), multicollinearity exists when the independent variables are highly correlated (r = 0.9 and above). As it is shown in the correlation matrix presented in table 8 above, all the correlation coefficients among the variables are less than 0.9 which implies multicollonearity is not a problem and all the independent variables can be inserted in to the regression model together.

4.2.2 Binary Logistic Regression Result

Once the assumptions were tested as shown above, binary logistic regression was run to identify which of the independent variables significantly determine loan repayment performance. The Omnibus Tests of Model Coefficients gives an overall indication of how well the model performs, over and above the results obtained when none of the predictors are entered into the model. This is referred to as a 'goodness of fit' test. For this set of results, we want a highly significant value. The omnibus test of the model coefficient for this specific study is given in table 9 below.

Table 9: Omnibus Test of Model Coefficients

		Chi-square	Df	Sig.
	Step	144.760	15	.000
Step 1	Block	144.760	15	.000
	Model	144.760	15	.000

Source: Survey Data Analysis

Table 9 above shows that when the 15 predictor variables are considered all together, they significantly predict Loan repayment performance of clients at $\chi 2 = 144.760$, df = 15, N=222, P = .000. Another reliable indicator of model fit in logistic regression is Hosmer and Lemeshow Test. The result of analysis is presented in the table below

Fable 10:	Hosmer	and	Lemeshow	Test
-----------	--------	-----	----------	------

Step	Chi-square	Df	Sig.
1	5.452	8	.708

Source: Survey data analysis

Hosmer and Lemeshow test is interpreted very differently from the omnibus test discussed above. For the Hosmer-Lemeshow Goodness of Fit Test, poor fit is indicated by a significance value less than .05, so to support our model we actually

want a value greater than .05 (Pallent, 2005). In this study, the chi-square value for the Hosmer-Lemeshow Test is 5.452 with a significance level of .708. This value is larger than .05, therefore indicating support for the model.

The next regression output is model summary which tells us the percentage of variation in dependent variable explained by the group of independent variables together.

Step	-2 Log likelihood	Cox & Snell R	Nagelkerke R					
		Square	Square					
1	118.799 ^a	.490	.693					

Table 11: Model Summery

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

Source: Survey data analysis

In table 11 above, the two important values are .490 and .693 suggesting that between 49% per cent and 69.3% percent of the variability of Loan Repayment performance is explained by the set of 15 independent variables all together. Further, the effect of each independent variable is given in table 12 below.

	В	S.E.	Wald	Df	Sig.	Odd Ratio
AGE	019	.044	.190	1	.663	.981
GDR	445	.612	.528	1	.467	.641
FMS	.057	.268	.046	1	.831	1.059
MRS	-2.068	.926	4.993	1	.025	.126
EDL	103	.112	.846	1	.358	.902
INC	.000	.000	1.074	1	.300	1.000
OCP	924	.610	2.298	1	.130	.397
COL	1.652	.825	4.012	1	.045	5.219
LSZ	.000	.000	.757	1	.384	1.000
LDV	.969	.405	5.721	1	.017	2.636
DST	.029	.071	.164	1	.686	1.029
PRT	.234	.396	.348	1	.556	1.263
SPV	.694	.376	3.402	1	.065	2.002
MLD	-5.687	2.123	7.175	1	.007	.003
RPD	1.476	.659	5.015	1	.025	4.374
Constant	3.541	3.346	1.120	1	.290	34.499

Table12: Determinants of Loan Repayment Performance

a. Variable(s) entered: AGE, GDR, FMS, MRS, EDL, INC, OCP, COL, LSZ, LDV, DST, PRT, SPV, MLD, RPD.

Source: Survey Data analysis

From table 12 above, it can be seen that among the 15 independent variables used in the regression, five of them including: Marital status, Ownership of collateral, Loan diversion, Model of Lending and Repayment period significantly determine clients' loan repayment performance at p < 0.05 and Follow-up and supervision significantly determine clients' loan repayment performance at p < 0.10

As indicated in the regression result, marital status of the borrowers significantly affects loan repayment performance at significant level of .025. The negative coefficient indicates that unmarried borrowers are more likely to default more compared to married clients. The corresponding odd ratio indicates, unmarried the client is, the more likely he/she is to default by a factor of .126. This might be because; clients who established family are more stable in their life and feel great responsibility to undertake their obligation. This result is in line with Mosha's (2016) and Mohammed's (2014) finding who found the same result.

The second significant independent variable is ownership of asset that can serve as collateral. The positive coefficient indicates that a client having long term asset tend to make their loan repayment regularly per their agreement. The old ratio of 5.219 indicates that clients having collateral are more likely to repay their loan at a factor of 5.219. This is because, at time of loan repayment if the borrowed money was lost in some way, the client can sell his/her collateral to pay back the loan or else the MFIs will sales the asset and pay the laon. This is what big banks are doing when the client fails to repay the principal and interest per the agreement.

The third significant variable is Loan diversion of clients. The positive coefficient indicates that a client who properly use the borrowed money for the intended purpose make their loan repayment regularly per the agreement. The odd ratio of 2.626 indicates that a client not diverting the loan for other purpose is more likely to repay his loan at a factor of 2.626. Similar to this finding, the study by Mosha (2016) and

Abafita (2002) showed that the use of loan for unintended purposes is likely to increase loan default compared to the one used for the purpose.

The fourth factor that was found to affect loan repayment at 10% significant level is follow-up and supervision of clients by MFIs officers. The positive coefficient indicates that a client who was properly supervised by officers of OCSSCO Kersa/Jimma branch make their loan repayment regularly per the agreement. The odd ratio of 2.002 indicates that a client who is properly supervised by officers is more likely to repay his loan at a factor of 2.002. This result is similar with Mohammod's (2014) finding and it indicates that regular visit of the business site after approval of the loan has positive effect in reducing default. If there is no regular visit it will encourage borrowers for moral hazard and enhance the probability of default.

The fifth factor that was found to significantly affect loan repayment performance is model of lending. The negative coefficient indicates that individual borrowers are more likely to default more compared to borrowers on group basis. The corresponding odd ratio indicates the individual borrowers are more likely to default by a factor of .003. This is because in a group lending, if one of the members is unable to repay the loan, the other group members have the responsibility to repay the loan and reduce the probability of loan default. Similar finding was obtained by Mohammed (2014) on this issue.

Finally, the last factor that was found to be significantly affecting loan repayment is Repayment period. The positive coefficient indicates that a client with long repayment period make their loan repayment more than those with short repayment period. The odd ratio of 4.374 indicates that a client with long repayment period is more likely to repay his loan at a factor of 4.374. This result coincides with Abafita (2002) finding on the same issue.

The remaining nine factors including: Age of the borrower, gender of the borrower, Family size of the borrower, Education level, Occupation of the borrower, Loan size, Distance from MFIs and provision of training were not found significant. This is not in line with the finding of other researchers such as Vasanthi and Raja (2006); Sulaya et al. (2012); Roslan and Abdukerim (2009); and Pasha and Negese (2014). The following table summarizes the result of hypothesis testing.

Hypothesis	Result
H ₁ : Age of the borrowers has statistically significant effect on loan	Not supported
repayment performance	
H ₂ : Gender of the borrowers has statistically significant effect on loan	Not supported
repayment performance	
H ₃ : Family size of the borrowers has statistically significant effect on	Not Supported
loan repayment performance	
H ₄ : Marital status of the borrowers has statistically significant effect	Supported
on loan repayment performance	
H ₅ : Education level of the borrowers has statistically significant	Not Supported
effect on loan repayment performance	
H _{6:} Ownership of Long term assets has statistically significant effect	Supported
on loan repayment performance	
H ₇ : Occupation of the borrowers has statistically significant effect on	Not Supported
loan repayment performance	
H ₈ : Amount of loan taken by the borrowers has statistically	Not Supported
significant effect on loan repayment performance	
H ₉ : Loan Diversion by the borrowers has statistically significant	Supported
effect on loan repayment performance	
H ₁₀ : Income level of the borrowers has statistically significant effect	Not Supported
on loan repayment performance	
H ₁₁ : Proximity of MFIs to borrowers has statistically significant	Not Supported
effect on loan repayment performance	
H ₁₂ : Arrangement of training by MFIs to the borrowers has	Not Supported
statistically significant effect on loan repayment performance	
H ₁₃ : MFIs supervision of the borrowers has statistically significant	Supported
effect on loan repayment performance	
H ₁₄ : Model of lending to the borrowers has statistically significant	Supported
effect on loan repayment performance	
H ₁₅ : Repayment period given to the borrowers has statistically	Supported
significant effect on loan repayment performance	

Table 13:	Summerv	of Hypothesis	testing
I upic 10.	Summery	or hypothesis	coung

Chapter Five: Conclusions and Recommendations

This chapter winds up the study by presenting the summery, conclusion, recommendation, limitation of the study and Future Research.

5.1Summery

Microfinance institutions are established to provide loan to the relatively poor section of the society so that they will use it to come out of poverty. Since, MFIs are suffering from loan default, conducting a study on the factors causing loan default is justifiable. This study was aimed to identify the determinant factors for loan default. After making in-depth literature review, about fifteen determinant factors were identified from similar studies and hypothesis were formulated.

Then about 330 sample respondents consisting 165 defaulters and 165 non-defaulters were identified using multistage sampling method (Stratified simple random sampling). Then primary data was collected using interview questionnaire from these respondents. Only 222 of them consisting 67 defaulters and 155 non defaulters are willing to participate in the study and responded to the questionnaire. So, analysis was made using data obtained from these respondents.

The collected questionnaire was edited, coded and entered in to SPSS software. Both descriptive and inferential statistical tools were used to analyze the data. Specifically, Binary logistic regression was used to identify the determinant factors in the context of OCSSCO Kersa/Jimma Branch. The analysis found that only six of the fifteen variables become significant. After analysis, the finding was interpreted and discussed by comparing and contrasting with earlier research findings.

5.2 Conclusions

The secondary data obtained from the branch indicates that the default rate in terms of number of borrowers is significant for the last three years. The loan granted out of the revolving fund has contributed to this default rate. It is known that the Ethiopian government has allocated 10 billion birr for job creation for the youth population before three years. However, it can be seen that a portion of the loan was not collected back on time.

Majority of the respondents to this study are males, married and has low educational status. Their monthly income is very low and the majorities are engaged in agriculture sector. Further, the loan size for about 95% of the clients is less than birr 50,000. This implies that the most of the features of the clients are those indicated in Microfinance literature. From the beginning, Microfinance institutions are established for these kinds of societies.

From the analysis it can be seen that among the 15 independent variables used in the regression, only six of them including: Marital status, Ownership of collateral, Loan diversion, Follow-up and supervision, Model of Lending and Repayment period significantly determine clients' loan repayment performance at p < 0.1. From this we can conclude that the main determinants for loan repayments are borrowers' economic and institutional related factors. Demographic factors of borrowers are not contributing that much to loan default.

Marital status of the borrower determines loan repayment performance. That means, clients who have established family tend to repay the principal and interest per their agreement. From this we can conclude that t married borrowers tend to be more responsible in business activities than single head of households.

Loan diversion and supervision are very much related. When the institution giving loan is not closely supervising the business, clients may divert the loan for some other unintended purpose. Clients can use the borrowed money for daily consumption than the purpose for which they have taken the loan. If close supervision and follow-up is made to borrowers, the chance of loan default is less since the money is spent on income generating activities and they can be able to repay the principal and interest on time.

Further, clients getting loan on group basis tend to repay the principal and interest on time as compared to individual loan. This is because if one of the members is unable to repay the loan, the other group members have the responsibility to repay the loan. In addition, the social contract created among the group member will prevent each and every member of the group from acts the lead to loan default. This implies group lending is more reliability for sustainability of MFIs as the loan they have granted will be returned back.

5.3 Recommendations

Based on the finding and conclusions made in the previous section, the following recommendations were forwarded.

Loan diversion is one of the factors that affect loan repayment performance. When clients are using the loan obtained from MFIs for unintended purpose, the probability of default is high. So clients need to use the loan obtained from MFIs for the purpose. If it is mandatory to divert the loan for other purpose, they need to request the advice of the OCSSCO kersa/Jimma branch customer service officers or managers.

It was found that follow up and supervision by officers of the branch plays great role in loan repayment. So OCSSCO Kersa/Jimma branch should give the necessary follow-up and supervision. They don't have to simply give and sit down. They need to make regular visit and provide the necessary consultation to clients.

It was found that modality of lending affects loan repayment. Loan default is very less for group borrowers compared to individual borrowers. So OCSSCO Kersa/Jimma branch customer officers should take care while giving loan to individual borrowers especially, when the client has no adequate collateral.

Finally, Loan repayment period is also another factor that affects default probability. OCSSCO Kersa/Jimma branch need to extend the loan repayment period based on the nature of business the client is engaged. They should not stick to institutional regulations and start charging penalty just because the clients are unable to repay the loan in the given time.

5.4Limitation of the study

This study was conducted on a single branch of OCSSCO. Therefore, it is very difficult to reach conclusion for OCSSCO at corporate level. In addition, the majority of the data were obtained from the opinions of individuals which are difficult to accurately measure. Though, the study have these limitations, the research has tried to substantiate the finding with other methods and the conclusion and recommendation can be used at least at branch level.

5.5 Future Research

It is suggested that future research on the same topic should involve more branches and other MFIs in the country.

References

- Abafita J. (2002), Microfinance and Loan Repayment Performance: A Case Study of the Oromia Credit and Savings Share Company (Ocssco) In Kuyu, M.Sc. Thesis, AAU.
- 2. Ahimbisibwe,G. (2002). The Effect of Credit Policy on the financial performance of deposit taking Microfinance Institutions in Kenya. Master's thesis of Finance, School Of Business, University Of Nairobi
- 3. Ameyaw Amankwah, I. (2011). "Causes and effects of loan defaults on the profitability of Okomfo Anokye Rural Bank." Thesis unpublished KNUST
- 4. Baruch Y. and Holtom B.C. (2008). Survey Response rate Levels and Trend in organizational Research. Human Relation
- Bhatt, N., & Tang, S.-Y. (2011). Determinants of repayment in microcredit: Evidence from programs in the United States. International Journal of Urban and Regional Research, 26 (2), 360-376
- Esty K. (2011). Lesson from Mohammod Yunus and The Gramee bank. OD Practitioners, Vol 43 No.1
- Fantahun M., (2000). Informal Financial Institutions: Impact Analysis of ACORD's Credit Intervention through Iddirs in Dire Dawa. M.Sc. Thesis, Addis Ababa University, Ethiopia.
- Godquin M (2004).Microfinance Repayment Performance in Bangladesh: How to Improve the Allocation of Loans by MFIs. World Development Vol 32, Issue 11
- Gujarati, D. (2004). Basic Econometrics (4th ed.). New York, NY: McGraw-Hill companies
- Hosmer, D. and S. Lemeshow (1989). Applied logistic regression. A wiley interscience publication, New York and Sociology Occasional Paper No. 2518. The Ohio State University
- Hulme, D. and Mosley. (1997). Finance for the Poor or Poorest? Financial Innovation, Poverty, and Vulnerability". In G.D Wood and Isharif (Eds).

- Hunte C. K. (1996), Controlling Loan Default and Improving the Lending Technology In Credit Institutions, Savings And Development, Vol.20, No.1.
- 13. Ifeanyi A., Ojiako, A. Idowu O. and Blessing C. Ogbukwa (2014),
 Determinants of Loan Repayment Behaviour of Smallholder Cooperative
 Farmers in Yewa North Local Government Area of Ogun State, Nigeria: an
 Application of Tobit Model, Journal of Economics and Sustainable
 Development, ISSN 2222 1700 (Paper) ISSN 2222 -2855
- Jain, S., and Ghazala, M. (2003). "A Little at a Time: The Use of Regularly Scheduled Repayments in Microfinance Programs." Journal of Development Economics, 72(1), 253–279.
- 15. Kakuru J. (2003), The Management of loan portfolios and the performance of indigenous commercial banks in Uganda: A case study of Uganda Commercial Bank and Centenary Rural Development Bank, MBA. Thesis, Makerere University, Kampala
- Karsa District Office of Finance and Economic Development (2005). Karsa Distric Profile. Jimma, Serbo
- Kon, Y., & Storey, D. A (2003) Theory of Discouraged Borrowers. Small Business Economics 21, 37–49. <u>https://doi.org/10.1023/A:1024447603600</u>
- Kothari, C.R. (2004). Research methodology: Methods and techniques (2nd Rev. ed.). New Delhi, New age International publishers.
- Ledgerwood, J. (1999). Microfinance Handbook: An Institutional and Financial Perspective. The World Bank, Washington DC.
- 20. Mengistu B. (1997), Determinants of Micro Enterprises Loan Repayment and Efficacy of Screening Mechanism in Urban Ethiopia: The Case of Bahir Dar and Awasa towns, M.Sc. Thesis, Department of Economics, A.A.U.
- 21. Meron M. (2008), Loan Provision, Degree of Collectibility and Reason for Default: A Case Study in Wise Saving and Credit Cooperatives Union for Women, MSc. Thesis, AAU.

- 22. Mohammed H.K. (2014). Determinants of Credit Default: Microfinance Institutions in Jimma Zone, Jimma Ethiopia. International Journal of Research in Business and Economics, 3(7).
- 23. Mosha (2016). Determinants of Loan Defaults in MFIs in Tanzania: A case of two selected MFIs in DODOMA Municipality (Master's Thesis). Mizumbe University, Tanzania.
- 24. Murray, J. (2011). Default on a loan. United States Business Law and Taxes Guide.
- NBE Directive No.52/2012. Divertive by National Bank of Ethiopian for NPL.
 Addis Ababa, Ethiopia
- 26. Obo, D.D. (2009). *Microfinance in Ethiopia, Elixir or poison* (PhD Thesis). Institute of social studies, Netherlands.
- 27. OCSSCO (2020). Credit services in OCSSCO. Accessed from .www.oromiamfi.com
- 28. Ongena S. and David C. S, (2001), The duration of bank relationships, *Journal of Financial Economics*, 61, 449-475.
- 29. Pallant, J. (2005). SPSS Survival manual: A step by step guide to data analysis using SPSS for window (Version 12). Australia, Allen & Unwin.
- Pandey, M. (2000), Financial Management; 8th Edition, New Delhi publishers Report; Oxford University press
- 31. Pasha &Negese (2014). Performance of loan payment determinant in Ethiopia
 Microfinance an analysis; Eurasian journal of business and economics vol.
 7(13) PP.29-49
- 32. Proclamation. 40/1996. Proclamation for the establishment of Micro finance institutions. Federal Negarit Gazzeta of Ethiopia, Berhanena Selam Printing Enterprise.
- 33. Quaye1F.M and Hartarska V.(2016) Investment Impact of Microfinance Credit in Ghana, International Journal of Economics and Finance; Vol. 8, No.

3; 2016 ISSN 1916-971X E-ISSN 1916-9728 Published by Canadian Center of Science and Education

- Robinson M.S. (2001). The micro finance Revolution: Sustainable Finance for the Poor: lesson from Emerging Industry
- 35. Roslan A.H. and M.Z AbdKarim (2009), Determinants of Microcredit Repayment in Malaysia: The Case of Agro Bank, Journal of Humanity and Social Science Vol. 4 No.1.
- 36. Tabachnick, B.G., & Fidell, L.S. (2007). Using multivariate statistics. USA:Pearson Education, Inc.
- 37. Vasanthi, P. and Raja, P. (2006). Risk Management Model: an Empirical Assessment of the Risk of Default. International Research Journal of Finance and Economics, Vol. 1, Issue 1.
- 38. Zikmund, W. G., & Babin , B. J. (2009). Business research methods (8th ed.).
 USA: southwest Publishing.

Appendix: Interview Questionnaire

Interview Questionnaire to Borrowers of OCSSCO, Serbo Branch

Part I: Please give you answer to each of the following Client and MFIS related information

Items	Response	Items		Response
1. Demographic		_		
Characteristics		2. E	conomic and Institutional	
Age		Estim	ated Monthly Income	
Sex		Occup	pation	
Education		Amou	int Borrowed	
Marital status		Distar	nce in KM from OCSSCO	
Dependent family size		Mode	l of Lending	
Instruction II: Give your	r opinion to each of the	followi	ng questions as a borrower o	f
OCSSCO by putting ticl	k mark ($$) to the approp	priate cl	noice(s).	
3. How do you evaluat	e the repayment period	of the l	oan from OCSSCO	
() Long Repayment	nt period	() Short Repayment period	
4. Did you make repay	ment of your loan on tin	me per	the agreement	
() Yes		() No	
5. If your answer to qu	estion number 3 above	is yes, f	rom what sources do you pay	y?
() Monthly salary		() Agricultural Income	
() wage from daily	y Labour	() Borrowing from friends	
() Business Incom	e	() Others,	
6. If your answer to qu	estion number 3 is no, v	what are	e the reasons?	
() Unexpected los	s of assets	() Short repayment period	
() Poor supervisio	n	() lack of time to come and p	bay
() poor legal enfor	rcement	() Others,	
7. Which of the follow:	ing fixed or Movable A	ssets th	at can serve as a collateral do)
you own?				
() Residence hous	e	() Livestock	
() Farm land		() I have no any fixed Asset	S
() Shops/ Worksh	ops	() Others,	
8. How did you use the	amount borrowed from	n OCSS	CO?	
() For the intended	d purpose totally	() partially for the purpose	
() For other purpo	se totally	() Others,	_
9. How do you rate the	Training given by OCS	SSCO, S	Serbo Branch before giving	
loan?				
() Excellent		() Satisfactory	
() Very Good		() Poor	
() Good		() Others,	

- 10. How do you rate the Supervision by OCSSCO, Serbo Branch with respect to your Loan?
 - () Excellent

() Satisfactory

() Very Good

- () Poor
 () Others,_____
- () Good () Other

11. What other Problems do you want to mention in relation to Loan repayment

Thank you for your Cooperation

Gaafilee Qoo'anaa liiqeefatota Waldaa Aksiiyoona Liqiif Quusanaa

Oromiiyaatif (WALQO) Damee Qarsatif Qoopha'ee

Qajeelfamaa I: Gaaffiilee odeefannoo armaan gadiitti tarreefamanif deebii sirrii ta'ee keenni

1. Odeefannoo Dhuunfaa	Deebii Keesan	2. Diinagdee fi Hala WALQO	Deebii Keesan
Umuurii		Tilmama Galii Ji'aa keesan	
Saala		Halaa Hoojii	
Baruumsaa		Amma Qarshii Liiqeefatani	
Haala Gaa'iilaa		Fageenyaa WALQO irra KMn	
Lakkoofsaa maatii		Akkataa Liiqii (Dhunfaa, Garee)	

Qajeelfama II: Muuxanoo qabdan iratti hundaa'udhan gaafilee armaan gadi jiiranif fiilanoo sirrii ta'ee mallattoo ($\sqrt{}$) dhan agarsiisaa . Yoo barbaachisaa ta'ee filanoo tokko ol filachuu nidandeesuu.

3.	Yeeroon Kafaltii Liiqii WALQO Damee Qarsaa akamiiti madaltuu			
	() Dheeradha ()) Gabaabaadha		
4.	4. Qarshii Liiqeefatani akkataa waliigaltee keesanin ya	Qarshii Liiqeefatani akkataa waliigaltee keesanin yaroodhan deebistanituu?		
	() Eeyyee ()) Lakkii		
5.	Yoo deebin keesan lakkofsaa 4faa tiif eeyee taée madii galii keesani maali?			
	() Miindaa ji'aa Hiraa kafalee ()) Galii Qonaa irra kafalee		
	() Hojii guyaa hojadhee kafalee ()) Liiqii Hiryootakoraa kafalee		
	() Galii daldalaa irra kafalee ()) Garabiiraa,		
6.	Yoo deebin keesan lakkofsaa 4faa tiif Lakii taée, sababnii issaa maalii?			
	() Kasaraa qabeenyaa () Yaroo	n kafaltii gabaabaa ta'uu		
	() To'ana WALQO raa dhabuu () Fageer	nyaa WALQO irraa kan ka'ee		
	() Laafiinsaa seeraa raawachisuu WALQO () G	arabiiraa,		
7.	7. Qabeenyaa dhaabatta armaan gadii keessa isakam qa	ıbduu?		
	() Mana jiireenyaa () Hoorii manaa		
	() Lafaa qoonnaa () Humaa hinqabuu		
	() Suuqii daldalaa () Garabiiraa,		
8.	8. Liqii WALQO irraa fudhatani akamitii fayadamtuu?			
	() Hunduma Kaayoo itifudhadheef fayadamaa () Gartookee fayadamaa		
	() Waan garabiiraatif fayadamaa ()) Garabiiraa,		
9.	9. Leenjii Liqii fudhachuun dura WALQO damee Kars	aa dhan keenamu akamiti		
	madaaltu?			
	() Tasa gaaridha ()) Ga'aadh		
	() Baayee gaaridha ()) Gad'annaa dha		
	() Gaarridha ()) Garabiiraa,		

- 10. Liqiidhan walqabatee T0'ana hojjeetaa WALQO damee Qarsaa dhan godhamuu akamiti madaaltu?
 - () Tasa gaaridha

() Ga'aadh

() Baayee gaaridha

() Gad annaa dha

() Gaarridha

- () Garabiiraa,_____
- 11. Rakoolee Liqiidhan walqabatee kan biroo jiiraan baka armaa gadiit ibsaa