DETERMINANTS OF LOAN REPAYMENT PERFORMANCE: THE CASE OF MICRO AND SMALL ENTERPRISES IN DIRE DAWA ADMINSTRATION

MSc THESIS

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APPROVAL SHEET

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As thesis research advisors, we here by certify that we have read and evaluated this thesis prepared, under our guidance, by Salem Abera entitled *:Determinants of Loan Repayment Performance: The Case of Micro and Small Enterprises in Dire Dawa Administration.* We recommend that it be submitted as fulfilling the thesis requirement.

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As member of the Board of Examiners of the M.Sc. Thesis Open Defense Examination, we certify that we have read, evaluated the thesis prepared by Salem Aberaand examined the candidate. We recommend that the thesis be accepted as fulfilling the thesis requirement for the degree of *Master of Science in Agriculture (Agricultural Economics).*

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DEDICATION

I dedicate this thesis to my beloved parents Belaynesh Agafari and Abera Aliye; and to my beloved husband Biruk Alemu for their patience and sacrifice during my academic study and all aspects of the research.

STATEMENT OF THE AUTHOR

First, I declare that this thesis is my work and that all sources of materials used for this thesis have been duly acknowledged. This thesis has been submitted in partial fulfillment of therequirements for an advanced MSc degree at the Haramaya University and is deposited at theUniversity Library to be made available to borrowers under rules of the Library. I solemnlydeclare that this thesis is not submitted to any other institution anywhere for the award of anyacademic degree, diploma, or certificate.

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LIST OF ACRONYMS AND ABBREVIATIONS

CSA	Central Statistical Agency
DDA	Dire Dawa Administration
DMFI	DireMicrofinance Institution
GTP	Growth and Transformation Plan
LPM	Linear Probability Model
LRR	Loan Repayment Rate
MOTI	Ministry of Trade and Industry
MSEs	Micro and Small Enterprises
MSMEs	Medium, Small and Micro Enterprises
PASDEP	Plan for Accelerated and Sustainable Development to End Poverty
PRSDP	Poverty Reduction and Sustainable Development Program
RS	Repayment Status

BIOGRAPHICAL SKETCH

The author was born on September 23, 1986 in Addis Ababa City. She attended her elementary education at New Era Elementary School, and secondary education at Medhanialem Senior Secondary School, Addis Ababa. The author joined Microlink Information Technology College in 2006 and graduated with B.Sc. degree in Management Information Systems in 2008. At present she is teaching in Microlink Information Technology College at Dire Dawa campus. The author joined Haramaya University to pursue her post graduate study in the field of Agricultural Economics in 2010.

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ABSTRACT

Loan repayment has a paramount importance to have viable financial institutions. Financial institutions are extending loanfacilities to Micro and Small Enterprises in order to narrow the gap between the capitals that is required and that the enterprises possess that would increase production and productivity.However, there is a serious loan repayment problem in the Dire Dawa Administration, which discourages urban financeinstitutions from promoting and extending loan.This study was aimed at examining the loan repayment performance of micro and small enterprises and identifying determinants of loan repayment performance of micro and small enterprises in Dire Dawa Administration. A multi-stage sampling technique was employed to select120 micro and small enterprises. Data werecollected through face-to-face interview and observation, and analyzed using descriptive and inferential statistics as well as econometric model. An econometric model known as two limit tobit regression model was used to identify factors that affect loan repayment performance. The result indicated thatsufficient loan size and repayment periods were negatively and significantly related to loan repayment performance of enterprises. Follow up and supervision, access to market, business experience, and trade and service sector types were important factors which affected loan repayment performance of the enterprises positively and significantly. Therefore, the studysuggests the identified significant variables to be a spring board for further interventions by financial institutions, stakeholders and policy makers so as to come with a breakthrough to significantly decrease defaulting problems.

Keywords: Micro and small enterprise, loan repayment performance, two-limit tobit.

1. INTRODUCTION

1.1. Background of the Study

The role of Micro and Small Enterprises (MSEs) in socio-economic development as a means for generatingsustainable employment and income is increasingly recognized. In developing countries, the MSE sector is the largest source of employment and income generation activity, particularly for the urban population (Wasihun and Paul, 2010). Now days, in almost all economies of the world, MSEs are becoming a crucial and key factor for sustained growth and development and becoming the lifeblood of most economies (Brhane, 2014). In Ethiopia, like any other developing countries, MSE has become an increasingly widespread used strategy for its labor intensiveness, suitability to produce more jobs with less capital per job created, its utilization of locally available resources, fostering of linkage within and among various sectors and its resilience to internal and external economic shocks (FMSEDA, 2012).

The Ethiopian MSE sector include a diverse set of operators ranging from petty traders to small restaurant owners, shoeshine boys to small shoes making enterprises, peddler in the street to grocery business operators, and the likes. Even though, the increased role and contribution that the MSE sectors could provide to the country's economy is immense, the sector is largely constrained by various structural, institutional, and policy related problems and bottlenecks that stifle its rapid growth and development (FeMSEDA, 2004).

According to the MWUD (2007), MSEs sector is believed to be the major source of employment and income generation for a wider group of the society. The major objective of MSEs development program, which is creating and promoting MSEs in urban areas, envisages reducing urban unemployment rate.

In most fast developing countries like Ethiopia, MSEs by virtue of their size, location, capital investment and their capacity to generate greater employment have proved their powerful propellant effect for rapid economic growth. The sector is also known as an instrument in bringing about economic transition by effectively using the skill and talent of the people

without requesting high-level training, much capital and sophisticated technology. The MSE sector is also described as the national home of entrepreneurship. It provides the ideal environment enabling entrepreneurs to exercise their talents to the full and to attain their goals. In all the successful economies, MSEs are seen as an essential springboard for growth, job creation and social progress at large(MWUD, 2007).

A number of African countries adopted poverty reduction strategies that mainly emphasized on development and promotion of micro and small enterprises (MSEs) as a major way to reduce poverty particularly among urban dwellers (Liedholm,1993).The Ethiopian government recognized the sector in 1997 through the issuance of MSEs promotion and development strategywhich was reviewed in 2011 in view of the country's dynamic economic progress, program feedback and experience of other countries (MoTI, 2011). Special attention has been given at all levels to untie the constraints of MSEs for they are important vehicles to address the challenges of unemployment, economic growth and equity in the country.

The government of Ethiopia has been implementing and incorporating the program as a strategic agenda in three consecutive five years national developmental plans of the country i.e. the 1st five years plan called Poverty Reduction and Sustainable Development Program (PRSDP), in the 2nd five years plan called Plan for Accelerated and Sustainable Development to End Poverty (PASDEP) and the 3rd five years plan which is called Growth and Transformation Plan (GTP) covering the years from 2010/11 to 2014/15. In view of this, the government is implementing different financial and Business development service programs in different parts of the country for helping MSEs attain their intended objectives. The support service program for the promotion and development of these enterprises has been launched in Dire Dawa Administration since 2012. The elements of the program include an enabling legal framework and streamlining regulatory conditions and specific support services (financial and business development services). The financial service includes credit and saving scheme whereas the business development services include trainings, technology transfer, counseling, provision of working premises and the likes(MoFED, 2011).

Financial services are being provided through Dire Micro Finance Institution (DMFI) in the study area and the business development services are being provided by Dire Dawa Micro and Small enterprise Development Agency.

DMFI was initially established and registered at National Bank of Ethiopia on May 09, 2010.However, DMFI commenced its operation few months later in March 2011.It is a legal share company whose governance includes General Assembly Board of directors and managing Director. Its ownership is divided into shares and it is owned by seven share holders namely, Dire Dawa administration, Biftu Dinshow Share Company, Dire Dawa Business women Association, Kabele 09 Women's Development Association, Asnaketch Women's Association, Kebele 09 Yedil Fire Women Association. DMFI's vision is to become self–sustaining, effective and efficient financial institution and see poverty and unemployment problem of Dire Dawa being alleviated through provision of financial service to low income group especially women and youth.

DMFI actively participate and contribute towards urban and rural poverty reduction endeavors through provision of effective and efficient financial service to low income segment of the community particularly women and youth.The institution provide micro – financial services to low income women, unemployed youth, farmers, provide demand, saving and time deposit services, provide local money transfer services, provide counseling service to its client,promote saving culture in the administration(DMFI, 2013).

DMFI has three structural layers that stretch down to the grass root level of society – Head office, Brach office and service center and satellite offices. The Head office 6 branches and two service centers are found in Dire Dawa city and five satellite office are found in rural area. There are several products that are provided by the institution like Microenterprise Loan, Small Business Loan, Micro lease Loan, Consumption Loan, Housing Loan, Short term Loan (DMFI, 2013).

The sector has been bound with various constraints andproblems, which hinder its potential contribution to the socio-economic development of the country (FMSEDA, 2012). In recognition of the sector's potential contributions and its constraints, the government has been

attempting to create enabling environment for its growth and profitability. Among others, the issuance of proclamation No 33/1998 to establish the Federal MSE Development Agency (FeMSEDA) and amendment of the proclamation by No 104/2011 are the major government efforts made to alleviate the constraints of the sector. As a result, MSE are flourishing across the country and the MSE sector becomes the second largest employment generating sector for the poor households following the agriculture sector (Mohammed*et al.*,2014).

Research findings of Amha and Ageba (2006) which focused on MSEs in major urban centers of Ethiopia revealed that access to markets and finance are the most pressing constraints of the sectors. This sector faces similar constraints throughout Ethiopia including Dire Dawa Administrative region.

However, limited empirical work has been done on this problem so far in Ethiopia because of the short history of Micro finances in financing the private sector and the prevalence of the problem in recent years.

It is, therefore, necessary toanalyze the existing phenomena empirically thereby an attempt was made to identify the major determinants of MSEs', operators of the sector in the urban area of Dire Dawa.

It also necessitate the need for making an empirical investigation on the factors behind the default problem so that the lending unit could make an appropriate precaution in its lending decision as well as revise its screening criteria in order for potentially credit worthy borrowers not to be rationed wrongly, while the nations resource will not be fruitless.

1.2. Statement of the Problem

Despite MSEs are recognized as vehicles for economic growth and reduce poverty and unemployment (Zemenu and Mohammed, 2014), most of them are facing critical constraints both at the operation and start up level. Some of these constraints include lack of access to finance, lack of access to working premise, lack of entrepreneurial training and management skills, lack of marketing information and the like (Brhane, 2014). Shortage and size of credit, shortage of working premise and size of sales spaces and stringent licensing requirements are some of the other key constraints to Ethiopian MSE (Assefa*et al*., 2014).

Lack of access to finance is the most influential factor from among all adverse factors hindering the growth and development of the MSE sector in Ethiopia. In Dire Dawa, MSEs have a problem of finance when establishing the business most individual sources of finance come from personal savings and loans acquired from relatives, friends and moneylenders with high amount of interests. After the business goes operational, the probability of becoming profitable and paying back debts along with accrued interest is less (Zeleke ,2009).

In Dire Dawa administration's urban part, there is a loan repayment problem. Out of the totalloan finance distributed by different enterprises for the last decade, almost 60% of it is not collected back. The loan repayment performance seen clearly implies as repayment problem is a core problem commonly shared by all those institutions engaged in providing loan(DMFI, 2013).

Onyeagocha et al, (2012) arguethat to continue providing financial services to MSEson a sustaining basis, the Microfinance Institutionsthemselves must be viable and sustainable. Therefore, the lenders must devise various institutional mechanisms that aimed to reduce the risk of loan default. If there is no repayment of loan, then there may not be sufficient funds to ensure that the liquidity position of the Microfinance Institutions is maintained. When there is a loss in the Microfinance Institutionsliquidity due to high levels of non-repayment, the cyclical flow of funds between the Microfinance Institutions and the borrowers will be interrupted.

One way to tackle the loan repayment problem is to investigate the factors whichaffect the loan repayment of MSEs, (Onyeagocha *et al*, 2012). Therefore, to alleviateaforementioned

problems the researcher intended to study major factors that determines loan repayment performance of borrowers in urban area of Dire Dawa.

1.3. Objectives of the Study

The general objective of the study wasto evaluate the loan repayment performance of micro and small enterprises. The specific objectives of the study were:

- Toanalyze the loan repayment performance of MSEs in Dire Dawa Administration.
- To identify the determinants of loan repayment performance of micro and small enterprises.

1.4. Significance of the Study

The findings of this study are expected to be significant for the following reasons.

Knowledge on determinants of loan repayment is undoubtedly important for the lenders. Government and other parties involved in thealready started and promotion of MSEs may use the findings of the study as additional information to address the problems uncovered in the development of MSEs. There is limited research output and literature regarding strategic orientation of MSEs in Ethiopia. Therefore, an analysis of factors affecting loan repayment performance of MSE borrowers would help policy makers to formulate successful credit policies and programmes that enable them to allocate scarce financial resources to the development of basic sectors of the economy.It will help the financial institutions to identify the major characteristics that distinguish credit worthy borrowers and defaulters so that it could act accordingly for future screening purpose. Academics, consultants, and government agencies may use the study as a stepping-stone for further study in the area at an advanced level. Both graduate and undergraduate students may find the study relevant for their academic work. The findings may also be considered as important additions to the existing knowledge and literature in the area for the public at large.

Other researchers could make use of the research outcome because it will help them to identifythe problem area in the general economic condition of the country. It will give them background information on entrepreneurship capacity of MSEs, marketing and production

activities of their products, and other social and economic variables influencing the repayment status of MSEs.

1.5. Scope and Limitations of the Study

The study was limited to MSEs that were registered and licensed by Dire Dawa Administration MSEs Development Agency. The study did not consider unlicensed enterprises because, it was very difficult to find those enterprises that were not registered and licensed it also causes difficulty to obtain reliable financial data and it avoids the need to adjust currency figure. Furthermore, the study only focuses on enterprises who borrowed from DMFI. Mostly Dire Dawa MSEs Development Agency leads registered and qualified enterprises to get the loan from DMFI but there are sectors that choose informal or other institution to get it.This study will avoid those who choose other institution or methods of getting the loan. The study also considers only the urban area of Dire Dawa.

1.6. Organization of the Thesis

The remaining parts of the thesis are organized as follows. Chapter two presents review ofliterature that includes definitions ofmicro and small enterprises, the nature of credit market, possible causes of default, theoretical arguments on loan default problem and empirical literature on loan repayment performance based on studies both in Ethiopia and other countries. Chapter threepresents the research methodologies employed in the study. Results obtained are presented anddiscussed in detail in chapter four. Finally, chapter five presents' summary and policyimplications of the research.

2. REVIEW OF LITERATURE

2.1. Definition of Micro and Small Enterprises

MSEs are very heterogeneous groups and they include a wide verity of firms like handicrafts, weavers, small machine shops, restaurants, etc. which can operate in very different markets and social environments. Though there is no universally accepted definition and differentiation of MSEs different countries try to define them depending on their socio-economic environment. As to Hallberg (2000), in some countries, the owners and workers of MSE are perceived to be dominated by members of particular groups, such as indigenous groups in Bolivia, weavers groups in Ethiopia, etc.

The MSE nomenclature is used to mean micro, small and medium enterprises. It is sometimes referred to as micro, small and medium enterprises (MSMEs). The MSEs cover non-farm economic activities mainly manufacturing, mining, commerce and services (URT, 2003). According to Kessy and Urio (2006), MSE can be defined as a productive activity either to produce or distribute goods and or services, mostly undertaken in the informal sector.

The definition and criteria for MSE vary from country to country. For example, in Ethiopia, country wide used definition of MESs is on the bases of three criteria. These are: level of paid-up capital/fixed asset, using high tech establishment and consultancy services. Accordingly, in Ethiopia micro enterprise refers to small business with paid up capital not exceeding birr 20,000 and excluding high-tech consultancy firms and high-tech establishments. And, small enterprise refers to enterprise with paid up capital from birr 20,000 to 500,000 and excluding high-tech consultancy firms and high-tech establishments (MOTI, 1997). However, in most countries MSE is defined based on number of employees. Accordingly, most commonly, micro enterprise is enterprise with 10 and less employees, while small enterprise is enterprise with 10 to 50 employees (Farman and Lessik, 1989).

The official and legal definition of industries in Ethiopia was provided by proclamation number 124 of 1997 and small scale industry comprises any manufacturing activity that uses motive power and machines, and which has a fixed asset, excluding building and land improvements, not exceeding Birr 20,000. This implies that the amount of investment is a major distinguishing factor and small scale enterprises or activities are like garment and shoe factories, steel and metal works, grain mills, etc (MOTI, 2003). However, this definition was revised when the government policy shifted from the policy of command system to a system of mixed economy. Accordingly, small scale manufacturing activities consider that, fixed locations within an urban center uses either operated machinery equipment or engaged in the mechanical or classical transformation of substances into new products through employing at least one person other than owner and family workers.

The statistical definition of MSEs varies by country, and is usually based on the number of employees or the value of assets. The lower limit for MSEs is normally set at 5 to 10 workers and the upper limit at 50 to 100 workers. Since this limit can vary in different countries, one should not overly concern about the lack of consistency in employment-based definition of MSEs(MOTI, 1997).

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

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

Information Communication Technology (ICT) and maintenance service)Micro enterprise are an enterprise operating with 5 persons including the owner of the enterprise and/or the values of total asset is not exceeding Birr 50,000. Small Enterprises in the industrial sectors are an enterprise operating with 6-30 persons and/or with a paid up capital of total asset Birr 100,000 and not exceeding Birr 1.5 million. Similarly, in the service sector, small enterprises are an enterprise operating with 6-30 persons and/or with a paid up capital of total asset Birr 50,000 and not exceeding Birr 500,000 (FMSEDA, 2012).

This study considers the definition of MSEs according to the definition of Federal Micro and Small Enterprises Development Agency see (Table 1).

Table 1: Definition of MSE applicable in Ethiopia

Enterprise	Sector	Employee	Capital
Micro-Enterprise	Industry	<5	<ETB 100,000
	Service	<5	<ETB 50,000
Small-Enterprise	Industry	6-30	<ETB 1,500,000
	Service	6-30	<ETB 500,000

Source: FeMSEDA, 2013

2.2. Role of the MSE Sector

MSEs have been recognized as engines of growth and development throughout the world (Munyoriand, 2014). The MSE operations worldwide plays a pivotal role by adding value to the economy by creating jobs, enhancing income, lowering costs and adding business convenience (Fatoki, 2012; Katua, 2014). MSEs are now widely recognized as a major component in the growth and development of emerging economies. They are found to be one of the most reliable economic development and livelihood strategy, especially during economic turbulence (Kamoyo *et al*., 2014). The importance of MSEs in general and new businesses in particular makes a significant contributions in addressing socio economic problems such as unemployment, poverty, income inequalities, political stability and economic growth among others (Musaraand, 2014).

In Ethiopia, the MSE has prioritized for economic growth, employment generation and building an industrial economy. The MSE sector serves as vehicle of development and broadens employment opportunities at urban center. The elements of the sector are taken as the major productive forces in the manufacturing sector and serve as incubation hubs for developmental investors. MSEs play great role in utilizing local resources and are labor intensive (FMSEDA, 2012).

2.3. Access to Finance and Loan Term

MSE face considerable financing constraints which hampers their profit and turnover growth. Lack of finance is the most referred complaint among entrepreneurs in Africa (Bigsten, et al., 2003). Such lack of access to financial resources hinders firms from growing to their optimal size (Cabral and Mata, 2003). Shortage of finance and small size of credit are key constraints to Ethiopian MSE growth (Assefa *et al*., 2014). Moreover, the study conducted by Ageba and Amha (2003) shows lack of access to credit is the major challenge to MSE growth and expansion in Ethiopia. About 30% of MSE operators replied that high collateral requirements to access credit hampered their businesses growth. Since most MSEs do not have a track record with banks and as they do not have the experience in dealing with financial institutions banks are reluctant to give loans to MSEs leading MSE to borrow from informal financial markets at higher interest rates (Ageba and Amha, 2003).

2.4. The Nature and Role of credit market

Finance is central to establish and operate productive activity. Sufficient finance is a prerequisite to proper organization of production, acquiring of investment assets and/or raw materials and development of marketing outlets, and the like. Credit is a device for facilitating transfer of purchasing power from one individual or organization to another. As indicated by Oyatoya (1983), credit provides the basis for increased production efficiency through specialization of functions thus bringing together in a more productive union the skilled labor force with small financial resources and those who have substantial resources but lack entrepreneurial ability.

The link between credit and economic development has captured the attention of economists since long (Schumpeter, 1933). With improved financial intermediation, the proportion of financial savings that is diverted by the financial system into non-productive uses fails, and the rate of capital accumulation increases for a given saving rate (Mensah, 1999). He further elaborates the importance of financial intermediation as it enhances saving mobilization by providing a variety of safe financial instruments to savers and ensuring tangible returns on savings. The financial sector contributes to the efficiency of the entire economy by spreading information about expectations and allocation of resources to investors.

The establishment of sustainable microfinance institutions that reach a large number of rural and urban poor, who are not served by the conventional financial institutions (such as the Commercial Banks) has been a prime component of the new development strategy of Ethiopia. Although the development of microfinance institutions in Ethiopia started very recently, the industry has shown a remarkable growth in terms of outreach, particularly in number of clients (Amha, 2000). Despite the obvious disadvantages of the microfinance industry in Ethiopia such as poor communication and infrastructure, weak legal systems, banking sector and lack of technical capacity as compared with other Sub-Saharan countries, the sector has been growing at a significant rate.

Financial theorists argue that if economic units relied completely on self-finance, investment will be constrained by the ability and willingness of each unit to save, as well as by its capacity and readiness to invest (Mensah, 1999). In his contribution to the role of financial institutions, Piscke (1991) admitted that even though finance is a catalyst for investment, it is also a catalyst for poor investment, political patronage, corruption and other types of opportunism.

A credit market differs from standard markets (for goods and services) in two important respects. First standard markets, which are the focus of classical competitive theory, involve a number of agents who are buying and selling a homogeneous commodity. Second in standard markets, the delivery of a commodity by a seller and payment for the commodity by a buyer occur simultaneously. In contrast, credit received today by an individual or firm in exchange

for a promise of repayment in the future. But one person's promise is not as good as another. Promises are frequently broken and there may be no objective way to determine the likelihood that promise will be kept (Jaffee and Stiglitz, 1990).

Differences between promised and actual repayments on loans are the result of uncertainty concerning the borrower's ability or willingness to make the repayments when they are due which creates the risk of borrowers default (Pischke, 1991; Vigano, 1993; Kitchen, 1989).

2.5. The Possible Causes of Default

The capability of borrowers to repay their microcredit loans is an important issue that needs attention. Borrowers can either repay their loan or choose to default. Borrower defaults may be voluntary or involuntary (Amare and Bekabil, 2008). According to this study involuntary defaults of borrowed funds could be caused by unexpected circumstances occurring in the borrower's business that affect their ability to repay the loan. Unexpected circumstances include lower business revenue generated, natural disasters and borrowers' illness. In contrast, voluntary default is related to morally hazardous behavior by the borrower. In this category, the borrower has the ability to repay the borrowed funds but refuses to because of the low level of enforcement mechanisms used by the institution. Research has shown that a group lending mechanism is effective in reducing borrower defaults (Armendariz, 1999). In group lending, the loan is secured by the co-signature of members within the group and not by the microfinance institution. Each member will put pressure on the others in the group to meet the loan repayment schedule. Thus, group sanction is important in discouraging defaults among members in microfinance (Van Tassel, 1999).

Al-Azzam*et al*. (2011) suggest that peer monitoring, group pressure, and social ties are likely to improve repayment performance of group-based credit. In addition, Rai and Sjostrom (2004) show that repayment performance of group-liability contracts depends on the truthful exposure of each group member to the success of the peers' projects. The repayment performance of group lending has been found to be affected by the weekly sales and distance between the members Wydick (1999), cultural similarities and gender differences, the role of

group leaders, peer monitoring and social ties, and group size (Madajewicz, 2005). With respect to the latter, Impavido (1998) suggested that group size affects both the ability to impose punishments as well as the level of monitoring.

Small scale enterprises possess shallow management, often with little experience and training; they are usually undiversified, one product firms, they are sometimes new businesses with little track record, and poor financial recording; they may have a new unproven product; they have little to offer by way of security to a lender; they may be reluctant to raise outside equity capital for reasons of expense, loss of control and increased disclosure requirements. These characteristics of small-scale enterprises provide little incentive for any aggressive loan recovery mechanisms (Beker and Dia, 1987). On the other hand, there are those who argue that the failure of lending agencies in playing their roles in loan disbursement and recovery process is a major contribution to loan default (Vigano, 1993).

Derban*et al*. (2005) classified the causes of default into three main categories. First, the inherent characteristics of borrowers and their business that makes it unlikely that the loan will be repaid. Second, the characteristics of the lending institution and the suitability of the loan released to the borrowers and third, the systematic risks from external factors such as the economic, political and business environment that may influence the borrowers' operations and performance.

Koopahi and Bakhshi (2002) suggested that repayment will be influenced by socio-economic characteristics of the borrower (i.e. income level, educational level, years of experience), and loan characteristics (i.e. transaction costs, amount of loan obtained, length of repayment period, bank supervision of credit use, the waiting time for loan reception). In addition, levels of physical capital (i.e. the use of machinery), and community characteristics (i.e. prevalence of natural disaster, seasonal and risky activities) were found to be significant. Finally, also characteristics of the lending institutions seem to affect the levels of repayment (Adams and Mehran 2003).

2.6. Empirical Literature on Loan Repayment

Loan repayment performance is affected by a number of socio-economic and institutional factors. While some of the factors positively influence the loan repayment, the other factors are negatively affecting the repayment rate. Regarding to the loan repayment performance of borrowers several studies have been conducted in many countries by different authors. Some of the studies are summarized below.

2.6.1. Studies in Ethiopia

Amare (2005) studied the determinants of loan repayment performance of smallholder farmers in North Gondar, Ethiopia. In order to analyze the factors that affect loan repayment, he employed the tobit model. Accordingly, land holding size of the family, agro-ecology of the area, total livestock holding, number of years of experience, number of contacts, sources of credit and income from off-farm activities were found to be important factors that affected loan repayment.

Jemmal (2003) analyzed the microfinance repayment performance of Oromia credit and saving institution in Kuyu, Ethiopia using logit model. According to his finding, sex, loan size and number of dependents are negatively related to loan repayment. On the other hand the effect of age was found to be positive, while that of age squared turned to be negative. Income from activities financed by loan, repayment period suitability and loan supervision were positively and significantly related to loan repayment performance. Moreover, loan diversion is significant and negatively related to loan repayment rate.

Fikirte (2011) employed a logit model to estimate the effects of hypothesized explanatory variables on the determinants of loan repayment performance in Addis Credit and Saving Institution in Addis Ababa, Ethiopia. Out of the eleven variables hypothesized to influence the loan repayment performance of borrowers, seven variables were found to be statistically significant. Some of these variables were age, family size, business experience, number of times borrowed, visits, and loan size.

Abreham (2002) studied loan repayment and its determinants in small-scale enterprise financing in Ethiopia around Zeway area employing tobit model. He found out other sources of income, education, and work experiences related to economic activities before the loan were found to enhance loan repayment. While extended loan repayment period influenced the repayment performance negatively.

Retta (2000, cited in Abafit, 2003) employed probit model for loan repayment performance of women fuel wood carriers in Addis Ababa. His finding indicated that frequency of loan, supervision, suitability of repayment period and other income sources were found to encourage repayment hence reduce the probability of loan default. While educational level was negatively related to loan repayment.

Million *et al* (2012) studied the determinants of loan repayment performance among smallholder farmers in East Hararghe zone, Ethiopia specifically Kombolcha and Babile Districts. A two limit tobit regression model was applied to identify factors that influenced loan repayment**.** The results indicatedthat agro ecological zone, off-farm activity and technical assistance from extension agents positively influencedthe loan repayment performance of smallholder farmers, while production loss, informal credit, social festival andloan-to-income ratio negatively influenced the loan repayment of smallholder farmers.

Tesfaye (2014) conducted a study with the objective of identifying and analyzing the factors that influence group loanrepayment performance of the beneficiaries of debit Credit and Saving Institution (DECSI) operating in the manufacturing sector as group owned MSEs by using binary logit regression model to analyze the grouprelated factors, lender related factors, and socio-economic related factor that influence group loan repayment.Accordingly, group composition, group initiation,peer pressure, suitability of repayment period, loan size and external shocks had statistically significant effecton loan repayment of the group borrowers.

Firafis (2015) conducted a study in Eastern Hararghe Zone of the Harari Regional State, Ethiopia to assess factors affecting loan repayment performance of Harari Microfinance Institution employing binary logit model. Accordingly, saving habit of borrowers, loan size, perception of borrowers on repaymentperiod, source of income, availability of training, business experience, business type, family size, andthe purpose of saving significantly influenced loan repayment performance. The econometric result revealed that the probability ofdefault increases as the family size increases, when the borrower has negative perception onrepayment period, less training, low business experience, poor saving habit and only single source ofincome.

Belay (1998) studied onanalysis of factors impeding loan repayment performance of smallholders in Alemgena woreda, West Shewa zone employing multiple linear regression model. Experience in own farm, experience incredit use, proportion of area under teff and wheat production, annual farm revenue, number of draught oxenowned, ownership of livestock in livestock unit, number of contacts with development agents and locationof the farmers from development agents' centre significantly affected loan repayment.

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

Abebe (2011) examined factors influencing timely credit repayment and input use (especially fertilizer) by smallholder farmers in Ada District of East Shoa zone employing tobit model. The result of the model showed that family size, livestock ownership, on-farm income, non-farm income and saving habitpositively and significantly affected timely loan repayment performance.

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

2.6.2. Studies in other countries

Bhatt and Tang (2002) studied the determinants of loan repayment in microcredit evidence from programs in the United States. Their study showed that women had low repayment rate because some women entrepreneurs in the study might have been engaged in high risk and low return activities. Godquin (2004) also examined the microfinance repayment performance in Bangladesh. His result indicated that female borrowers did not prove to have a significant better repayment performance. The size of loan and the age of the borrower showed the negative effect on the repayment performance. In the contrast, Abreham (2002) showed in his study male borrowers are the undermining factors for repayment.

Stephen (2012) investigated the loan repayment, its determinantsand socio-economic characteristics of microfinance loanbeneficiaries in the Southeast states of Nigeria employing ordinary leastsquare (OLS) multiple regression analysis toisolate and examine the determinants of loan repayment fromthe respondents' perspective. Results showed that loan size, level of education, experience, profitabilityand portfolio diversity wereOutstanding among the determinantsof loan repayments from the respondents' perspective.

Onyeagocha *et al* (2012) analyzed the loan repayment performance, institutional factors, and factors affecting repayment rate ofmicrofinance institutions (MFIs) in the South-east states ofNigeria. Outstanding among the determinants of loanrepayment of microfinance institutions were outreach, shocks,training duration, loan size and credit officer's experience.

Gerald and Deogratius (2013) examined the credit rationing and loan repayment performancevictoria savings and credit cooperative society in Tanzania. The study found that business management skills, alternative source of income, unfavorable weather conditions, house hold size, late loan delivery, distance between the SACCOS and the member's project, number of years of project runs, experience, age, credit rationing and loan diversion influenced loan repayment performance.

Zeller (1996) analyzed the determinants of repayment performance of credit groups in Madagascar. His finding was that groups with higher level of social cohesion had a better repayment rate. Moreover, the programs that provide saving service to their members had a significantly higher repayment rate. Olagunju and Adeyemo (2007) and Oke *et.al*, (2007) also analyzed the determinants of repayment decision among smallholder farmers in southwestern Nigeria. The result showed that the number of visits made by loan officers to the borrowers, higher level of education, and time of loan disbursement would result in a better repayment performance. Moreover, borrowers with lower number of household members would meet their repayment obligation better than those with high number of household members. And having access to business related information and providing training to the clients were important in increasing the loan repayment rate of the borrowers.

Kamau (2012) conducted a study withthe objective of identifying the major determinants of loan repayment in Small Scale Enterprises(SSEs) withparticular reference to SSEs in Kariobangi Division, Nairobi County by using regression model. The study found out that business related factors were significant in influencing loan repayment of the respondents with increase in input prices as the major factor that led to loan defaults while death of spouse was seen as the least factor that led to loan default. In addition, education level, family size,amount of loan applied and business experience of the respondents were found to have a positive relationship to loan repayment. Age, interest rate and change in gender had an inverse relationship to loan repayment.

As mentioned above, various studies were conducted on the determinants of loan repayment performance in different countries. Most of these studies focused on the credit associated with

agricultural activities and they identified the socioeconomic factors that affect the loan repayment rate of rural households. However, in the literature review nothing was indicated about the business related factors influencing the loan repayment performance of MSEs borrowers in Dire Dawa city, especially in the business sectors of trade, service and construction. Therefore, this study aims at addressing this research gap.

2.7. Conceptual Framework of the Study

The diagrammatic representation of conceptual framework in Figure1 shows how the variables of the study are related.Individualentrepreneur characteristics, loan specific characteristics and business related factors are independent variables whereas loan repayment rate is a dependent variable, which is a measure of loan repayment performance and depends on the occurrences of the stated independent variables.
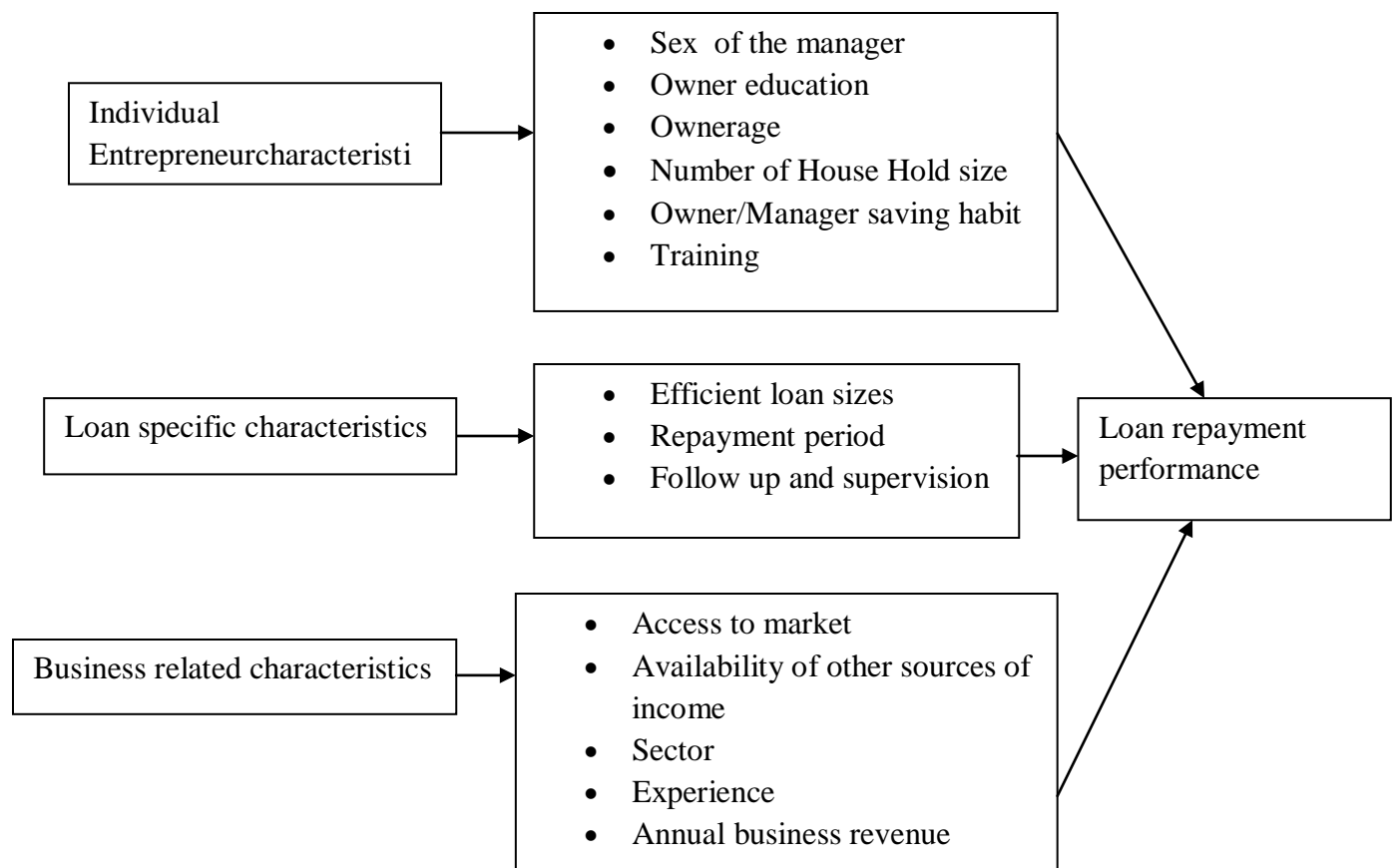
Figure 1 Conceptual framework

Source: own summary based on literature reviewed (2016)

3. RESEARCH METHODOLOGY

This section presents description of the study area, source data and data requirement, sample size and methods of sampling and method of data collection. It also contains methods of data analysis.

3.1. Description of the Study Area

Dire Dawa is one of the two city administrations of the federal democratic republic of Ethiopia. It is located in between 9027' and 9049'N Latitude and 41038' and 42019'E Longitude coordinate. It lies in the eastern part of the nation at a distance of 505 kilometers to the east of Addis Abeba, 55 kilometers to the north of the historic city of Harar, and 313 kilometers to the west of Port Djibouti. It is bounded in the North West and East by Somali National Regional State and the South by Oromia National Regional State. The total land size of the administration is 1558.61 km2 of which 1.88% of it is urban and the remaining 98.12% rural part(CSA, 2007).

As per CSA's 2007 report, Dire Dawa is estimated to have a total population of 341,834. From the total population, 171,461 are men and 170,373 women. 233,224 or 68.23 percent of the total population are urban inhabitants and the rest 108,610 or 31.7 percent of them lives in the rural kebeles.

The seasonal rainfall has a bimodal distribution with peak in April and August. In Dire Dawa, erratic rain fall and drought are very common. The rainfall pattern of the Administration has a bimodal characteristic. The small rainy season is from March to April, while the big rainy season extends from August to mid-September. The mean annual rainfall is 657mm and mean monthly values vary between 5.7mm and 119 mm. The mean annual average air temperature is 25.3oC and June is the warmest month of the year while December and January are the coldest. Meanwhile, it's annual highest and lowest temperature is 32.2 and 18.38 degree centigrade respectively.

Dire Dawa has a potential area of 22,450 hectare of farm land for rain fed agriculture and 2,088 hectare for irrigation. Currently, 12006.59, 1847 hectares of farm land are being used for rain fed and irrigation agriculture respectively.

In the 1950s and 1960s, Dire Dawa was an industrial town but later on (1970s and 1980s) with the industry lagging behind. Latter, the situation changed and commerce started to play a leading role in the local as well as the national economy to some extent. It is worth noting at this juncture that most of the commercial activities that ''boomed' in Dire Dawa in those days were illegal and macro economically harmful contraband trades (CSA, 2007).

Figure 2 Map of Dire Dawa Administration

Source: Dire Dawa administration's Statistical Abstract 2010/11 – 2011/12

3.2. Data Type and Method of Data Collection

3.2.1. Data type

To undertake this study, both primary and secondary data were taken into account.Structured questionnaire was prepared and used tocollect data from all sampled MSEs in Dire Dawa. Face-to-face interviews were carried out with theMSEs operators and the owners in the selected sectors and Documents that is obtained from DMFI.Moreover,Observation and informal discussions were also be used as additional source of information. Variety of books, published and/or unpublished government documents, websites, reports and newsletters wereused to make the study fruitful.

3.2.2. Methods of data collection

The required primary data were collected through survey using structured questionnaire. Trained enumerators collected the data under close supervision of the researcher. Secondary data were collected from different published and unpublished sources and from records of relevant organizations and MSEs.

3.3. Sampling Method and Sample Size

3.3.1 Sampling method

A multi-stage sampling technique was employed to select sample respondents. In the first stage, four kebeles were selected purposively out of the 9 kebeles based on the large number of MSEs found in the kebeles. In the second stage, MSEs were stratified into three stratums based on their sector, stratum one representing Trade sector, stratum two representing the Service sector, and stratum three construction sectors. In the third stage, using simple random sampling technique 65 trade,35 service,20 construction stratum are selected that is a total of 120 sample is selected.

Table 2. Sample distribution

Type of Enterprises	Total Number of enterprises			Sample of Enterprises		
	Non Defaulters	Defaulters	Total	Non Defaulters	Defaulters	Total
Trade	2,569	949	3518	40	25	65
Service	496	54	550	22	13	35
Construction	23	12	38	14	6	20
Total	3,091	1,015	4,106	76	44	120

Source: Own design based on Dire Micro Finance Institution (2016)

3.3.2. Sample size determination

There are several approaches to determine the sample size. These include using a census for small populations, imitating a sample size of similar studies, using published tables, and applying formulas to calculate a sample size. This study applied a simplified formula provided by Yamane (1967) to determine the required sample size at 95% of confidence level and level of precision= 9%.

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

Where n is the sample size, N is the population size (total number of enterprises equal to 4,106) and e is the level of precision (equal to 9%). According to above formula this study wascarried out on 120 respondents.

3.4. Methods of Data Analysis

Both descriptive and econometric analyses were employed to analyze factors attributed for loan default problem, to identify the loan repayment performance and to find out the major distinguishing features characterizing defaulters and non-default borrowers.

3.4.1. Descriptive statistics

Descriptive statistics, one of the techniques, which were used to summarize data, collected from the respondents. By applying descriptive statistics such as, percentages, mean, standard deviation, maximum and minimum, one can compare and contrast different categories of samples with respect to the desired characters to draw some important conclusions. In addition, t-test and Chi-square test statistics were employed to compare defaulter and non-defaulter groups with respect to some explanatory variables.

3.4.2. Econometric model

An econometric model known as Tobit model was used to empirically identify the determinants of loan repayment performance of MSEborrowers.This model is also recognized as censored regression model in the sense that a sample in which information on the regressand (dependent variable) is censored.

The Tobit model was selected because loan repayment rate, which is the dependent variable, is continuous and censored.To evaluate the repayment performance of the MSEs, the variable loan repayment rate (LRR) was used as a dependent variable in the Tobit model. In this study the value of the dependent variable is repayment ratio were computed as the ratio of amount of loan repaid to the total amount borrowed. Thus, the value of the dependent variable ranges between 0 and 1 and a two-limit Tobit model which is based on maximum likelihood techniquewaschosen as a more appropriate econometric model based on Maddala, (1983) and Gujarati(2004). The structural equation of the Tobit model is given as:

$$Y^* = X_i\beta' + \varepsilon_i \tag{2}$$

e ~ N [0,s]

Denoting Y_i as the observed dependent (censored) variable

$$Y_i = \begin{cases} L \ if \ Y^* \le L \\ Y^* = X\beta + \varepsilon_i \ if \ L < Y^* < U \\ U \ if \ Y^* \ge U \end{cases} \tag{3}$$

Where:

Y_i = the observed dependent variable, in our case repayment ratio (ratio of amount repaid to the amount borrowed)

Y_i^* = the latent variable (unobserved for values smaller than 0 and greater than 1)

X_i = is a vector of independent variables postulated to influence repayment rate.

β_i = are parameters associated with the independent variables to be estimated.

ε_i = Residuals that are independently and identically normally distributed with mean zero and a common variance.

i = 1,2,…n (n is the number of observations).

L = lower limit

U = upper limit

By using the two-limit Tobit model, the ratio of repayment was regressed on the various factorshypothesized to influence loan repayment performance of MSEs in the study area.

The log likelihood function for the general two-limit Tobit model can be given as follow:

$$Log = -\frac{1}{2}\sum_{j\varepsilon c} W_j \left[\left(\frac{y_{i-x\beta}}{\sigma}\right)^2 + \log 2\pi\sigma^2 \right] + \sum_{j\varepsilon L} W_j \log \Phi\left(\frac{y_{Lj-x\beta}}{\sigma}\right) + \sum_{j\varepsilon R} W_j \log \left[1 - \Phi\left(\frac{y_{Ri-x\beta}}{\sigma}\right)\right] + \sum_{j\varepsilon I} W_j \log \left[\Phi\left(\frac{y_{2j-x\beta}}{\sigma}\right) - \Phi\left(\frac{y_{1j-x\beta}}{\sigma}\right)\right] \tag{4}$$

Where C's are point observations, L's are left censored observations, R's are right-censored observations, and I's are intervals. And Φ is the standard cumulative normal distribution, and the w_j is the normalized weight of the jth observation.

The Tobit coefficients do not directly give the marginal effects of the associated independentvariables on the dependent variable. But their signs show the direction of change in probabilityof being non-defaulter and marginal intensity of loan recovery as the respective explanatory variable change (Amemiya, 1984; Goodwin, 1992; Maddala, 1992).

Based on McDonaled and Moffit (1980), The Tobit model has an advantage in that its coefficients can be further disaggregated todetermine the effect of a change in the i^{th}variable on changes in the probability of being nondefaulter as follows:

1. The change in the probability of repaying the loan as an independent variable X_i changes is:

$$\frac{\partial \Phi(\delta)}{\partial X_i} = \emptyset(\delta)\frac{\beta_i}{\sigma} \tag{5}$$

2. The change in intensity of loan repayment with respect to a change in an explanatory variable among non-complete defaulters is:

$$\frac{\partial E(Y_i/U>Y_i>L,X)}{\partial X_i} = \beta_i\left[1 + \frac{\delta_L\emptyset(\delta_L)-\delta_U\emptyset(\delta_U)}{\Phi(\delta_U)-\Phi(\delta_L)} - \left[\frac{\emptyset(\delta_L)-\emptyset(\delta_U)}{\Phi(\delta_U)-\Phi(\delta_L)}\right]^2\right] \tag{6}$$

3. The marginal effect of an explanatory variable on the expected value of the dependent variable is:

$$\frac{\partial E(Y/X_i)}{\partial X} = \beta_i(\Phi(\delta_U) - \Phi(\delta_L))$$
$$\tag{7}$$

Where:

X_i= explanatory variables,

$\Phi(\delta)$ = the cumulative normal distribution

$\delta = \frac{\beta_i X_i}{\sigma}$ =the cumulative normal distribution

β_i = a vector of Tobit maximum likelihood estimates

σ= the standard error of the error term.

$$\delta_L = \frac{L - X_i\beta}{\sigma}$$

$$\delta_U = \frac{U - X_i\beta}{\sigma}$$

L and U are threshold values (L =0 and U =1)

φ and F are probability density and cumulative density functions of the standard normal distribution, respectively.

Obtaining efficient and unbiased estimates for models, which utilize censored samples requires the use of the tobit estimator with the assumption that the error terms are independently and normally distributed (Maddala, 1994). In this case an ordinary least squares model will lead to biased and inconsistent estimates. Furthermore use of a probit would forego valuable information because of using a dummy instead of a continuous variable.

The use of Tobit model to study censored and limited dependent variables has becomeincreasingly common in applied social science research (Smith and Brame, 2003). Most of the studies conducted in modeling the determinants of loan repayment used dichotomous discrete choice models (Logit and Probit) where the dependent variable is a dummy that takes a value of zero or one depending on whether or not aMSEsare defaulted.

However, thereare possible losses of information if a binary variable isused as the dependent variable. In addition, binomial models, explain only the probability that an individual made a certain choice (i.e. defaulted or has not defaulted) and they fail to takeinto account the degree of loan recovery. The linear probability model (LPM), even thoughcomputationally and conceptually simpler and easier than the binary choice models, it depends on the use of ordinary least squares (OLS) approach. Application of OLS to censored model however, inherently produces hetroscedastic disturbance term and as a result, the standard deviations of the estimates are biased. These inadequacies are minimized with the use of the Tobit model (Greene, 2000).

It is worth nothing that estimating the model using OLS would produce both inconsistent and biased estimates (Gujarati, 2004). This is because OLS underestimates the true effect of the

parameters by reducing the slope (Goetz,1995). Therefore, the maximum likelihood estimation is recommended for Tobit analysis.

3.5. Definition of Variables and Hypotheses

Dependent variable (LRR): The dependent variable of the Tobit model for this study is the proportion of loan repaid during the specified repayment period. This was calculated as the ratio of the total amount of loan repaid to the total amount due. Its value ranges between 0 and 1.

Independent variables

The explanatory variables selected for this study were broadly categorized under Individual entrepreneur characteristics, loan specific characteristics and business related factors. The loan repayment performance could be affected by these factors either positively or negatively. Therefore, a brief explanation of the explanatory variables and their influence on the loan repayment performance is presented below.

Individual entrepreneur characteristics

Ageof the owner (AGE): It is defined as the number of years the respondent has lived since birth until the survey was conducted. It is a continuous variable measured by number of years. Through time borrowersacquire experience in the business and/or credit use. Moreover, older borrowers may accumulate more wealth than younger ones. This result concur with those found by Swain (2007) who stated that with the increase in age, accumulated experience, practical and professional wisdom, increased its income generating capability and demanded more credit to explore capabilities or to spend on consumption. Therefore, this variable is hypothesized to have positive impact on loan repayment performance of respondents.

Sexof the owner(SEX): This is dummy variable in the model, which takes a value 1 if the borrower is male and 0, if the borrower is female. In some cases there is an intention that male borrowers have better managerial ability to run an enterprise than female ones, most studies attach positive sign to females in relation to repayment arguing that female borrowers feel more responsibility to their families than male. Dyar*et al*.,(2006) and D'Espallier*et al*., (2009) reported that women are considered to be ideal credit targets because of their proven high loan repayment rates when compared to men. This result contrasts the finding of Bhatt and Tang (2002) and Godquin (2004) who reported that men were most likely to repay than women. Therefore it was ambiguous to hypothesize the sign beforehand.

Educational level of the owner(EDUC): This is a continuous variable measured by level of educational attainment.It was assumed that as the borrower gets educated, he could acquire more knowledge so that his efficiency in allocation of resources increases and so does the proper utilization of the loan. A more educated owner is expected to use the loan effectively as compared to a less educated one (Amare and Bekabil, 2008).His ability to adopt himself to changing situation would be better than the illiterate ones, hence the variable is expected to have positive relation with loan repayment.

Saving habit of the owner (SAV): This is dummy variable in the model, which takes a value1 if the borrowerhas a saving habit and 0, if the borrower does not have a saving habit.Zeller (1996) stated that the presence of voluntary saving service in the Micro-finance institute improve the repayment performance of enterprises. If the owners save money in an institution before the failure, they may be willing to repay their loan. Since when they are in default, they will lose their saving. Thus, the saving behavior of ownersmay have low default rate (Bhatt and Tang, 2002).It was expected that this dummy variable was expected to have positive impact on repayment rate.

Level of Training of the owner (TRA): This is dummy variable in the model, which takes a value1 if the ownertook training and 0, if the owner does not get any training.If the borrower gets various training, he will able to understand the rule and regulation of lender easily. They will also develop skill on how to do business and money utilization. Training is needed not

only for owners but also for loan officers. In both case it has a positive contribution to the repayment rate. Norell (2001) also agree on the importance of training for the decreasing of default rate.

Loan specific characteristics

Efficient loan sizes (ELS): Pischke (1991)noted that sufficient loan sizes fit borrowers' repayment capacity and stimulate enterprise. If the amount of loan released is enough for the purposes intended, it will have a positive impact on the enterprise capacity to repay. On the other hand, in case of over and under finance, the expected sign is negative. If the amount of loan exceeds what the enterprise needs and can handle, it will be more of a burden than help and extra funds may go toward personal use (Norell, 2001), thereby undermining repayment performance. If the loan is too small, it may also encourage enterprise to divert the loan to other purposes (Vigano, 1993).Hence this variable is dummy which take 0 if the loan is not enough and 1 if the loan is enough, and positive sign is expected.

Suitable Repayment period (SRP): If the repayment period is suitable, the enterprisemay be able to perform better. For example, if there is grace period for some months after the loan disbursement, the entrepreneur can run their business without shortage of working capital. If the repayment period is relaxed, the amount of each installment required to pay will decrease, the debt burden on the enterprise will be smaller hence will not face difficulty in properly meeting his debt obligation. Hence, positive sign was expected.

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

Business related characteristics

Availability of other sources of income (OI): If the entrepreneur has other source of income, she/he may not spend the income that will be generated from the enterprise for other purpose but for the loan repayment. Even if the project may have faced with any failure to repay the loan, there could be a case that the enterprise could settle the loan from other source of income. Thus a positive sign was expected.

Sector (SEC): Firms in different sectors of the economy face different types of problems. That means the degree of those critical factors in food processing sector may differ from the factors that are critical to textile and garment and wood and metal work sectors (Admasu, 2012). In this study only three sectors are selected based on their high involvement in loan in the urban area of Dire Dawa and sector variable here wasa categorical variable, which takes a value1 if the borrower is involved in trade, 2 if the borrower involved in service and 3 if it involves in construction.Hence, this variable is expected to correlate with loan repayment positively.

Experience (EXP): Owner of MSE who acquired extensive experience in similar activity before the loan knows how to run a profitable business than new ones hence could have better repayment record. Therefore, the more the number of years in a business, the better would be the loan repayment performance (Amare and Bekabil, 2008). Thus, a positive sign was expected.

Revenue from the Business (RB): Was defined as the total income generated from the enterprise activities measured in Birr during a particular year.As annual business revenue increased greater chance of repaying the loan is expected. Therefore, the coefficient of this continuous variable is expected to appear with positive sign.

Table 3.Summary of variable definitions, measurements and hypothesis

Variable code	Description	Expected sign	Type	Measurement
LRR	Loan repayment rate		Continuous	Amount repaid divided by total amount borrowed x 100 • Defaulters, if LRR=0 • Non-defaulters, if $0<LRR\leq1$
AGE	Age of manager	+	Continuous	Number of years
SEX	Sex of manager	+/-	Dummy	0=female, 1=male
EDUC	Educational status	+	Continuous	Number of years
SAV	Saving habit	+	Dummy	0=no, 1=yes
ELS	Efficient loan size	+	Dummy	0=not enough, 1=enough
SRP	Repayment period	+	Continuous	Number of months
OI	Availability of other sources of Income	+	Dummy	0=no, 1=yes
RB	Revenue from the Business	+	Continuous	Amount in birr
SEC	Sector type	+	Categorical	1=trade, 2=service, 3=construction
EXP	Business experience	+	Dummy	0=first time, 1=experienced
TRA	Training	+	Dummy	0=no, 1=yes
FS	Follow up and supervision	+	Dummy	0=no, 1=yes

4. RESULTS AND DISCUSSION

This chapter discusses both results of descriptive and econometric analysis. Under descriptive analysis, individual entrepreneur characteristics, business and loan related variables computed by either chi-square or t-test. And econometric analysis was done by two-limit tobit model for independent variables with dependent variable of loan repayment performance.

4.1. Descriptive Results

4.1.1. Individual entrepreneur characteristics

Age of the owner (AGE): The average age of the sampled household heads was 37.3 years with the minimum and maximum ages of 23 and 65 years, respectively. The average age of non-defaulters was 36 years while that of defaulters was 44.21 years with mean difference significant at 1% probability level.

Sex of the owner (SEX): The sample composed of both male and female MSE borrowers. Of the total sample borrowers, 36.67% were male and 63.33% were female. About 10.83 and 5% of the respondents were female and male defaulters respectively, while 52.50 and 31.67% of the respondents were female and male non-defaulters respectively. The proportion difference tests in terms of sex between the two groups were not statistically significant.

Educational level of MSE owner (EDUC): The average educational level of MSE borrowers was 9.93. The largest educational status was 13 and the smallest was 1. The average educational status of non-defaulters was 9.92 while that of defaulters was 9.95 with no significant difference between means of the two groups.

Saving habit of MSE owner (SAV): The result below shows the saving habit of Dire MSE borrowers. Of the total sample of borrowers, 98.33% had saving account, while, 1.67%, of them did not have saving habit. About 15.83% of those who have saving habit were

defaulters, while 82.50% of those who had saving habit and 1.64% of those who did not have saving habit were non-defaulters.

Training of MSE owner (TRA): The result below shows those borrowers both who took training and those who did not take training from Dire MSE. Of the total sample of borrowers, 72.50% had taken training, while 27.50% did not take training. About 6.67% of those who had training and 9.17% of those who had no training were defaulters, while 65.83% of those who had training and 18.33% of those who had no training were non-defaulters. The mean difference between the two groups in terms of training was statistically significant at 1% significance level.

4.1.2. Loan specific characteristics

Efficient loan size (ELS): The result below shows the response of Dire MSE borrowers who had enough loan size and who did not have enough loan size. Of the total sample of borrowers, 54.17% had enough loan amounts, while 45.83% did not have enough loan size. About 5% of those who had enough loan amounts and 10.83% of those who did not have enough loan amounts were defaulters, while 49.17% of those who had enough loan amount and 35% of those who did not have enough loan size were non-defaulters. The mean difference between the two groups in terms of efficiency of loan size was statistically significant at 5% significance level.

Suitable Repayment period (SRP): The average repayment period of MSE borrowers was 12.88 months. The largest repayment was 36 and the smallest was 10 months. The average repayment period of non-defaulters was 12.93 while that of defaulters was 12.63. The mean difference between the two groups was not statistically significant

Follow up and supervision (FS): The result below shows the response of borrowers both that had continuous follow up and supervision and who did not have followed up and supervision. Of the total sample of borrowers, 96.67% had follow up and supervision, while 3.33% did not have follow up and supervision. Only 15.83% of those who had follow up and supervision were defaulters, while 8.83% of those who had follow up and 3.33% of those who did not

have follow up were non-defaulters. The mean difference between the two groups in terms of follow up and supervision was not statistically significant. This might not necessarily indicate that this variable has no influence on their repayment status but, unfortunately, due to the fact that majority of the borrowers had follow up and supervision, this makes it difficult to compare it to those who do not have follow up and supervision statistically.

4.1.3. Business related characteristics

Access to other income (OI): The result below shows the response of borrowers both who had access to other income and who did not have access to other income. Of the total sample of borrowers, 58.33% had access to other income, while 41.67% did not have access to other income. About 12.50% of those who had access to other income and 3.33% of those who did not have other income were defaulters, while 45.83% of those who had access to other income and 38.33% of those who did not have access to other income were non-defaulters. The mean difference between the two groups in terms of access to other income was statistically significant at 5% significant level. Since the majority of borrowers had other income source, it supported the business and enables them to repay their loan.

Sector (SEC): The result below shows the response of MSE borrowers for three types of business sectors; trade, service and construction. Of the total sample, 66.67%, 24.17% and 9.17% of MSE borrowers were categorized under trade, service and construction business respectively. About 8.33% of respondents under trade and 7.50% of respondents under construction business were defaulters, while 58.33% of respondents under trade, 24.17% of respondents under service and 1.67% of respondents under construction businesses were non-defaulters. The mean difference between the two groups in terms of sector types was statistically significant at 1% significant level.

Business experience (EXP): The result below shows the response of MSE borrowers in relation to their business experience. Of the total sample, 89.17% were experienced while 10.83% were first time in business. About 11.67% of experienced respondents and 4.17% of first time in business respondents were defaulters, while 77.50% of experienced respondents

and 6.67% of first time in business respondents were non-defaulters. The mean difference between the two groups in terms of business experience was statistically significant at 5% significant level.

Revenue from the Business (RB): The annual business revenue of MSE borrowers was 15,362.5 birr. The largest production income was 120,000 birr and the smallest was 0 birr. The annual business revenue non-defaulters was 17,980.2 birr while that of defaulters was 1,447.35 birr with a significant difference between means of the two groups at 1% significance level.

Table 4.Characteristics of dummy variables for the distribution of MSE borrowers by repayment status

Characteristics		Non-Defaulters(101)		Defaulters(19)		Total(120)		X^2-value
		No	%	No	%	No	%	
SEX	Female	63	52.50	13	10.83	76	63.33	0.2516
	Male	38	31.67	6	5.00	44	36.37	
SAV	Yes	99	82.50	19	15.83	118	98.33	0.3826
	No	2	1.64	0	0.00	2	1.67	
TRA	Yes	79	65.83	8	6.67	87	72.50	10.4602***
	No	22	18.33	11	9.17	33	27.50	
ELS	Enough	59	49.17	6	5.00	65	54.17	4.6392**
	Not enough	42	35.00	13	10.83	55	45.83	
FS	Yes	97	8.83	19	15.83	116	96.67	0.7784
	No	4	3.33	0	0.00	4	3.33	
SEC	Trade	70	58.33	10	8.33	80	66.67	42.0617***
	Service	29	24.17	0	0.00	29	24.17	
	Construction	2	1.67	9	7.50	11	9.17	
EXP	Experienced	93	77.50	14	11.67	107	89.17	5.6018**
	First time	8	6.67	5	4.17	13	10.83	
OI	Yes	55	45.83	15	12.50	70	58.3	3.9467**
	No	46	38.33	4	3.33	50	41.67	

*** Represents level of significance at 1% significance level

Defaulters, if LRR=0, Non-defaulters, if 0<LRR≤1

Table 5. Characteristics of continuous variables for the distribution of MSE borrowers by repayment status

Descriptive Results for continuous variables		Age (AGE)	Education (EDUC)	Repayment Period(RP)	Revenue from the Business (RB)
Non Defaulters (101)	Mean	36	9.92	12.93	17,980.2
	SD	9.74	2.58	4.05	21,165.06
	Minimum	23	1	10	2,000
	Maximum	65	13	36	120,000
Defaulters (19)	Mean	44.21	9.95	12.63	1,447.35
	SD	8.82	2.15	2.75	1,957.14
	Minimum	33	7	12	0
	Maximum	55	12	24	8,000
Total (120)	Mean	37.3	9.93	12.88	15,362.5
	SD	10.02	2.50	3.87	20,340.79
	Minimum	23	1	10	0
	Maximum	65	13	36	120,000
t-value		3.4195***	0.0423	-0.3.79	-3.3906***

*** Represents level of significance at 1% significance level

Defaulters, if LRR=0, Non-defaulters, if 0<LRR≤1

4.2. Results of the Econometric Model

The estimated results of the two-limit tobit model of the maximum likelihood and the marginal effects are shown in tables 4 and 5, respectively. A total of 12 explanatory variables were considered in the econometric model out of which five variables were found to significantly influence the loan repayment performance of MSE borrowers. These were repayment period (RP), efficient loan size (ELS), follow up and supervision (FS), business sector (SEC), and business experience (EXP). Of which, repayment period (RP) and efficient loan size (ELS) influence loan repayment performance at 10% significant level while follow up and supervision (FS), business sector (SEC), and business experience (EXP) influence repayment performance at 1% significant level. The remaining variables such as sex of borrowers (SEX), age (AGE), education level (EDUC), saving habit (SAV), training (TRA), other source of income (OI) and Revenue from the Business (RB) were found to have no significant effect on the loan repayment performance of Dire MSE borrowers.

Table 6. Maximum likelihood estimates of the two-limit tobit model.

Variable	Coefficient	Robust Std. Error	t-ratio	$P > |t|$
EDUC	0.012	0.023	0.54	0.476
AGE	-0.006	0.005	-1.06	0.141
RP	-0.017*	0.010	-1.69	0.082
RB	2.461	0.000	0.24	0.0342
SEX	0.165	0.127	1.30	0.189
SAV	0.118	0.224	0.53	0.589
TRA	0.000	0.134	0.00	0.702
ELS	-0.161*	0.092	-1.74	0.063
FS	0.602***	0.183	3.29	0.003
TRADE	1.320***	0.253	5.20	0.000
SERVICE	1.051***	0.273	3.84	0.000
OI	-0.112	0.116	-0.97	0.648
EXP	0.483***	0.132	3.65	0.000

Log pseudo likelihood= -74.2492   Number of observation=120

Prob>F=0.0000   19 left censored observations at LRR< = 0

$R^2 = 0.3585$ 65 uncensored observations

F = 6.87   36 right censored observations at LRR> = 1

Table 7. The marginal effects of change in explanatory variables

Variables	Effect of change in independent variable on the probability of being non defaulter. $$\frac{\partial \Phi(\delta)}{\partial X_i}$$	Effect of change in independent variable on dependent variable	
		For Non Complete Defaulters (N=19) $$\frac{\partial E(Y_i/U > Y_i > L, X)}{\partial X_i}$$	For all observations (N=120) $$\frac{\partial E(Y/X_i)}{\partial X}$$
RP	-0.007	-0.006	-0.012
ELS	-0.069	-0.059	-0.116
FS	0.153	0.220	0.426
TRADE	0.089	0.440	0.795
SERVICE	0.613	0.319	0.536
EXP	0.025	0.181	0.355

***,**and * indicate the level of significance at 1, 5 and 10 percent, respectively.

The marginal effects of changes in explanatory variables from tobit regression analysis were computed following the procedure proposed by McDonald and Moffitt (1980) and Maddala (1999). The derived values for the significant explanatory variables indicate that the effects of a unit change in those variables on the unconditional expected value of technical efficiency, expected value of technical efficiency conditional upon being between 0 and 1, and probability of being between 0 and 1 (Table 7).

Follow up and supervision (FS) is also among the economic factors that was, as expected, positively and significantly affected loan repayment performance of MSEs at 1% significant level. As the result indicated follow up and supervision given by MSE borrowers increases the probability of repaying the loan by 15.3% and increases the rate of loan repayment by 0.220 among non-complete defaulters and by 0.426 for the entire respondents. Norell (2001) stated the same thing that frequent follow up and supervision by loan officer help the borrower not to end up being defaulter. This studies shows whether flexible or more constant and frequent visit by loan officer always help to reduce defaulters. Norhaziah and Mohd (2013) stated on the case of microfinance program in Malaysia that the more frequent the MFIS officers visit borrowers' business premise, the higher probability of the borrowers to pay on time. The result is parallel with previous study of Papias and Ganesan (2009) found that loan monitoring is an important factor in increasing loan repayment rate among borrowers.

Therefore, borrowers should not be left on their own to handle repaying their money rather need to be motivated and reminded.

Business experience (EXP) is also among the economic factors that was positively and significantly affected loan repayment performance of MSEs at 1% significant level. As the result indicated having access to market increases the probability of repaying the loan by 3% and increases the rate of loan repayment by 0.222 among non-complete defaulters and by 0.433 for the entire respondents. Zelalem (2013) came up with similar conclusion that experienced borrowers have developed their credit utilization and management skills that helped them to pay loans timely. Therefore, the more the number of years in a business, the better would be the loan repayment performance (Amare and Bekabil, 2008). Stephen and Sunday, (2011) suggested that the length of experience in occupation was a potent factor in loan repayment. This was because experience provided the compass with which the entrepreneur navigated the turmoil business environment and was a veritable decision tool.

Tundui and Tundui (2013) also found that when borrowers possess experience and skills related to their business operations, those who had undergone training in business management (bookkeeping, marketing, planning and budgeting), and when they previously owned a business prior to accessing business loans were less likely to experience repayment

problems. This is because skilled and experienced borrowers are better able to manage their businesses but also make efficient use of their loans. Experience in the business operations is also able to amplify borrower's problem solving ability including seizing opportunities that are important to the growth of the business and their repayment abilities.

Business sector (SEC) is also among the economic factors that was positively and significantly affected loan repayment performance of MSEs at 1% significant level. Each additional increase of involvement in trade and service business sector increases the probability of repaying the loan by 8.9% and 61.3% and increases the rate of loan repayment by 0.44 and 0.319 among non-complete defaulters and by 0.795 and 0.536 for the entire respondents respectively. The type of business sectors together with market location affected loan repayment performance positively. According to the report of Abiola (2012) businesses located in the urban areas strive better due to infrastructure, working inputs, larger and more dynamic market. Business sectors in this sample like trade and service are found in urban, Dire Dawa city and this helped to reduce repayment difficulties.

Efficientloan size (ELS) is among the economic factors that was negatively and significantly affected loan repayment performance of MSEs at 10% significant level. Each additional unit of available efficient loan size decreases the probability of repaying the loan by 6.9% and decreases the rate of loan repayment by 0.59 among non-complete defaulters and by 0.116 for the entire respondents. This indicates that borrowers who satisfied on the loan size were end up being defaulters. Tundui, C. and H. Tundui (2013) reported the case of Micro and Small Women Business Entrepreneurs in Tanzania that as the loan increases in size, borrowers are more likely to report repayment difficulties. In other words, borrowers with bigger loans are more likely to default than borrowers with smaller loans. Tesfaye (2013) reported on a case study in DebitCredit and Saving Institution (DECSI) for group borrowers in Ethiopia that the probability of loan repayment decreases for group borrower that perceived the loan amount is enough as compared to group borrowers who did not satisfied with the loan amount that borrowed, other variables kept constant. Therefore, borrowers who supposed that granted loan size is enough to conduct the intended investment poorly perform loan repayment than those borrowers agreed granted loan size is not as much enough to carry out investment.

Repayment period (RP) is among the economic factors that was negatively and significantly affected loan repayment performance of MSEs at 10% significant level. Each additional months of repayment period decreases the probability of repaying the loan by 0.7% and decreases the rate of loan repayment by 0.06 among non-complete defaulters and by 0.12 for the entire respondents. Guttman (2007) found that weekly repayment basis is more suitable than monthly basis because it can identified defaulters early and can be pushed by the bank officer to "keep step" in their loan repayment. His discovery together with this study indicated whenever long repayment schedule is set, borrowers end up being defaulter. However, Field and Pande (2008) found that no significant effect of type of repayment schedule either weekly or monthly on client delinquency and default. They suggested a more flexible schedule to the clients because it can reduce transaction costs. Abreham (2002) also reported on the case of private borrowers around Zeway area that projects with long term repayment period are found to be defaulters. This supports the hypothesis that as repayment period of projects gets longer the probability that the loan is subjected to risk and uncertainty will increase. According to these studies, long repayment period induce repayment problem and borrowers become defaulters.

5. SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary and Conclusion

This study was conducted to identify individual entrepreneur, business and loan related factors affecting loan repayment performance of MSEs in Dire Dawa. Both Primary and secondary sources were used to carry out the study. A total of 120 MSEs were selected by multi-stage sampling method from four *kebeles* of the city. The descriptive statistics results showed that about 19(15.83%) and 101(84.17%) of the sample MSEs were defaulters and non-defaulters respectively.

The t- test showed that there was a significant difference between the defaulter and non defaulter group in terms of age of the manager and Revenue from the Business (RB)at 1% significant level. The chi-square tests also revealed a significant difference between defaulters and non-defaulters in terms of training, business sector type and at 1% significant level, and in terms of efficient loan size, access to other income and business experience at 5% significant level.

The result of two-limit tobit econometric model showed that, from a total of 12 explanatory variables used in the regression model, five variables such assufficient repayment period (SRP), efficient loan size (ELS), follow up and supervision (FS), business experience (EXP) and types of business sector (SEC) had statistically significant influence on the loan repayment performance of the sample MSE borrowers.

Sufficient Repayment period affected loan repayment performance negatively and significantly. This is due to the fact that whenever there is extended period to repay their loan there might be a change for them to divert their income for other activities other than repaying their loan. Number of years of experience in business activities is a factor, which positively related to the dependent variable. This might indicate enterprise who acquired extensive experience in similar activity before the loan knows how to run a profitable business than new ones hence could have better repayment record. This might because of the fact that those

borrowers that have participated in the same business for many years have developed the skills of using new business making ways that would increase their income. This ultimately improves the loan repayment performance of the MSE borrowers. In addition, those borrowers that are regular participants in credit benefits are the one who exactly knows how to avoid the challenge of being defaulter and are likely to make conscious decision to repay loan timely.

The type of business sector an enterprise involved is the other factor that affected loan repayment performance positively. Involving in the business sector of trade and service positively affected loan repayment rate. In case of construction it may not be the same since the business is filled with critical problems and more exposed to risk. Therefore, being a business man in the sector of trade and service might reduce the probability of being defaulter. Efficient loan size affected negatively and significantly. If the amount of loan is enoughit may go toward personal use thereby undermining repayment performance. Follow up and supervision made by loan officer affected loan repayment performance of borrowers positively and significantly. There is a possibility to remind the obligation and motivate the enterprises for repaying the loan.

5.2 Recommendations

Based on the findings of the study, the following recommendations are forwarded.

Financial institutes like Dire Micro and Small Enterprises should carefully watch in what kind of sector an enterprise involved. It will be better if the loan is given to trade and service enterprise since it is known for high loan repayment performance. And also other business types where there are relatively few problems and challenges to be dealt by the scope of the skill of the business man and his/hers loan amount. Business activities in the area of construction needs much careful attention since the problems and challenges in the area are difficult to be dealt with in the scope of micro and small enterprises.

The loan amount is the other direction that needs closer attention since it tend to affect repayment performance negatively because of the fact that borrowers usually ask loan amount they so that there might be loan diversion for personal needs other than the enterprise. Therefore, all financial institutes has to look the business proposal carefully for all cost analysis's to release adequate loan, not more or less than desired.

As the study indicated increment in number of months of repayment period decreases loan repayment performance. Therefore, financial institute should be careful not to give extended payback time since the borrowers end up being defaulters. Further study is recommended so as to determine the optimum number of months that enable the borrowers' payback on time, effectively and without being stressed.

According to this study and others it is comprehended that borrowers usually need continuous remembrance for the repayment schedule otherwise they end up being defaulters. Therefore, financial institute should make qualitative and quantitative follow up and supervision on how is the business and loan repayment is going.

In most studies, experienced enterprises keep the repayment schedule, and tend to be non-defaulters than first time business men. Financial institutes should give affirmative action for the first time business men in two ways. First, it is important to give them grace period until they are able to stand on two legs. Grace period is a period given by the institutes until it start the fixed repayment period schedule. Secondly, training on the 'how to run business' is crucial. And also, giving them holistic, continuous and quality supervision should go hand in hand.

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7.APPENDICES

7.1 Appendix Tables

Appendix Table1. Repayment status of MSEs

Repayment status	Freq.	Percent
Defaulter	19	15.83
Non-defaulter	101	84.17
Total	120	100.00

Appendix Table2.Summary of loan amount repaid, loan amount received and LRR of MSEs

Variable	Observation	Mean	Std. Dev.	Min.	Max.
Loan Repaid	120	8,845.167	8,733.237	420	50,000
Loan received	120	12,808.33	14647.14	1,000	80,000
LRR	120	0.62	0.38	0	1

7.2. Survey Questionnaire and Interview Schedules

QUESTIONNAIRE
HARAMAYA UNIVERSITY
COLLEGE OF AGRICULTURE AND ENVIRONMETNTAL SCIENCES
DEPARTMENT OF AGRICULTURAL ECONOMICS
CEP PROGRAM

Dear respondent,

Your response to this Questionnaire will serve as source of information to the research paper to be done for thesisentitled*'Determinants of Loan Repayment Performance:The Case of Micro and Small Enterprises in Dire Dawa Administration'.* Any response you provide here is strictly confidential and will be used exclusively for the research purpose. No individual's responses will be identified as such and the identity of persons responding will not be published or released to anyone. Your honesty in responding the right answer is vital for the research outcome to be reliable. Thank you in advance for your kind cooperation and dedicating your time.

Sincerely,

Salem Abera

l. Individual entrepreneur characteristics

1. Sex of the manager (SEX) ☐Male ☐Female

2. Age of the manager (AGE) _____

3. Manager education (EDUC) _____

4. Do you have saving account (SAV)? ☐Yes ☐No

5. If yes, where do you save your account?

    ○ In Dire Micro Finance Institution

    ○ In Banks

    ○ Both in Banks and Dire Micro-finance Institute

    ○ Privately

6. For what purpose do you save?

    ○ To expand business

    ○ For personal needs

    ○ For consumption

    ○ For emergency

    ○ For repayment

7. Did you take training from Dire Microfinance (TRA)? ☐Yes☐No

8. If yes, what kind of training did you take?

    ○ How to do business training

    ○ Training on different microfinance service (credit, saving, insurance)

    ○ Both on business and microfinance training.

9. was the training useful? ☐ Yes ☐No

II. Loan specific characteristics

10. What is the purpose of taking the loan?

_____

11. Do you use the loan for the intended purpose or you divert it for other purpose?

_____

12. From where do you take the loan?

    ○ From Dire Micro Finance

    ○ From Other Source

13. Do you have access to get the loan from other institutions?

_____

14. Do you have access to get loan from informal sources?

○ Relatives

○ Friends

○ Informal money lenders

○ From other source

15. Sufficient loan size (SLS)/WAS IT ENOUGH?

    ○ No

    ○ Yes

16. The condition of loan interest

    ○ Too much

    ○ Suitable to repay

    ○ Very small

17. The year and month the loan received._____.

18. Repayment period (RP) in month's _____ was it suitable for repayment?

  ○ Suitable

  ○ Not suitable

19. What is the total investment cost?_____

20. Amount loan taken in birr (LA) _____

21. Amount repaid in birr (LR) _____

22. If all amount of loan is not repaid, what is the reason for not repaying the loan?

_____

23. Is there any continuous follow up and supervision to evaluate theloan utilization

andrepayment (FS)?   ☐ yes   ☐ no

III. Business related characteristics

24. Sector (SEC):

  ○ Trade

  ○ Service

  ○ Construction

25. Do you involve in different activity including urban agriculture at any scale?

_____

26. Do you have other source of income other than your business (OI)? ☐ yes ☐ no

27. If there is other source of income, what is the average amount of income you get?

In week,month,year_____.

28. Business experience in years (EXP) _____

  o Experienced

  o First time

29. Income from your products (RB) _____