Innovations

Determinants of loan repayment of Microfinance institutions in Ethiopia

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Abstract
The loan repayment of borrowers in microfinance institutions is influenced by different factors such as borrowers' characteristics, loan characteristics, project characteristics, and lending institutions related factors. Hence, the objective of this study was to identify the determinants of Credit default of Microfinance institutions in Ethiopia. To this end, the researcher employed a mixed research approach with a correlational research design where the effect caused by the independent variable on the dependent variable is observed through regression analysis. The primary data were collected from 161 sampled borrowers using a structured questionnaire. The researcher used a binary logistic model to identify the effect of explanatory variables on the dependent variable. The result of regression analysis showed that out of ten independent variables incorporated in the model eight variables such as being female, age, lack of experience, having other sources of income, lack of financial planning skill, loan diversion rate, involved in service sector business activity, and project follow up are statistically significant respectively. Based on the findings of the study, the researcher forwarded possible recommendations for the MFIs to improve loan repayment of private borrowers more than the current status.

Keywords*: 1.Credit Default, 2.borrowers, 3.Determinants, 4.Microfinance institutions5.,loan repayment*

Introduction

The purpose of microfinance is to fight poverty through the improvement of socio-economic conditions of the poor who have been kept out of the conventional banking practice on the ground that they are poor and unbendable (Colombet, 2001; Cull, Demirgüç-Kunt, &Morduch, 2009Hermes & Hudon, 2018;). Services rendered by microfinance institutions are not limited to credit facilities only, but it encompasses savings, insurance, and money transfers.The institutional outreach and sustainability of MFIs will be achieved if credit is collected back from customers but the opposite is true credit is not collected on its maturity date ((Hermes, Lensink, R., & Meesters 2011).

The loan is the most important asset of the MFIs and on-time repayment (non-default loan) has a positive influence on MFIs performance while default payment harms MFIsperformance. Consequently, various research works have been conducted on factors affecting loan repayment in different countries outside Ethiopia. For instanceGodquin (2004); Koopahi and Bakhshi (2002);Muiruri(2014); Kohansal et al., (2008);

Geraid&Deograties (2013);Ume et al., (2018); Addae-Korankye (2014); Okorie (2004);and Ramanujam&Vidya (2017). Has studied the topic and found out that loan repayment of MFIs is influenced by demographic characteristics of borrowers and economic factors MFIs.When it comes to Ethiopia, very few researchers have also researched the issue under the study. For instance, Binyam (2013), Shaik and Tolosa (2014); Ayele, (2018); Haile (2015); Girma (2018); Tegen (2021); Kiros (2022) studied the same topic by focusing on borrower nature factors affecting loan repayment. But, this study is different from empirical studies reviewed above by focusing on factors affecting credit default from three additional dimensions lending institution, loan nature, and project-related factors. Thus, the aforementioned problem necessitates the present study to be conducted. The objective of this study is to identify determinants of credit default of microfinance institutions in Hawassa city, Sidama Regional State, Ethiopia by filling the above-mentioned methodology, conceptual, and time gaps.

The objective of the study

The overall objective of the study was to identify the determinants of loan repayment of borrowers in MFIs. Based on the general objective, the specific objectives that were achieved in this study are as follows:

1. To identify the effect of socio-economic characteristics such as gender, age of borrowers, education level, financial planning skill, experience, and other sources of income on loan repayment of private borrowers.
2. To examine the impact of MFI related variable (project continuous follow up) on loan repayment of borrowers
3. To examine the impact of the loan related factors like loan repayment period and loan diversion rate on loan repayment of borrowers

Review of Literature &Research Hypotheses

The 10 variables incorporated in this study were categorized into four major classes of borrowers' characteristics (gender, age, education, experience, another source of income, and financial management skills). The second major category is loan-related factors includes, including repayment period and loan division rate. The third category is project-related which is a type of business. The fourth category is an institutional factor which is project follow-up. These are explained below.

a) Borrowers' Characteristics

Gender (GEN): many researchers argue that females were better payers than male borrowers, taking into consideration they're being more entrepreneurial which results from assuming more responsibilities in the internal affairs of a household. However, some researchers have found the opposite result. Ofbaga (2018) used a binary logistic regression model that indicated that female borrowers havea positive impact on loan repayment. Accordingly, the research hypothesis can be developed by the researcher as:

H1: ***Being a female borrower is positively related to loan repayment***

Age (AG): Usually at a certain level of age limit, borrowers get more stability and experience, and beyond a certain age limit this variable has a positive relationship. This shows as people get older, their ability to effectively use loans and generate income declines. Fikirte (2011) employed a logit model and found out that age was found to be statistically significant i.e. as age increased; the probability of being a defaulter is decreased. Hence, the researcher has developed the hypothesis as:

H2: Increase in the age of the borrower has a negative and significant impact on loan repayment

Education Level (EDL): Considering normal circumstances, a more educated borrower is expected to use the loan effectively as compared to a less-educated one. Ayele (2016), Muluken (2014), Abreham (2002), and Girma (2018) find out that the education level of borrowers has a positive and significant influence on loan repayment. So, the research hypothesis can be developed as:

H3: Increase in education level has a positive and significant impact on loan repayment

Experience: it is a continuous variable. Borrowers who have been in business longer are expected to be more successful with their enterprise. Empirical studies byOfbaga (2018), Birhanu (2008), Muluken (2014), and Ayele (2016) find out that experience in doing business has a positive impact on the loan repayment of borrowers. Therefore, the hypothesis can be stated as:

H4:lack of experience in doing business has a negative influence on loan repayment of borrowers

Availability of Other Source of Income: If the borrowers have another source of income, it is expected that he/she will cover/ her other expenses from that income which is out of the project and it is assumed that this will result in a higher deposit of money from the outcome of the project, which will help the borrower to have successful loan repayment performance. A study by Girma (2018) found that the availability of another source of income has a positive impact on the loan repayment of borrowers. For this reason, it can be hypothesized that:

H5: Availability of another source of income has a positive influence on borrower's loan recovery capacity

Financial management skill: it is a continuous variable. The marketing skill of the project or business manager is the factor that leads to the success or failure of business on one hand and payment within the due date or not of loan borrowed from a lender. A study byOfbaga(2018) has suggested that having marketing skills has a negative on loan repayment of the borrowers. Hence, the research hypothesis can be constructed as:

H6: lack of good financial planning skills has a negative and significant influence on loan repayment of the borrowers:

b) Loan-related characteristics

Loan Diversion Rate (**LDR):** The impact of this variable depends on for what purpose the diverted loan is put. If they are used for more productive purposes than the intended ones, then repayment will be enhanced and loan default can be reduced. On the other hand, if the loan is diverted to non-productive uses, it will have a positive impact on the loan default. Studies byBirhanu (2008),(and Shaikand Tolosa, 2014), concluded that the loan diversion rate has a negative relationship with the loan repayment of borrowers. Hence, it can be hypothesized as

H7. The loan diversion rate has a negative and significant on loan repayment

Repayment period (RIP): It is a continuous variable**.** If borrowers find the repayment period-appropriate, they can utilize the loan proceeds effectively for the intended purpose than those who regard the period of repayment unsuitable. The research findings (Shaikand Tolosa, 2014) concluded that repayment has a positive influence on loan repayment of borrowers. In opposite direction,Ofbaga (2018) find out that the loan repayment period has a negative and significant impact on loan repayment. Hence, the research statement can be constructed as:

H8: The repayment period has a negative relationship with loan repayment of borrowers.

c) Project-related factors:

Type of project (TP): It is argued that different types of projects have different levels of risk hence profitability. Thus, borrowers with different types of projects may have different repayment rates. However,

it is expected that borrowers who engage in service giving sectors are expected to have successful loan repayment performance; this is because now a day the demand for service giving sectors is highly increasing. Hence, the hypothesis can be:

H9: Participating in the business sector has a positive impact on loan repayment of borrowers

d) Institutional factors:

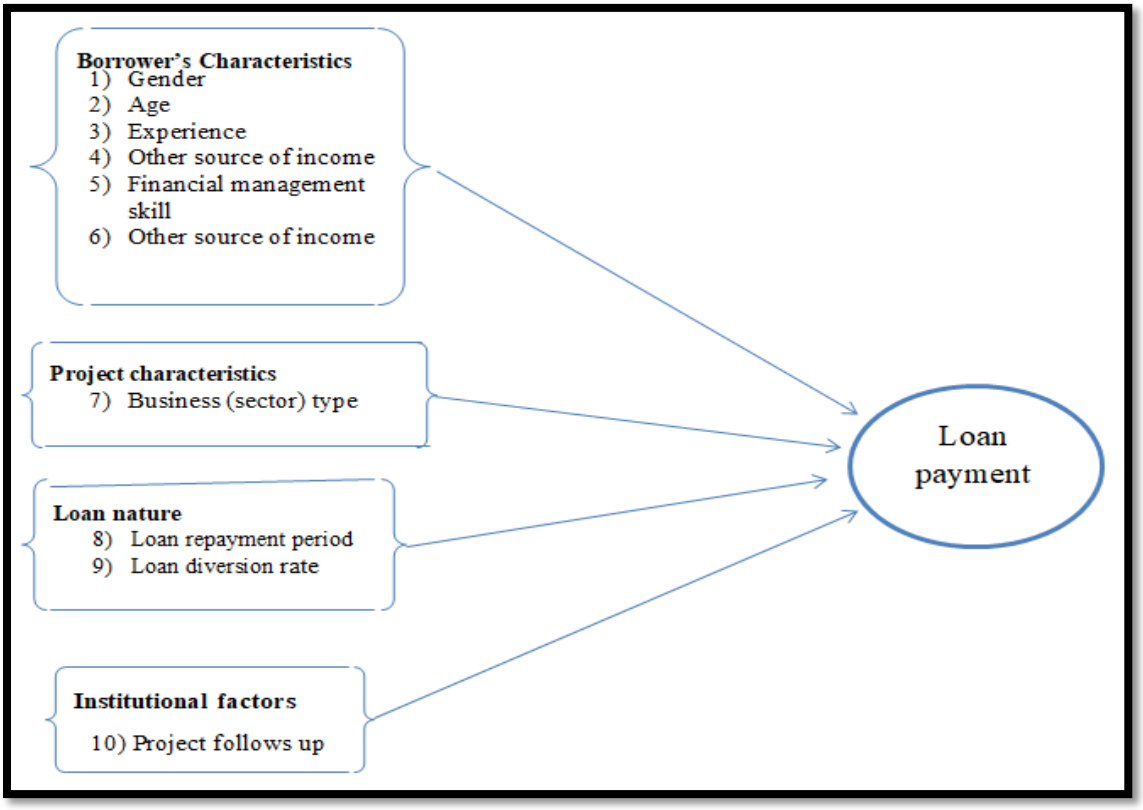
The project follows up (PF): Frequently, Project follow-up is an important factor inthe loan repayment performance of the financed project. Studies, by Ayele (2016), Muluken (2014), and (Ofbaga, 2018) find out that project follow-up has positive and statistically significant. Hence, it can be hypothesized that:

H10: Effective project follow up and control has a positive and positive impact on loan repayment of borrowers

Conceptual Framework of the study

The independent variables are classified based on four dimensions such as characteristics of the borrowers, project type, loan, and MFI, related factors in the rectangle on the left side havea significant impact on the dependent variable (loan repayment of borrowers) in the rectangle at the right side as follow:

Figure1: Conceptual Framework



Source: researcher's construct (2022)

Materials & Methods

Research Design

The foremost purpose of this study is to identify the determinants of credit default concerning Microfinance. To achieve this objective, an explanatory research design will be employed for the study. Explanatory research design helps to identify and evaluate the relationship between the different variables under consideration

Research Approach

The research approach employed in this study is a quantitative research approach due to the nature of the data.

Sampling Design

Currently,40 Microfinance Institutions are Operating in Ethiopia. The target population of this study is borrowers in the Microfinance Institutions in Ethiopia duringJanuary 2022. But due to financial constraints, the researcher purposively selected five MFIs such asOmo Micro Finance, Sidama Micro Finance, Vision Fund Micro Finance, Agar Micro Finance, and Kendile Micro Finance because they are currently active in Hawassa city, Ethiopia. There are 341 active borrowers in five MFIs. To determine the sample size of total borrowers, the mathematical formula of Yamane (1967) was used by taking into account the total population, the sampling error, and the level of reliability. It is assumed that the sample would have 95% reliability in population and a sampling error was 5%. This simplest formula is: -

$$n = N/1 + (e)^2 * N \ldots\ldots(1)$$

Where N= study population, n = sample size and e = error margin

Accordingly, the sample was first determined from the total target population by the formula of Yamane (1967) as follows:

$$184 = 341/1 + (0.05)^2 * 341$$

Therefore, the maximum sample size from 341 borrowers of MFIs in Hawassa was 184 borrowers.

Sources of Data and Method of Data Collection

The type of data to be used in this research will have a nature of both types: qualitative and quantitative types. Questionnaires and Interviews are the means of data collection from the targeted group of respondents in the MFIs. The questionnaires were distributed to the borrowers and are composed of both open-ended and close-ended types, and the interview will be an open discussion to get further information about determinants of credit default.

Econometric model Specification

The dependent variable can be defined as whether borrowers had delayed repayment of the loan to MFI or not. Hence, if the borrower had not any delayed repayment, the value of the dependent variable will be 1 and otherwise 0. The empirical pieces of evidence like Shaikand Tolosa, (2014); Ume et al, (2018); Girma (2018), and Ofbaga(2018) used the binary logit model in analyzing determinants of loan repayment in different study areas. Accordingly, the binomial logistic regression model of this study becomes:

$$P(Y) = \frac{e^{\beta 0+\beta 1GEN+\ \beta 2AGE\ +\beta 3EDL+\beta 4LBE\ +\beta 5AOSI+\ \beta 6LFP+\ \beta 7\ LDR+\ \beta 8PT+\beta 9RPT+\ \beta 10PFU}}{1+e^{\beta 0+\beta 1GEN+\ \beta 2AGE\ +\beta 3EDL+\beta 4LBE\ +\beta 5AOSI+\ \beta 6LFP+\ \beta 7\ LDR+\ \beta 8PT+\beta 9RPT+\ \beta 10PFU}} \quad \ldots\ldots(2)$$

P(Y) denotes the probability of loan repayment. Logit model limits probabilities for values of the dependent variable between 0 and 1. The symbols such as GEN, AGE, EDL, LBE, AOSI, LFP, LDR, PT, RPT, and PFU denotes the independent variables that influence loan repayment of DBE borrowers. β0, β1 up to β_{10}, known as the parameters of the model are the intercept and slope coefficients respectively.

Methods of Data Analysis

After the accomplishment of the data collection procedure, it should have been classified as per each variable, the qualitative data has been coded to be measured quantitatively. In this research, data has been analyzed by using descriptive statistics such as maximum and minimum values, average, correlation, frequency, percentage, variance, and standard deviation and inferential statistics (binary logistic regression model) through SPSS version 23.0 to get the reliable finding.

Results

This part of the paper deals with the analysis of the data that was collected through a structured questionnaire from sampled borrowers. To this end, the researcher distributed a total of one hundred eighty-four (184) questionnaires. Out of the 184 questionnaires distributed to the borrowers, one hundred sixty-one (161) questionnaires were correctly filled and returned. This implies that the response rate of the research was eight seven-point fifty percent (87.50%) which indicates more than half of the respondents have participated in the process of data collection. Then, the data analysis was done using the statistical package for social science version 23.0 based on 161 questionnaires properly filled and collected. The descriptive and regression analysis has been done as follows:

The Result of Descriptive Statistics

Table 4: Summary of Descriptive Statistics for all Variables incorporated in the model.

	N	Minimum	Maximum	Mean	Std. Deviation
Loan repayment (LRP)	161	0	1	.61	.490
Gender of the borrowers(GEN)	161	0	1	.61	.490
Age of the borrowers (AGE)	161	1	4	2.24	.973
Education level (EDL)	161	1	5	2.86	1.066
Business experience(BE)	161	0	1	.29	.453
Other source of income (OSI)	161	1	5	3.4027	.87750
Lack of financial skill (LFPS)	161	1	5	3.1183	.81610
Loan diversion rate (LDR)	161	1	5	3.0409	.91812
Project type (PT)	161	1	5	3.0486	.73458
Repayment period (RPT)	161	0	1	.55	.499
Project Follow up (PFU)	161	0	1	.45	.499

Sources: Personal survey, 2022

Loan repayment (LRP) was the dependent variable of this study and was measured by a dummy scale through yes or no questions. The summary statistics table shows approximately 61 percent of the sample are no defaulters while the reaming 39 percent of the total sample are defaulters. The gender of respondents as one explanatory variable which is a dummy variable considered as (female respondent = 0) and male = 1) was already displayed in table 4 above showed that 62 percent of the sample is male and the reaming 38 percent are female borrowers. This implies that more than half sample observation or the majority of respondents were male borrowers. The age of the respondents is independent as can be observed in the table 4 given the average value of the age was 2.24 which indicates the majority age of the respondents fall within the age interval of 25 to 46 and above years because it was coded as (< 25 years = 1), (from 25 to 36 = 2), (37 to 46 years =3) and > 47 = 4) to enter into SPSS for analysis purpose.

The education level of the borrowers was also measured by an ordinal scale that rangedthe education status of respondents as (below diploma = 1), (diploma =2), (first-degree level = 3), (masters candidate = 4) and master and above =5). The average value of education level as shown in the above table 4.5 was 2.86 ≅ 3 indicates that the majority of respondents have completed a BA degree education. With regarding business experience (BE) of borrowers was measured on a nominal base dummy variable represented by 0 = experienced, but not experienced internal auditors represented by= 1). The average of yes or no questions shown in the above table was 0.29 means 29 percent of respondents were not experienced in conducting audit work but the reaming 71 percent of the borrowers sampled were experienced borrowers. The other source of income (OSI) as a factor affecting loan repayment was measured on 5 point liker scale the average was 0.4 or 40%. This indicates that the majority of respondents around 60% haveanother source of income but only 40% of the respondents have no other source of income. The financial planning skill (LFPS) is measured on the same Likert scale base as shown in the above table 4 with an average value of 3.11 implies that on average the agreement or disagree was approximate which fell around 3 the value of neutral is neither positive nor negative but indirectly will negative perception because not putting agreement or being neutral in human behavior in a given situation by itself is the negative attitude of the borrowers.

LDR has an average value of 3.01 and hasan average value of more than three which indicates that more respondents have not stated their positive agreement on questions asked to measure the loan diversion rate. This conveys that the probability of having a loan diversion rate is low by borrowers of MFIs Hawassa. Concerning project type (PT) which is fall (3 = service), (4= agro-processing), and (5= urban agriculture)} The above table shows that about 3.40 percent of sampled respondents participated in agro-processing. Lastly, the repayment period (RP) is measured on an ordinal scale basis from lower to higher probability (short =0) and long period (= 1) of the responses. The average value of repayment period as already in the above table 4 showed approximately 56 percent of the loan is long repayment period while the remaining 44 percent of sampled borrowers responded that they short loan repayment period for the fund taken from MFIs. Concerning project follow-up and supervision of MFIs, it was measured through the nominal scale of measurement since it was considered a discrete variable and coded as (0= for not getting follow up and supervision and (1= get supervision and follow up services provided by bank loan officer). Table 4 indicates that (45 percent) of borrowers were getting in supervisor service and the remaining 55 percent) of borrowers were not getting loan repayment to follow up and supervision. This result indicates, to ensure repayment, less peer pressure from the bank to make the borrowers repay the loan.

Pearson correlation matrix

The correlation matrix for this study was computed as follows in table 5

Table 5: Pearson correlation matrix for variables

Sources: Personal survey, 2022

Variable	*LPR*	*GEN*	AGE	*EDL*	*BE*	*OSI*	LFPS	*LDR*	*PT*	*RPT*	*PFU*
LRP	1										
GEN	-.226*	1									
AGE	.240**	.030	1								
EDL	-.060	.036	-.015	1.							
LBE	-.254**	.028	-.059	.098	1						
OSI	.528**	-.066	.126	.074	-.012	1					
LFPS	-.089	.150	.143	.055	-.077	.028	1				
LDR	.561**	-.139	.103	-.026	-.153	.326**	-.023	1			
PT	.475**	-.107	.078	.007	-.187*	.269**	.206**	.701	1		
RPT	.200*	-.056	.019	.020	-.067	.043	-.153	.076	.002	1	
PFU	-.165*	.014	.030	-.054	.087	-.245**	-.175*	-.165*	.014	-.054	1

**Correlation is significant at a 1 % significance level, * Correlation is significant at a 5 % significance level (two-tailed).

Table 5 shows the relationship between the dependent variable (loan repayment (*LRP*) and independent variables with a coefficient of correlation of 1.00 indicates that each variable is perfectly correlated with the other. The result shows that (Age of the respondents (*AGE),* Business experience (BE), another source of income (OSI), loan diversion rate (LDR), and project type (PT) were found to be significantly correlated with Loan repayment (LRP) at 1% significance level (as P<0.01. But, other variables such as gender of the borrowers (GEN), repayment period (RPT), and lending method of the DBE (LM) were found to be significantly correlated with Loan repayment (LRP) at a 5% significance level (as P<0.05. As it can be seen from table 5 education status of borrowers (EDL) and the financial planning skill of borrowers have no relationship with loan repayment (LRP) since p>0.01 and 0.05.

Binary Logit Model Regression Result

The results of the binary logistic model on determinants of loan repayment of performance of borrowers are presented in table 6 a total of 10 explanatory variables were incorporated in the model (often referred to as logistic regression). Out of these, 8 variables Such as gender of borrowers, age, business experience, another source of income, financial planning skill, loan diversion rate, repayment period, and project follow up of the bank were found to significantly influence the probability of loan repayment at different significance level.

Table6: The Regression result of the study

Variables in the Equation								95% C.I.for EXP(B)	
Variable		B	S.E.	Wald	Df	Sig.	Exp(B)	Lower limit	upper limit
Step 1[a]	GEN	-1.417	.737	3.699	1	.054*	.243	.057	1.027
	AGE	.851	.359	5.622	1	.018*	2.342	1.159	4.733
	EDL	-.511	.335	2.316	1	.128	.600	.311	1.158
	LBE	-1.406	.766	3.373	1	.066*	.245	.055	1.099
	OSI	1.617	.501	10.421	1	.001**	5.040	1.888	13.454
	LFPS	-1.344	.537	6.267	1	.012*	.261	.091	.747
	LDR	2.394	.560	18.260	1	.000**	10.959	3.655	32.861
	PT	2.750	.686	16.093	1	.000**	15.643	4.081	59.954
	RPT	1.113	.698	2.541	1	.111	3.045	.775	11.968
	PFU	-1.181	.702	2.827	1	.093*	.307	.078	1.216
	Constant	-15.103	3.462	19.028	1	.000	.000		

a. Variable(s) entered on step 1: GEN, AGE, EDL, LBE, OSI, LFPS, LDR, PT, RPT, and PFU.

Step1 -2 Log likelihood = 65.285a, Cox & Snell R Square = 0.6070, Nagelkerke R Square = .822

**Regression is significant at 1 % significance level, * regression is significant at 5 % significance level respectively.

Sources: Personal survey, 2022

Cox & Snell R Square with value (R2=0.6070) shows that about 60.70 percent of change inloan repayment is explained by independent variables incorporated in the model.While 39.3 percent variation in loan repayment could be explained by exogenous variables outside the model.

Discussions

a) Gender of the Borrowers: With regard gender of the borrowers**,** theregression result of the study showed that being male borrowers with a regression coefficient of (β= -1.417) and (p-value =0. 054) has negative and statistically significant at 10% level of significance because p-value =0. 054<0.1) and (Wald statistic =3.699) is outside lower (0.057) and upper limit (1.027) at a 90% level of confidence. Hence, H1 is accepted. This result is consistent with the finding by Ofbga (2018) who has used a binary logistic regression model that indicated that female borrowers have a positive impact on loan repayment. But dissimilar by finding by Abreham (2002) studied the same topic using the Tobit model found sex (being male) has a positive and significant relationship with loan repayment.

b) Age of the Respondents: Concerning the gender of the borrowers, the regression result of the study showed that an increase in age of the respondents with a regression coefficient of (β= 0.851) and (p-value =0. 018) has a positive and statistically significant at 5% level of significance because p-value =0. 018<0.05). Therefore, H2 is rejected. This result is consistent with finding by (Pasha &Negese, 2014).). determinants of loan repayment ' are through binary logistic model out of which 9 variables such as age (negative), education (positive), time-lapse between loan application and disbursement (negative), loan size (negative), loan diversion (negative), repayment period (positive), number of dependents (negative), training (positive), and supervision (negative) were determinants of loan repayment of borrows of Ethiopian microfinance institution. Ayele (2016) studied a similar topic the case of the

development bank of Ethiopia using the Tobit model and concluded variables such as the experience of project managers (positive), loan processing time (negative), an education level (positive),

c) **Business Experience (BE):** It was hypothesized that an increase in the year of experience in doing business has a positive influence on loan repayment of borrowers but a lack of experience has the reverse impact on loan repayment. So, the result from the binary logit regression model in the above table 4.6 indicates a negative sign for the lack of business experience variable with a coefficient of regression of (β = -1.406), which implies a negative association between lack of experience in doing the business and loan repayment DBE. Since the Sig. statistic or p-value in some other statistical application (.066) is smaller than the chosen significance level (0.10 or 10 percent), and the negative association between business experience and the loan repayment is statistically significant. As the result, H4 is accepted.

d) **Another source of income (OSI):** It was hypothesized that there is a significant association between another source of income and loan repayment of DBE. the result of the model in the above table 4.6 reveals a regression coefficient of (β= 1.167) and (p-value =0. 001) has positive and statistically significant at 1% level of significance because p-value =0. 001<0.01). Hence, H5 is accepted. This shows that as borrowers have another source of income, the probability of borrowers repaying their loans increases. Having another source of income might lead the borrowers to use the loan they obtain from DBE for repaying other loans taken from another source of income. Hence, the ability of borrowers to repay the loan from Microfinance institutions on time will be lost and result in loan default. This result is consistent with the descriptive statistics result and with most empirical findings such as Abraham (2002), Samual (2011), Berhanu (2005), Abafita (2003), and Fikirte (2011) who argued that the availability of other income sources is an important and significant factor that enhances the loan repayment performance and thereby reducing loan default problem. But, inconsistent findings by Girma (2018).

e) **Financial skill and planning (LFS):** The financial planning skill of the project or business manager is the factor that leads to success or failure of business on one hand and payment within the due date or not of loan borrowed from the lender. It has been hypothesized that having good marketing skills has a positive and significant influence on loan repayment of the borrowers. The regression result of this study shows that the marketing skill of the respondent has a positive and statistically significant influence on loan repayment of DBE with a regression coefficient of (β= -1.344) and (p-value =0. 012) has a positive and statistically significant at 5% level of significance because p-value =0. 012<0.05). So, H6 is accepted. This finding is consistent (Ofbaga, 2018) has suggested that lack of financial skill has a negative on loan repayment of the borrowers.

f) **Loan diversion rate (LDR):** It was hypothesized that there is a negative and significant association between the nearness of the borrower's loan diversion rate and loan repayment of DBE. Accordingly, the result from the binary logistic regression model in the above table 4 indicates a positive sign for the loan diversion rate variable (β = 2.394), and the statistic or p-value in some other statistical application (.000) is smaller than the chosen significance level (1 percent).

g) **Involving in the service sector (TP):** It is argued that different types of projects have a different levels of risks hence profitability. Thus, borrowers with different types of projects may have different repayment rates. However, it is expected that borrowers who engage in service giving sectors are expected to have successful loan repayment performance; this is because now a day the demand for service giving sectors is highly increasing. It can be measured as a continuous variable. The result of this

study shows there is a positive relationship between the type of business and loan repayment of DBE borrowers with a regression coefficient of (β= 2.750) and a p-value of 0.000 which is less than 0.01. This implies that business type is statistically significant 1% level of significance with a high coefficient (Haile, 2015).

h) Project follow-up and supervision (PFU): It was hypothesized that there is a significant association between project follow-up and loan repayment. But, the result from the binary logistic regression model in the above table 6 reveals the negative sign of the coefficient for this variable (β = -1.181), which shows a negative association between project follow-up and loan repayment of borrowers in MFI. This shows that as follow-up frequency decrease, the probability to repay their loan decreases. If the MFI loan officers frequently follow up onthe project, this would positively influence the probability borrower's loan repayment performance. As the p-value (.093) is smaller than the chosen significance level (0.10 or 10 percent), the negative association between the method of follow-up and loan repayment is statistically significant. As the result, H10 is accepted. This finding is similar to the result that Pasha &Negese (2014) found that supervision and follow-up have (a negative) influence on the loan repayment of borrowers.

Conclusions

This study was designed to achieve the determinants of credit default of borrowers in MFIs, test ten hypotheses and provide a recommendation based on the results of the study by collecting data from the selected borrowers of MFIs using questionnaires, descriptive statistics, and statistical analysis using a binary logistic regression model that performed by SPSS version 23.0. Hence, descriptive statistics found that MFIs in Hawassa, Ethiopiaare generating more than 50% loan repayment of borrowers as the mean value of loan repayment is 61% of the repayment performance. Based on these findings the researcher concluded that the loan repayment status of private borrowers is good and enables the bank to smoothly run its business activity if other things remain constant. On the other hand, the finding from regression analysis indicated that out of ten independent variables incorporated in the model eight variables such as gender being female, age, lack of experience, having another source of income, lack of financial management skill, loan diversion rate, involving in service sector business activity (positive), and project follow up (negative) and statistically significant respectively. Whereas, other explanatory variables like education level and repayment period were not statistically significant.

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Reference

1. *Addae-Korankye, A. (2014). Causes and control of loan default/delinquency in microfinance institutions in Ghana. American International Journal of contemporary research, 4(12), 36-45.*
2. *Adeyemo R, Agbonlahor, M. U. and Oke, J.T. O. (2007).An empirical Analysis of Microcredit repayment in South-Western Nigeria.Human and social sciences journal 2(1):63-73; 2007.*
3. *AyeleShirega (2016).determinant of successful loan repayment performance in project financing in the case of development bank of Ethiopia. A Thesis Submitted to St. Mary's University, School Of Graduate Studies, In Partial Fulfillment of The Requirements for the Degree Of Master Of Accounting And Finance.*

4. *Berhanu A, Fufa B (2008). The repayment rate of loans from semi-formal financial institutions among small-scale farmers in Ethiopia: Two-limit Tobit analysis. J. Soc. Econ. 37:2221-2230.*
5. *Cull, R., Demirgüç-Kunt, A., &Morduch, J. (2009). Microfinance meets the market. Journal of Economic Perspectives, 23(1), 167-92.*
6. *Dean S. Karlan (2001),Microfinance Impact Assessments: The Perils of Using New Members as a Control Group. Journal of Microfinance, Volume 3 Number 2 pp. 75 to 85*
7. *García-Pérez, I., Fernández-Izquierdo, M. Á., & Muñoz-Torres, M. J. (2020). Microfinance institutions fostering sustainable development by region. Sustainability, 12(7), 2682.*
8. *Israel G., (1992). Sampling the evidence of extension program impact, Program Evaluation, and organizational Development', Institution of Food and Agricultural Science (IFAS).*
9. *Fikirte K (2011). Determinant of loan repayment Performance" A case Study in Addis Ababa Credit and Saving Institution.Wegeningen University: Netherlands.*
10. *Haile, F. (2015). Determinants of loan repayment performance: A case study of Harari microfinance institutions. Journal of agricultural extension and rural development, 7(2), 56-64.*
11. *Girma Guide Joe. (2018**).** Determinants of Loan Repayment: The Case of Microfinance Institutions in Gedeo Zone, SNNPRS, Ethiopia. Universal Journal of Accounting and Finance 6(3): 108-122,*
12. *Geraid&Deograties. (2013). Factors Affecting Loan Repayment Performance among Yam Farmers.Agris online Papers in Economics and Informatics, 5(2), 111-122 www.dbe.com.et, 2018). allafrica.coml*
13. *Godquin, M. (2004). Microfinance Repayment Performance in Bangladesh: How to Improve the Allocation of Loans by MFIs. World Development, Volume 32, p. 1909–1926.*
14. *Hermes, N., & Hudon, M. (2018). Determinants of the performance of microfinance institutions: A systematic review. Journal of economic surveys, 32(5), 1483-1513.*
15. *Hermes, N., Lensink, R., & Meesters, A. (2011). Outreach and efficiency of microfinance institutions. World Development, 39(6), 938-948.*
16. *Schreiner, M., &Colombet, H. H. (2001). From urban to rural: Lessons for microfinance from Argentina. Development policy review, 19(3), 339-354.*
17. *Kiliswa Nancy G. Kamau (2014). Major Determinants Of Loan Repayment In Small Scale Enterprises In Kariobangi Division, Nairobi County.*
18. *Kiros, YitbarekWeldegerima Mr. (2022). Determinants of Loan Repayment Performance of Micro and Small Enterprises: Empirical Evidence from Somali Regional State, Ethiopia. The Journal of Entrepreneurial Finance. Vol. 24: Iss. 2, pp. 59-76-.Available at: digitalcommons.pepperdine.edu*
19. *Koopahi, M., &Bakhshi, M. R. (2002). Factors affecting agricultural credit repayment performance:(case study in Birjand district). Iranian Journal of agricultural sciences, 33(1), 11-19.*
20. *Kohansal, M. R., Ghorbanifar, M., &Mansoori, H. (2008). Effect of credit accessibility of farmers on agricultural investment and investigation of policy options in Khorasan-Razavi Province. Journal of applied sciences, 8.*
21. *OfgahaAlemu Dire (2018).Determinants of Loan Repayment of Micro and Small Enterprises in Jimma Town, Ethiopia. Global Journal of Management and Business Research: B Economics and Commerce Volume 18 (4). PP.47-65*
22. *Ramanujam, V., &Vidya, K. A. (2017). A Study on the credit repayment behavior of borrowers. Int Res J Business and Manage, 10(8), 9-18.*
23. *Okorie A (2004). Major determinants of agricultural smallholder loan repayment in a developing economy: Empirical evidence from Ondo State, Nigeria. Savings and Development 1:89-98.*

24. *Tegene, K. B. (2021). Determinants of Credit Default of Micro Finance Institution Borrowers: The Case of Hawassa City, Sidama Region, Ethiopia. International Journal of Accounting, Finance and Risk Management, 6(3), 76.*
25. *Muluken Tariku. (2014). Factors affecting loan repayment performance of floriculture growers :(the case of Development Bank of Ethiopia). Unpublished Master's Thesis, ST. Mary's University.*
26. *Muiruri, P. M. (2014). The Role of Micro-Finance Institutions to the Growth of Micro and Small Enterprises (MSE) in Thika, Kenya (Empirical Review of NonFinancial Factors). Vol. 4, No.4; pp. 249–262*
27. *Okorie A (2004). Major determinants of agricultural smallholder loan repayment in a developing economy: Empirical evidence from Ondo State, Nigeria. Savings and Development 1:89-98.*
28. *Pasha, S. A. M., &Negese, T. (2014). Performance of loan repayment determinants in Ethiopian micro finance-An analysis. Eurasian Journal of Business and Economics, 7(13), 29-49.*
29. *Ume, S. I., Ezeano, C. I., &Obiekwe, N. J. (2018). Analysis of determinant factors to loan repayment among broiler farmers in Enugu State, Nigeria. International Journal of Environmental and Agricultural Research 4 (6). 1-11*