

# Factors Affecting Loan Repayment Performance of Smallholder Farmers: A Case of Sinqe Bank, Jima Arjo Woreda of East Wallaga Zone, Oromia Region, Ethiopia

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## Abstract

This study was conducted to examine factors affecting loan repayment performance of smallholder farmers in Jima Arjo district, East Wallaga, Oromia Region, Ethiopia. The study has used Purposive and proportionate sampling technique in order to select sampled kebeles and households, respectively. Hence, from twenty one kebeles which has large number of credit users two kebeles selected, 86 farmers were selected randomly from 582 household credit users in the selected kebele. Both primary and secondary data were collected for this study. Primary data was collected through questionnaire and interview whereas; secondary data was collected from records of Sinqe Bank Jima Arjo branch. Descriptive statistics was used in order to summarize and describe the answer of the respondents. Furthermore, chi-square test was used to test the association between the explanatory variables and the dependent variable. In addition, binary logistic econometric model was employed in order to identify the significant factors that influence loan repayment performance of the selected sampled household farmers. A total of eleven explanatory variables were included in the econometric model and they were: socio-economic characteristics such as, Age, Sex, Marital status, Family size, Education level, Annual income, saving habit. Availability of other source of income and loan related factors such as Repayment period, Time of loan release and Training on loan use. Nine of these variables were found to be statistically significant determinants of loan repayment. Depending on his finding, the researcher has made some recommendations

**Keywords:** Loan, loan repayment, loan default, smallholder farmers, sinqe bank.

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## 1. Introduction

The Ethiopian economy has gone through remarkable economic growth in all agriculture, service and industrial sector according to the (World Bank, 2016). In the same token the banking sector play a very important role in the economic development of every nation. They have control over a large part of the supply of money circulation. The financial sectors contribution to growth lies in the central role; it plays in mobilizing savings and allocating these resources efficiently to the most productive uses and investments in the sector (Cristian, et al., 2019). The financial sector in Ethiopia is growing although as the quickness that is not as expected. Financial institutions play a critical role in economic development and job creation. The Sinqe bank continues to strengthen its services to low-income people, farmers, and unemployed youths combined with its full banking service. The bank will certainly contribute to economic growth by mobilizing potential financial resources in the region as well as in the region by providing state of art financial services equipped with contemporary financial technologies. Further studies have identified cause of high loan default among the Institutions. Poor management of loans processes by MFIs has also been cited as one of the causes of loan delinquency (Owusu et al., 2015). The problem of nonpayment loans reduces the lending capacity of a financial institution. It also rejects new applicants' access to credit as the banks' cash flow management problems enhance in direct proportion to the increasing default problem (Kebede et al., 2016). This paper aimed to determine the factors that affect loan repayment among smallholder farmers from Sinqe Bank in Jima Arjo woreda. This title was selected for the reason, credit is considered as one of the most important to survive from financial constraints. But, even if such financial services are available, the high default rate is one of the major concerns of financial institutions. In somewhere, the living conditions of smallholder farmers were unimproved and they were unable to repay their loan. When a loan is unpaid, defaulting will occur that will extremely reduce economic development, impact the ability to receive future credit, can lead to the removal of personal property and lack of job creation, etc. due to unable to repay their loan on time affected by the above threats.

## 2. Statement Of The Problem

Sinqe Bank set a vision aspires to be world class MFI contributing to create an economically empowered and transformed society by 2025 by Provide affordable, innovative and customers' responsive financial services to rural and urban economically active people to improve their income. However, the loan default was not reducing

from time to time as expected. The factors affecting loan repayment performances or increase in loan defaults are resulted to the cumulative effects of different factors such as less job creation, unimproved living condition and removal of personal property etc. (Simachew et al., 2020) Education level, Land holding size, total livestock holding, non-farm income, expenditure on social festivals, number of years of experience in agricultural extension services, saving habit and source of credits were highly important in influencing loan repayment performance. (Arega et al., 2016) The poor credit assessment and credit monitoring are the major causes for the occurrence of NPL in DBE.

(MERCY, 2015) high interest rate, weak monitoring and managing the loan, poor appraisal, unclear credit policy, high overhead costs on the institution that reduce the budgetary allocation to loan follow-ups thus giving rise to a delinquency crisis. In all the above studies, what affects loan repayment performances are limited to bank specific factors such as credit assessment, credit monitoring, Credit size, high interest rate, weak monitoring and managing the loan, poor appraisal, unclear credit policy and procedures of loan handling and conducting recoveries, high overhead costs. In reality what affects loan repayment performances were not limited to bank specific factors only, but beyond these it includes, socio-economic factors and loan specific factors. Also to the best of my understanding, there was no study conducted on Sinqe Bank and at East Wallaga. The study was conducted to fill variable, methodological and study gap. Other researchers conduct the same title use multi linear model and Tobit but this study use binary logit. So in order to reduce those factors:- less job creation, unimproved living standards and removal of personal property, identify the socio-economic factors such as age, gender, marital status, family size, Saving habit, education level, annual income of the borrowers, and saving habits and Identify lending characteristics such as repayment period, timeliness of loan release and training on the loan that can influence the loan repayment performance of smallholder farmers are critical issues need to attend to enhance repayment performances of the borrowers.

### 3. The Objectives of the Study

The General Objective of the study

The purpose of this study was to identify Factor Affecting Loan Repayment Performance of Smallholder Farmers. Specifically to:-

- To identify the socio-economic factors (age, gender, marital status...) that can influence loan repayment performance of smallholder farmers in case of Sinqe Bank, Jima Arjo district.
- To identify loan related factors (Repayment period, timeliness of loan release and Training on the loan) that can impact the loan repayment performance of smallholder farmers in case of Sinqe Bank, Jima Arjo district.

## 2. Review of Related Literature

### Loan

A loan is a form of debt incurred by an individual or other entity. The lender—usually a corporation, financial institution, or government—advances a sum of money to the borrower. In return, the borrower agrees to a certain set of terms including any finance charges, interest, repayment date, and other conditions. Loan becomes a defaulted loan when the chance of recovery becomes minimal. Credit risk evaluation is a complex process, which implies a careful analysis of information regarding the borrower in order to estimate the probability that the loan will be regularly repaid. It is important that borrowed funds be invested for productive purposes, and the additional incomes generated be used to repay loans to have sustainable and viable production processes and credit institutions. (Yodit, 2017).

### Smallholder Farmers

Smallholder farmers are defined in various ways depending on context, country and ecological zone. This explains interchangeable use of the term smallholder with small scale, resource poor and peasant farmer. According to (George, 2015), smallholder farmers were defined as a sector made up of farms that are operated by farm families, using largely their own labor. Smallholder farmer's production, which generally occurs on plots of less than two hectares, is characterized by low yields, low quality, poor linkage, and little access to finance (Nagayets, 2005). The World Bank's rural strategy defined smallholders as those with a low asset base, operating less than 2 hectares of cropland (World Bank, 2003). (ISSAH, 2017) the name smallholder farmers, is based on the limited resource endowment of the people in this sector, relative to other farmers. Smallholder farmers are also defined as those farmers owning small-based plots of land on which they grow subsistence crops and one or two cash crops relying almost exclusively on family labor. Also, it is sometimes widely used to include small farmers who do not own or control the land they farm on. In this study, smallholder farmers are farm households with access to means of livelihoods in land relying primarily on family labor for farm production to produce for self-subsistence and market sale.

### Loan Default

A default is the failure to pay back a loan. Default may occur if the debtor is either unwilling or unable to pay their debt. Default occurs when a debtor has not met his or her legal obligations according to the debt contract. For

example a debtor has not made a scheduled payment, or has violated a loan agreement of the debt contract. Loan delinquency refers to failure of borrowers to repay their debts on time or to repay them. At all Loan delinquency is a serious problem of rural credit programs because it results making it difficult to borrow money in the future in a waste of manpower, high administration costs and slow turnover of resources. A loan default occurs when the borrower does not make required payments or in some other way does not obey with the terms of a loan.

(Nawai & Mohdsharif, 2013) has found out the fact that when the business of the loan borrowers does not have enough of return to cover the scheduled payment on the repayment day, the loan borrowers will choose to defaulting their loans. (Abdelfettah, 2013) States repayment performance of borrowers can be affected due to various factors. An economic theory suggests that a flexible repayment schedule set by the lending institutes can benefits borrowers and potentially enhances their capacity of repaying their debts. On the contrary, MFIs practitioners believed that high repayment recovery rate can be realized through maintaining the regular repayment time schedules.

**Loan Repayment:** Loan repayment is the act of settling an amount borrowed from a lender along with the applicable interest amount. Generally, the repayment method includes a scheduled process (called loan repayment schedule) usually in the form of equated monthly installments or EMIs. These installments are the amount of money that is repaid to the lender every month. It is made up of two components – the principal amount and the interest on the principal amount, paid to the bank or lender on a fixed date each month until the total amount due is paid up over the loan tenure. Repayment schedule guides the loan borrowers in their repayment process. The borrowers expected to pay back the principal and interest on the term agreed. This referred to as repayment loan.

### 3. Research Methodology

#### 3.1. Descriptive Of The Study Area

Jima Arjo is found in East Wallaga Zone of Oromia region located 379 Km far from Addis Ababa, Ethiopia to the Western Region of the country. The district is located in between 8033' to 8055'N latitudes and 36022' to 36044'E longitudes. The physical landscape of Jima Arjo is quite diversified. The major topographic features of the area are composed of hilly, flat to undulating rugged topography, plain, plateau and valley. Jima Arjo is bordered on the southwest by the Didesa River which separates it from the Illubabor Zone, on the northwest by Diga Leka, on the northeast by Guto Wayu, and the southeast by Nunu Kumba.

#### Ethiopia

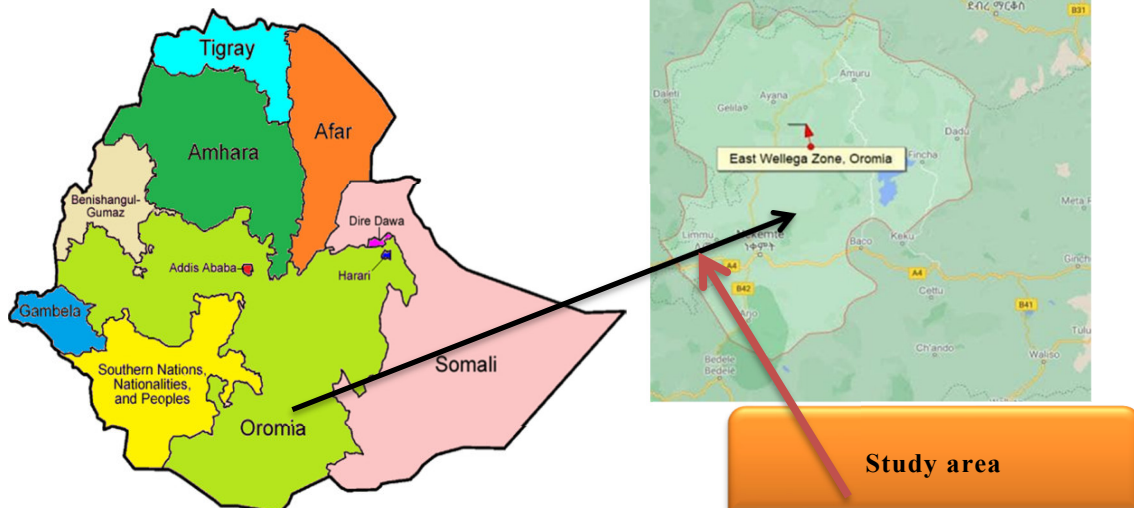


Figure 1. Map of the study areas

#### Research Design

The research was done through descriptive type of research emphasizing both quantitative and qualitative data. In this study both purposive and simple random sampling techniques were employed for selection of the study area and respondents respectively.

#### A four stage sampling procedure was used:

First: Jima Arjo district was selected purposively. the district has a low loan recovery rate as compared with other districts.

Second: Two kebeles (namely Wayu Kumba and Jarso Gerbi) were selected also purposively, information obtained from institutions, they were more considered as a customer of Sinque Bank and have long experience of credit users and low loan reimbursement available in the area.

Third: From 3112 the total household in the two kebeles were stratified in to two groups, these are 582 credit

participants and 2530 non-participants of formal source of financial institutions based on the household lists which are obtained from the office of the kebeles and formal financial institutions.

Fourth: 86 respondents were selected randomly based on the sampling formula provided by Yamane (1967).  $n = N / (1 + N(e)^2)$  By taking e as 9% and N as 582, the sample size appeared to be:

$$n = 582 / (1 + 582(0.1)^2) = 86$$

Table 1: Smallholder farmers' size

Kebele	Smallholder size	proportion	Sample size
Wayu Kumba	191	0.3	26
Jarso Gerbi	391	0.7	60
Total	582	1	86

Source: Own calculation from total sample households 2023.

#### 4. Results and Discussion

##### Socioeconomic Characteristics of the sample Respondents

Out of the total 86 interviewed borrowers 72 (84%) were non-defaulters and 14 (16%) were defaulters.

##### Age of the borrowers

In Table 2 disclosed that, age of sample respondents range from 25 to 56 and above years. Accordingly, the respondents' age range from 25 – 35 constitutes 14%, the age range from 36 – 45 constitutes 41%, the age range from 46 – 55 constitutes 23%, and the remaining 6% of respondents were constituted under the age ranges of above 56 years. The proportion of defaulters' age was highest in the age range of 25 – 35 by constituting 10.5%, and lower in the age range of 36 – 45 representing 2%. While the non-defaulters respondents comprises 41% in the age range of 36 – 45 and 12% in the range of above 25-35. Thus, this indicates that the borrowers at younger stages become more defaulter than at older age. This is because as age of borrowers' increases they became settled and accumulate wealth; acquire experience in business management and credit use than youngsters. Then these and related positive variables enables elder borrowers to be better payers than youngsters.

Table 2: Age structure of the borrowers

Respondent category		Age category				Total
		25-35	36-45	46-55	>56	
Non-Defaulter	count	12	35	20	5	72
	%	14%	41%	23%	6%	84%
Defaulter	count	9	3	2	-	14
	%	10.5%	3.5%	2%	-	16%
Total	count	21	38	22	5	86
	%	24.5%	44.5%	25%	6%	100

Source: Survey results, 2023

##### Sex of the borrowers

As shown in Table 3 the sex composition, 13 (15%) were female respondents, whereas, 73 (85%) were male respondents. The proportion of defaulters was 3 (3%) for females, whereas, 11 (13%) for male counterparts. This reveals that from their respective sex composition, females' respondents were found having more repayment performance than male respondents. Likewise, out of the total 72 non defaulters male borrowers were 62 (72%) and female were 10 (12%). It is found that males are 120% more likely to default.

Table 3: Sex of the borrowers

Respondent Category		Sex Borrowers		Total
		Male	Female	
Non-Defaulter	Count	62	10	72
	%	72%	12%	84%
Defaulters	Count	11	3	14
	%	13%	3%	16%
Total	Count	73	13	86
	%	85%	15%	100

Source: Survey results, 2023

**Results and Discussion from the Estimated Logit Model**

**Table 4: Maximum likelihood estimates of logistic regression model**

	B	Std. Error	Wald	df	Sig.	Exp(B)	95% Confidence Interval	
							Lower Bound	Upper Bound
CONSTANT	-3.039	1.791	2.878	1	0.090	20.878		
AGE	2.453	1.390	3.116	1	0.078	11.623	-.271	5.177
SEX	-1.600	2.091	.585	1	0.444	.202	-5.698	2.498
MRTS	2.116	1.669	1.608	1	0.205	8.300	-1.155	5.388
FSIZ	-4.449	2.168	4.214	1	0.040	.012	-8.698	-.201
EDLB	5.046	1.873	7.259	1	0.007	.395	1.375	8.717
AINCOME	5.049	2.418	4.360	1	0.037	.006	-9.787	-.310
SVH	3.365	1.532	4.823	1	0.028	.932	.362	6.368
AOSOI	3.969	2.169	3.349	1	0.067	.916	-.282	8.219
RPERIOD	6.451	3.022	4.556	1	0.033	.002	-12.375	-.527
TLOANR	3.022	1.809	2.791	1	0.095	.049	-6.568	.523
TLOANU	6.069	2.206	7.567	1	0.006	.281	1.745	10.393

Sig level \*, \*\* and\*\*\* at 1%,5% and 10% respectively.

Source: binomial logistic regression model output, 2023

**Logit Model Results for socio economic characteristic of borrowers.**

**Age of borrower (AGE):** The result revealed that age has positive and significant impact towards loan repayment performance with significance value at 10%. Its implication is the number of year's increase their honesties also increase due to religions afraid of God, the person to repay the loan. And also increase work experience and elders are better than youngsters in adopting technologies, being flexible, accessing education and the like. This result is consistent with the findings of (Yodit, 2017) and (Feda et al., 2020) who suggested the elder borrowers feel more responsible to repay their loan than youngsters. But this result is inconsistent with the findings of (Megersa, 2022) and (Haile, 2015) who argued that as age increases, the probability of paying the loan decreases.

**Sex of borrowers (SEX):** The regression result implies being male/female was not related with loan repayment performance as expected, although it is statistically insignificant. The result from logistic regression model indicate association between sex and loan repayment is statistically insignificant at P=0.444 which is greater than 10 percent. This result is in agreement with the findings of (Medhin, 2015) (Yodit, 2017).

**Marital status of borrowers (MRTS):** Marital status of the borrower was not an important predictor of loan repayment performance. From regression result it is statistically insignificant which is p=0.205. This result is in agreed with findings of (Firafis, 2015), (Medhin, 2015) and (Yodit, 2017)

**Family size (FSIZ):** The result from binary logistic regression model indicates negative sign for family size variable ( $\beta$  of -4.449), that shows negative relationship between family size and loan repayment performance of farmers. This shows that as borrower's family size increases, the probability of borrowers to repay their loan become decreases. Among the respondents who stated yes, they stated the following family aspects as what they consider; number of children, number of dependents' and household expenses. Having higher number of family members will increase consumption expenses and other living expenses which led to loan repayment difficult. Since the Sig. statistic or p-value (0.040) is less than the chosen significance level (0.05 or 5percent), the negative association between family size and loan repayment is statistically significant. The result from table 7 binary logistic results can be interpreted as, other factors being equal, as the family size increase by one person (child), the odd ratio in favor of loan repayment performance decrease by odds of 0.012 and significant at 5%.

This result is consistent with the findings of (Dula, 2012), (Biruk and Mesfin, 2017)and (Girma, 2018) who argued that family size had significant negative effect on loan repayment performance of smallholder farmers.

**Educational level (EDLB):** The result from binary logistic regression model indicate positive sign for the variable education level ( $\beta$  of 5.046), which implies positive association between education level and loan repayment performance of farmers. This shows that as level of education increases, borrowers enhance their ability to access, evaluate, and understand new production techniques and technologies. The higher education levels enable the borrowers acquire more knowledge about the business that his efficiency in allocation of resources increases and so does the proper utilization of the loan. More educated owner is expected to use the loan effectively as compared to a less educated one. Since the Sig. statistic is (.007) which is smaller than the chosen significance level (1 percent), the positive association between education level and loan repayment is statistically significant.

This suggests that more educated borrower have more level of awareness, exposure to technologies, better managing ability and access to business information. This result is consistent with the findings of (Feda et al.,

2020) and (Girma, 2018).

**Annual income (AINCOME):** The result from logistic regression model indicate positive sign for the variable annual income ( $\beta$  of 5.0490), which implies positive association between annual income and loan repayment of farmers. This shows that as annual income farmers' increases by one birr, farmers' financial capacity also increase and this result in paying their debt on time. The positive association between total annual income and loan repayment is statistically significant at  $P=0.037$  which is less than the chosen significance level of 5%. other variables being constant, one birr increase in income could lead loan repayment rate in favor of defaulting by the odds of .006. This result is consistent with the findings of (Biruk and Mesfin, 2017), (Girma, 2018) and (Amenu, 2021).

**Saving habit of borrowers (SVH):** voluntarily saving is significant at 5 % level and positively related to borrowers' repayment performance. It implies that saving habit helps borrowers to improve the proper utilization of the loan, improve relationship with the bank and saving helps to repay their loan easily. This shows that as saving habit increases, farmers financial capacity also increases and this result in paying their debt on time. The positive association between saving habit of borrowers and loan repayment is statistically significant at  $P=.028$  which is less than the chosen significance level of 5%. binomial logistic model can be interpreted as, save one birr increase loan repayment rate in favor of non-defaulting by the odds of 28.93. This result agreed with the estimation result of (Yodit, 2017) and (Amenu, 2021).

**Availability of other source Income (AOSOI):** This variable was positively affects the loan repayment rate at 5 percent significance level in the study area. This might be due to the fact that, activities were additional sources of income for smallholders and the cash generated from these activities could back up the farmers' income to settle their debt. Borrowers who had other alternative source of income rather than loan like, income from employment other than the business the loan is taken for, remittance, pension payments etc. were found to be better payers relative to those who didn't have other sources of income. The result from binomial logistic model can be interpreted as, other variables being constant, one birr increase in income from other source of activities could lead loan repayment rate in favor of defaulting by the odds of 52.916 percent. This result is agreed to (KIBROM, 2010), (Medhin, 2015) and (Yodit, 2017). Finding that, availability of other source Income was associated with loan repayment performance of farmers.

**Logit Model Results for Loan related factors.**

**Repayment period (RPERIOD):** From regression result since the Sig. statistic or p-value (.033) is less than the chosen significance level (0.05 or 5percent), the positive association between repayment period and loan repayment is statistically significant. The suitability of repayment period of loan is affected by odd ratio of 0.002.this means as the repayment period is revised from short term to long term, or match with right time of season at what the borrowers get income, the probability of borrowers' loan non defaulting increase by 0.002 This result agreed with the findings of (Walelign, 2019), but inconsistent with (Yodit, 2017).

**Timeliness of loan release (TLOANR):** this variable was found to influence positively and significantly the borrowers' loan repayment rate at 10% significance level. Loan which is timely disbursed used for the intended yet productive purposes. This means if the time applied for loan compared to loan approval and disbursing time is too long the borrowers couldn't able to repay their loan at the time of scheduled loan repayment time because the borrower might need the loan at the time of loan application in the bank. Thus, borrowers can repay their loan regularly and successfully. The Complicated loan processing procedures which might delay disbursement, most likely have high default rate. This result is also agreed with findings of (Yodit, 2017) and (Walelign, 2019) Who conducted research determinants of successful loan repayment performance in foreign owned investments in Ethiopia: the case of development bank of Ethiopia and commercial bank of Ethiopia? They found that time laps between loan application and disbursement was found significant to influence repayment performance of borrowers at significance levels.

**Training on loan use (TLOANU):**

If other variables hold constant, the delivering of well-organized and sufficient training properly for borrowers increases the probability of borrower's loan repayment by 432.281. This result agrees with the findings of (Firafis, 2015) , (Girma, 2018) and (Abreham, 2017). But, it disagrees with the result of (Belete 2015) study, who argued that the association between training and loan repayment performance of borrowers is statistically insignificant.

**Table 5. Model summary**

Step	No. obs	-2 Log likelihood	B	S.E.	Wald	R Square	Adjusted R Square	Sig.	Exp(B)
1	86	18.966	1.638	.292	31.433	.487	.828	.000	5.143

Adjusted R squared it indicates that 82% of the variation in the output variables are explained by the input variables. The model has a higher log-likelihood value (18.966), which means the model offers a better fit to the data

**Correlation Analysis Result**

The primary objective of correlation analysis is to measure the strength or degree of linear association between

two variables. The correlation coefficient examines the strength and direction of the linear relationship between two variables. The correlation coefficient can range between -1 and +1, the larger the absolute value of the coefficient; the stronger the relationship between the variables. Zero (0) indicates no relationship between two variables. Since the result showed in the table below was less than 0.5 there was no multi co linearity problem between independent variables .therefore all of the independent variables were included in the model.

Thus we can test using the Correlation matrix – when computing the matrix of Pearson's Bivariate Correlation among all independent variables the correlation coefficients need to be smaller than 1.

**Table 6. Correlation Matrix**

	Constant	AGE	SEX	MRTS	FSIZ	EDLB	AINCOME	SVH	AOSOI	RPERIOD	TLOANR	TLOANU
Constant	1.000											
AGE	-.083	1.000										
SEX	-.517	-.102	1.000									
MRTS	.220	.206	-.185	1.000								
FSIZ	-.457	-.576	.428	-.507	1.000							
EDLB	.342	.566	-.350	.568	-.822	1.000						
AINCOME	-.165	-.284	-.055	-.530	.215	-.585	1.000					
SVH	.323	.454	-.307	.374	-.599	.595	-.462	1.000				
AOSOI	.245	.345	.043	.330	-.359	.603	-.560	.346	1.000			
RPERIOD	-.437	-.300	-.049	-.448	.596	-.569	.351	-.518	-.736	1.000		
TLOANR	-.221	-.240	-.314	-.422	.103	-.373	.661	-.342	-.644	.488	1.000	
TLOANU	.438	.231	-.164	.439	-.535	.586	-.584	.657	.567	-.770	-.425	1.000

Source: Binomial logistic regression model output, 2023

## 5. Summary, Conclusion And Recommendations

The main problems of Ethiopian rural societies include poverty, low agricultural productivity, Unemployment and unimproved living standards etc. which can basically be attributed to limited access to financial services. Bank services are considered as one of the tools for fighting poverty in rural societies through providing efficient saving and credit services. Access to finance in rural areas creates opportunity for rural dwellers especially to small holder farmers to increase their productivity and income through purchase of farm inputs, accessing seed capital to start income generating activities and creating job opportunities etc. with possibility of reduction in poverty and improvement in standard of living. There are lots of options to deliver financial services to the rural poor smallholder farmers of which financial institution are the one. However the borrowers' loan repayment performance was the great problem.

In light of this, the study was intended to extend its investigation on factors that affect the loan repayment performance of smallholder farmers in Arjo Woreda, Ethiopia. For that purpose both primary and secondary data were collected from 86 sample respondents who were credit uses from Sinqe Bank in the study area using questionnaire. In order to identify those relevant factors such as socio-economic and loan related factors, primary data were collected from sample respondents. The descriptive and econometric regression analysis was employed to predict the effects of those independent variables to the loan repayment performances using the Binary logit model. Most of the variables that are related to those factors were analyzed with the statistical descriptive method while 11 variables were included in econometric regression model. In binary logistic regression model the dependent variable, loan repayment performance was a dichotomous categorical variable taking value of '1' if the house hold is non-defaulter and '0' otherwise (defaulter).

## Conclusion

The study concludes that socio-economic factors and loan related factors have a relationship with loan repayment. As we have seen from the result of this study the main source of rural credit was found to be financial institution. In the econometric analysis, the finding indicate that, out of eleven explanatory variables hypothesized to influence loan repayment performance of smallholder farmers, nine explanatory variables happened to be significant factor affecting loan repayment performance of households in the study area. These are (Socio economic characteristic

of respondents such as, Age, educational status, annual income, saving habit, availability of other source of income have a positive and significant influence on smallholder farmers loan repayment performance while, family size have a negative and significant ) and (Loan related factors such as, repayment period, timeliness of loan release, and training on loan use were found to have a positive and significant influence on smallholder farmers' loan repayment performance). However, Sex affect loan repayment performance of smallholder farmers negatively but insignificant, also marital status of borrowers is insignificant. This study has shown that socio economic characteristics of borrowers and loan related factors all of which contribute to the loan repayment performance positively or negatively.

#### **Socio economic characteristics of respondents that were affect significantly the loan repayment performance of smallholder farmers:-**

The age of the borrowers was significant to influence repayment performance; the study implied that borrowers with higher age (adult group) slightly had better repayment performance than youngsters. Further majority indicated the age bracket likely to default in loan payment is 25-35 years. Additionally respondents were above 35 years that Increase in age increases borrower acquirement of experience in business management and credit use than youngsters, followed by age determine the productivity of the borrower and subsequent ability to repay loans. As age of borrower increase, chances of the borrower to become settled and accumulate wealth and increase in age determine borrowers' loan repayment.

The family size significantly determines probability of loan repayment. The result shows that as farmers family size increases the probability of paying the loan decreases. This is due to the fact that large families' consumption expense is greater than small families' expense and to meet these expenses, farmers with large family tend to divert the loan to consumption. This reduces the capacity of the borrower to repay its debt on time. Therefore it can be concluded that larger family size tends to be more defaulter than small family size.

Education is a key to development of every country. Educated citizens know how to use their resources and also know how to access and use what they do not have. Education level of farmers was one of the significant determinants of loan repayment. The finding of this study shows that, as educational level increases, riskiness of loan repayment decreases which means the probability of loan repayment increases. Especially farmers with higher educational level are most likely to become non defaulters than uneducated farmers. It can be concluded from this that farmer's education level and loan repayment is positively related.

#### **Loan related factors that were affect significantly the loan repayment performance of smallholder farmers:-**

Repayment period of loan have a positive relation with loan repayment performance. Although there are some sample borrower who feels disappointed with shortage of sufficient grace period. Concerning repayment schedule this study indicates that respondents were strongly agreed that rigid repayment schedule discourage successful loan repayment, but flexible repayment schedules and Long repayment period enable borrowers to repay their loan regularly.

Majority of the respondents were strongly agreed that amount of time (Delay) taken to be approve the loan, speedy procedure (short process) of loan approvals in the bank affect loan repayment and the presence of bureaucracy of loan approvals results to low and inefficient repayment performance.

Training was another significant determinant of loan repayment. The regression result from binary logistic regression shows that the presence of training while giving the loan affects the probability of loan repayment positively. The finding also shows that almost all of those who have attended training have repaid their loan on time. From this, it can be concluded that giving training for borrowers regarding utilization of the loan increases their probability of paying the loan in time. In general, education level of farmers, Annual income of farmers (borrowers), saving habit, availability of other source of income, repayment period, timeliness of loan release and training are positively related with loan repayment, while family size are negatively related with loan repayment.

#### **Recommendation**

An important policy implication from the strong relationship between education and successful loan repayment performance is that there is a need to consider the educational level of borrowers or their managers in the credit policy of the bank and it should be given high emphasis before the loan is disbursed. And helps to use the loan in appropriate way and perceived importance of loan by the borrowers it also helps to accelerate the chance of the repayment of the loan at proper time. Since education is important factor in the proper utilization of loan as well as on its safe return the concerned bureaus and the government have to do the necessary efforts to create access to education to farmers in a form of adult education in the study area to enhance their loan repayment performance. Repayment period is found to be a significant determinant of loan repayment performance of borrowers. Majority of the sample borrowers were convinced with the available repayment period schedule set by those lending institute had good impact on the repayment performance. However, the study recommends lending institutes'' to incorporate those disappointed, where there is a possibility for grace time improvements.

The Bank should give enough training related to business development schemes and creates awareness on the role of saving to become successful and profitable both the borrower and the bank which works for mutual benefit.



Business concept training was found to be one of the most important factors, which increases loan repayment performance (Training on financial management, resource allocation and utilization, more supervision, and other technical support). Hence, lenders should incorporate business related training as an essential part and offer to their clients before loan disbursement. Financial institution, should develop or design a curriculum that comprise basic financial literacy skill training, business development skill training, and business diversification training for every and each clients before the loan disbursement effects. So before the loan issued it is mandatory to give train and supervise the borrowers business viability and after the loan issued would be regularly followed up to ascertain its proper utilization for the intended purpose. The Lending institution in Ethiopia (Banks) should focus on the repayment challenges which are stated by the borrowers and take corrective actions. Banks in Ethiopia it is recommended to conduct market study before disbursing the loan and give enough training to borrowers to invest fund in different business.

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