

ACCESSING CREDIT FROM FINANCIAL INSTITUTIONS TO RURAL HOUSEHOLDS IN ETHIOPIA: THE CASE OF SEBETA ADMINISTRATION

Wakjira Lucho¹

Abstract

This study has aimed to identify rural households' access to credit in Sebeta City Administration. A total of 190 households, 24% of them female headed households, were included in the study. Logistic regression was applied in order to identify factors affecting credit accessibility to rural households. . The study result revealed that only 15% of households included in the survey had access to formal credit service while 60% of them had indicated that they have a need for such service. Many of them had stated that they were reluctant to apply for credit for two main reasons: amount of loan offered by the institutions being not sufficient for their needs and lack of awareness about the process and procedures to apply for the loan. The result of the survey indicates that four continuous variables, age, aging, family size and number of livestock significantly affect access to loan availability. Similarly, four categorical variables, namely access to extension package, sex of the household head, ownership of irrigable land and group membership significantly affect rural household's access to formal credit. However, education level, income and land size don't have significant impact on credit access. Thus, 57.3% of the households included in the study were credit constrained households.

¹ DAI (Lift Project) Economic Empowerment Unit of Oromia National Regional State, Ethiopia
E-mial:wajiral@yahoo.com

1. Introduction

1.1 Background

Ethiopia is one of the poorest nations in Sub-Saharan African countries. In 2014, the Per capita income of the nation was \$ 530; according to Human Development Index (HDI), it is ranked 173rd from 187 countries (UNDP, 2015). Agriculture remained the backbone of the country's economy; it directly supports 85% of the population, 43% of the GDP and over 70% of export value (*Ibid*). Increasing agricultural productivity level is considered to be the most vital requirement for sustaining economic growth in Ethiopia. The country's capacity to address poverty, food insecurity and various other socio-economic problems is highly dependent on the performance of this sector.

According to MoFED (2003), growth in agriculture implies higher incomes of the agricultural population and hence increased consumption. Thus domestic demand for industrial goods and services particularly trade will expand, providing the industrial and trade sectors an impetus for growth. The expanded domestic market will lay a firm foundation for accelerating growth of the non-agricultural sectors.

The importance of rural credit services can be best understood by their potential contribution to the development of the agricultural sector. Credit is necessary for small-scale farmers to increase their agricultural productivity and farm income. Modernizing agriculture requires significant amount of credit to finance use of purchased inputs such as fertilizer, improved seeds, insecticides, additional labor and so on.

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Gurley and Shaw (1967) have stressed the role of credit market imperfections as an obstacle to rapid economic growth. The message from strand of literature revealed that financial deepening in the form of smoothly functioning insurance and credit markets is a prerequisite for economic development.

Despite the importance of credit for rural households to increase production and productivity of agriculture sector, their access to institutional credit is limited due to various factors. The banking sector does not satisfy the growing demand for credit and many borrowers turn to the informal sector to meet their needs. It has been estimated that only 5% of farmers in Africa and about 15% in Asia have had access to formal credit (Swain, 2001).

There is no consensus among scholars also as to what determine households' access to credit and factors affecting credit constraint. For example some researchers such as Zeller *et al* (2002) argued that gender appeared to have no impact on credit access while others argued that women are especially discriminated against formal financial markets. Furthermore, since such kind of study has not been conducted in the study area, , this paper is helpful in bridging the knowledge gap and can positively contribute to the ongoing debate on factors that affect rural household's access to credit service.

2. Research Methodology

2.1 Description of the Study Area

Sebeta City Administration is one of the towns found in Oromia National Regional State, Finfine rounding Oromia Special Zone, at a distance of

25km to the South west of Addis Ababa to the direction of Jimma main road. Sebeta has given the status of Zone and it is also serving as the capital of SebetaHawasWoreda. The town is divided into nine Kebeles (the lowest political administrative Units). It covers a total area of about 9800 hectares. The study area is located between $8^{\circ}53'50''\text{N}$ and $8^{\circ}55'59''\text{N}$ latitude, and $38^{\circ}36'36\text{E}$ to $38^{\circ}40'\text{E}$ longitude.

It has an altitude of 2,356 meters above sea level. According to 2007 CSA census, the population of Sebeta town was 49,331 where male and female account for 24,356 and 24,975, respectively. But, based on the 2013 Sebeta Administration Report, number of population is projected to be 120,427 (male 62,134 and female 59,293) (CSA, 2007).

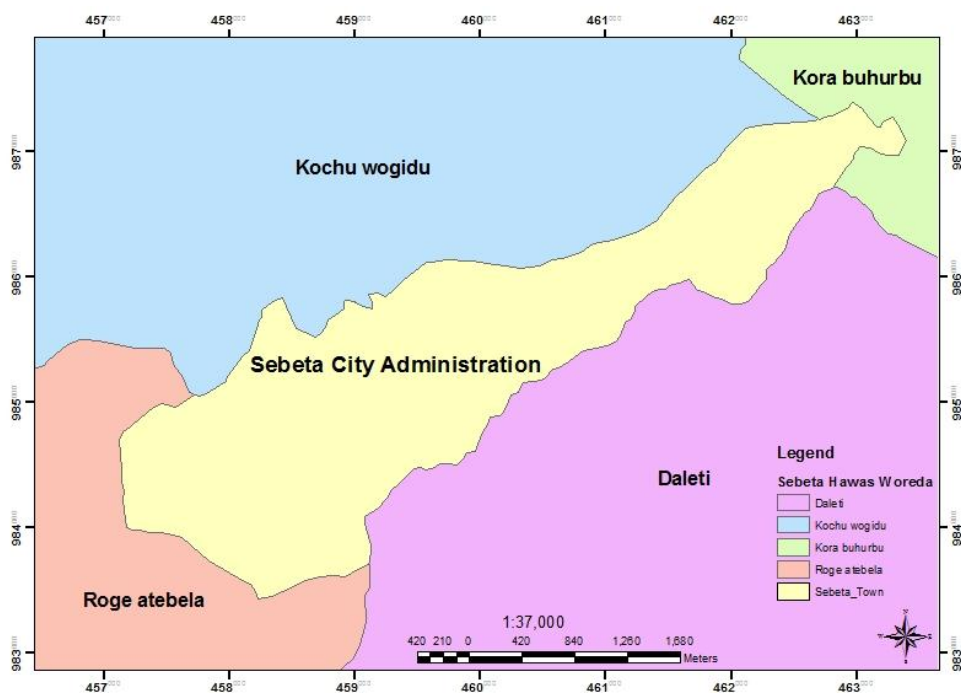


Figure 1: Map of Sebeta City Administration

Source: Shape File Adopted from CSA 2007

2.2 Research Design

This research adopted a descriptive survey design. Descriptive research helps to study characteristics of the study subject, estimate proportion of population that have particular characteristic and to discover association/correlation among different variables. Therefore, descriptive survey was deemed the best strategy to fulfill the objectives of the study.

2.3 Sampling Technique

A multistage sampling technique was used to select 190 respondents from the City Administration. Firstly, purposive sampling is used to choose two Kebeles (sub-district) from the Woreda (district) because they are the only rural Kebeles under the City Administration and farmers in this area depend on agriculture for their livelihood. In order to include representative women in the study, stratified random sampling was used.. First, the households were stratified into male and female-headed. Then, systematic random sampling was used to select sample households from each stratum.

2.4 Data Collection

With respect to primary data collection, structured and semi-structured questionnaire was used to collect required information from the selected households and key informants. In addition, secondary data were consulted to strengthen the finding of the study.

2.5 Analytical Method

The stated objectives were achieved using one empirical model to estimate the desired variables. In the first objective, only descriptive method was used to analyze the data. In the second and third objective, both descriptive

and logistic regression was used in the analysis of categorical and continuous variables.

2.6 Model Specification

Empirical Model Specification

“Access ” refers to actual receiving of credit facility from formal financial institution. The response in this case is dichotomous (binary choice variable); includes a “yes” or “no” type.

However, whether the households are constrained or not is derived from their response to the following questions. Do you need credit? Why didn't you access formal credit? Was the amount of credit received enough? Those households that replied “I don't need credit” were included in unconstrained group. If the answer was yes, follow up question was asked to know whether they were credit constrained or not. Those households that received credit but replied the amount is insufficient were considered as credit constrained households. Furthermore, those who didn't apply for credit due to small loan size, lack of awareness about the conditions and procedures, and those households' whose application was rejected due to unclear reasons were also included in constrained group. However, those households who replied, “ I have enough money”, “loan received was enough” and “afraid of risk” were considered as unconstrained groups. As a result, the final choice in the case of credit constraint is also binary “ Yes” if constrained and “ No ” otherwise.

According to Brooks (2008), both the logit and Probit are non-linear models and are estimated using maximum likelihood (ML) method. They are the

most widely used model when the dependent variable happens to be dichotomous (Gujarati, 2004). Probit has a normal distribution while logit has a logistic (slightly flatter tails) distribution. The choice of probit versus logit regression depends, therefore, largely on the distribution assumption one makes. The logit regression model in practice has been used by many researchers because of its comparative mathematical simplicity. The logistic regression is powerful, convenient and flexible and is often chosen if the dependent variable is of categorical nature or it is not normally distributed. Some of the study variables are categorical and therefore this study will apply binary logit model to identify the factors that influence access to credit.

Logistic Probability Model is econometrically specified as:

$$P(X_i) = \frac{e^{\alpha + \beta X}}{1 + e^{\alpha + \beta X}} = \frac{1}{1 + e^{-Z}} = e^Z \quad \text{Where } Z = \alpha + \beta X$$

- ✓ Where, P_i is the probability that an individual access credit given X_i
- ✓ X_i represents the i th explanatory variable, a vector of household socioeconomic, demographic, institutional and communication characteristics and
- ✓ e denotes the base of natural logarithms,
- ✓ α and β are parameters to be estimated

Central to the use of logistic regression is the logit transformation of P given by Z , that is, to get linearity, we take the natural logarithms of odds ratio equation.

The logistic transformation is given by:-

$$Z = \ln \left(\frac{P_i}{1 - P_i} \right) = \alpha + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + U_i$$

- ✓ Where Z_i is the indicator of smallholder farming household access to credit or not,
- ✓ U_i is the error term.

2.7 Variables and Expected Signs

Table 1 : Variables Expected to Affect Access to Credit and Expected Sign

List of variables	Description	Expected Sign	Remark
Age	Age of the household head in years (continuous)	-ve or +ve	Based on previous studies
Aging	Age square of household head (continuous)	+ve	Previous studies
Education	Education level of a household head (years)	+ve	Based on previous studies
EXTS	Extension service by farmer (0= No, 1 = yes)	+ve	Based on previous studies
FSIZE	Family size of the household	+ve	Based on previous studies
GRPM	Group Membership (0=No, 1= Yes)	+ve	Based on previous studies
LANDSIZE	Total land size in Hectare	+ve	Based on previous studies
Income	Value of Total produce and income generated from off farm activities.	+ve	
IRL	Have irrigable land (0 = No, 1= Yes)	+ve	Own observation
SEXHH	Gender of head of household (Dummy 1= Male, 0= female)	+ve	Based on previous studies
TLU	Number of total livestock measured in tropical livestock unit	-ve	As they can be cash sources for buying inputs.

From personal observation, cultivation of irrigable land is labor intensive and inputs need for such purpose is more expensive compared to rain fed agriculture. As a result, household need additional finance in order to cover all the necessary expenses which increases demand for credit.

Table 2. List of Variables Expected to Affect Credit Constraint

List of Variables	Description	Expected Sign	Remark
Age	Age of the household in years (continuous)	-ve or +ve	Based on previous studies
Aging	Age square of household head (continuous)	-ve	Based on previous studies
DCHILD	Number of dependent children under 15	-ve	Based on previous studies
Education	Education level of a household head (years)	+ve	Based on previous studies
LANDSIZE	Total land size in Hectare	+ve	Based on previous studies
GRPM	Group Membership (0=No, 1= Yes)	+ve	Based on previous studies
SexHH	Sex of household head (Dummy 1= Male, 0= female)	+ve	Based on previous studies
TLU	Number of total livestock measured in tropical livestock unit	-ve	Based on previous studies

3. RESULTS and DISCUSSIONS

3.1 Characteristics of Sample Households

This section presents demographic, institutional and socioeconomic characteristics of households included in the survey such as age, sex, number of dependent children, education level of household head, size of land holding in hectare, livestock size, participation in extension package, and ownership of irrigable land, income from farm and off farm income generation activities.

A total of 190 households were included in this study, women headed households accounts for 24% of individuals interviewed. The average age of household in the study area is 46.21. Average family size of households included in the study is 4.87 and average number of dependent children per household is 1.63. Average family size of the respondents is slightly below the mean family size for the country (Table 3).

Land is the most important asset in the Woreda. Mean landholding of the respondents is 2.28 hectare which is twice as large as national average for the country. Another important asset of rural households is livestock; it is

measured in terms of number of tropical livestock unit. The mean livestock size of the households is 8.9 (Table 3).

With respect to education which was measured in terms of year of schooling, mean year of schooling for the respondents is 3.78 which seem to be very low (Table 3).

With regard to purpose for which the credit was used, 46% of respondents used it for trade, 22.5% of them used it for livestock fattening, 24% of them for the purchase of agricultural inputs, 6.8% for expansion of irrigation channel and 3.4% of them used it for land rental (Table 3).

Table 3: Summary of Sample Household Characteristics

	N	Minimum	Maximum	Mean	Std. Deviation
Age of head of household	190	22	76	46.21	11.634
Number of dependent children below 15 years	190	0	6	1.63	1.260
Education level of household head	190	0	12	3.78	4.073
Family size of the household	190	1	10	4.87	1.874
Total size of land owned in hectare	190	0.00	7.00	2.2817	1.10074
Loan size	190	2000.00	5200.00	3851.7	889.01
Total livestock owned in Total livestock unit	190	0.00	39.00	8.9632	7.54467
Total value of income from farm & off farm	190	8000.00	224000.00	57942.1053	46398
Valid N (listwise)	190				

4.2 Number of Households with Credit Access

The result of the survey had indicated that only 15% of the respondents in the study area had access to formal credit (Fig. 2). However, 60% of the respondents had stated that they would have liked to take loan from formal financial institutions to expand their farming business (Table 4).

Table 4: Demand for Credit

Demand for Credit	Frequency	Percent
No	76	40.0
Yes	114	60.0
Total	190	100.0

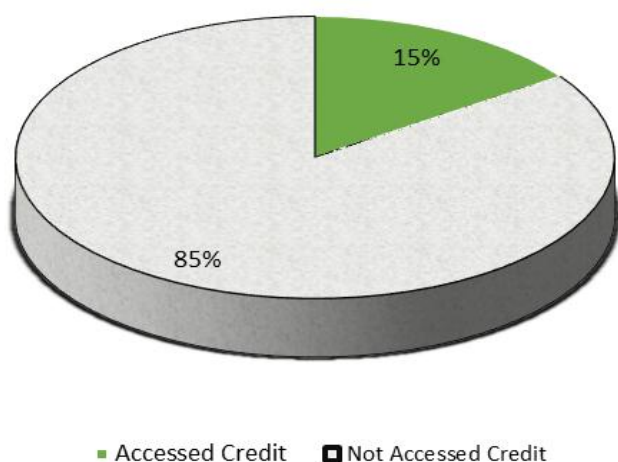
Figure 2: Level of Credit Access by Sample Households

Fig. 2: Level of credit Access by sample households

4.3 Factors Affecting Rural Households' Access to Credit

This section deals with the effect of continuous and discrete variables on access to credit. “Continuous Variable” quantitative variables that can be easily measured while “categorical, discrete or dummy variable” refers to the variables that are qualitative in nature and can only assume nominal values such variables usually indicate the presence or absence of a “quality” or an attribute.

4.3.1 Descriptive Statistics

With respect to gender, 65.5% of those who managed to access formal credit were male and 34.5 % were female. Similarly, 77.6% of those who failed to get access to formal credit were male and 22.4% were female (Table 5).

Among the farming households who managed to get access to formal credit, 86.2% accessed extension service while 13.8% were not exposed to extension service. On the other hand, from households who failed to access formal credit, 54.7% of them use extension package while 45% do not use extension package (Table 5).

Table 5: Summary of the Attributes of Smallholder Farmers Access to Credit (for categorical variables)

Variable	Households Accessed Credit (Yes = 1)			Households Not Accessed Credit (No = 0)			P- value
	Obs.	Freq.	Percent	Obs.	Freq.	Percent	
Gender							0 .1
Male	29	19	65.5	161	125	77.6	
Female	29	10	34.5	161	36	22.4	
Participation in extension package				161			0 .000
Yes	29	25	86.2	161	88	54.7	
No	29	4	13.8	161	73	45.3	
Group Membership				161			0 .097
Yes	29	29	100.0	161	74	46.0	
No	29	0	0.0	161	86	53.4	
Own irrigable land				161			0 .035
Yes (= 1)	29	11	37.9	161	75	46.6	
No (=0)	29	18	62.1	161	86	53.4	

4.3.2 Logistic Regression Analysis

Overall Significance and Goodness of Fit of the Model

- Overall Significance of the model or null hypothesis: Chi-square is used to test the existence of relationship between the dependent variable and independent variables as a whole. As indicated in Table 8, Chi-square value is 57.7 and it is statistically significant at 1% hence we reject the null hypothesis which states that there is no relationship between the dependent variable, access to credit, and the independent variables. However, some of the variables are individually insignificant in explaining rural households' access to credit.
- Goodness of Fit: In order to assess the goodness of fit of the model, percentage correctly predicted, -2Log-likelihood and Nagelkerke R Square was used. The results obtained from the Table 8, indicates that overall the model correctly predicts 87.4% expected outcome , Nagelkerke R Square= 0.456 and - 2Log-likelihood is 104.6
- Therefore, given the above points, it is possible to conclude that the model is significant in explaining determinants of rural households' access to credit in the study area even though some of the variables are not significant individually.

The result had indicated that four of the continuous variables, age, and aging, family size and number of livestock in tropical livestock unit significantly affect access to rural credit. On the other hand, all the four categorical variables, use of extension package, sex of the household head, ownership of irrigable land and group membership significantly affect rural

household's access to formal credit. However, education level, income and land size do not have significant effect on credit access (Table 6).

Though education level in terms of year of schooling shows positive sign, it is statistically insignificant. The finding of the study contradicts with findings of Hussein (2007) who concluded that higher level of education is associated with the ability to access and comprehend information on credit terms and conditions. The reason for insignificance of the variable might be attributed to low level of education in the study area which was only 3.7 years of schooling (Table 6).

With respect to land size, its insignificance might be associated with the fact that the financial institutions in rural area do not take into consideration size of land while providing loan to clients. For MFIs, the loan size depends on the number of terms the client has taken loan from them and the loan size is very small compared to agricultural input price. Furthermore, farmers in Ethiopia are not allowed to take loan from financial institutions presenting their land as a collateral (Table 6).

Table 6: Summary of Logistic Regression Result for Access to Credit

Variables	B	S.E.	Wald	df	Sig.	Exp(B)
AGEHH	-0.216	0.1	4.6	1	0.031**	0.806
AGING	0.002	0.001	4.3	1	0.036**	1.002
EDUHH	0.053	0.08	0.436	1	0.509	1.054
EXTENSION(2)	-1.639	0.883	3.44	1	0.064*	0.194
FSIZE	0.427	0.159	7.232	1	0.007***	1.533
GROUPMEM			6.747	2	0.034**	
INCOME	0	0	0.496	1	0.481	1
IRRIGABLE(2)	1.596	0.731	4.773	1	0.029**	4.935
LANDSIZE	0.218	0.303	0.518	1	0.472	1.244
SEXHH(1)	2.07	0.755	7.517	1	0.006***	7.923
TLU	-0.14	0.082	2.867	1	0.09*	0.87
Constant	-19.799	40193.12	0	1	1	0
Percentage Correct = 87.4						
- 2log likelihood = 104.6						
$\chi^2 = \text{Chi-square} = 57.7, \text{Sign} = 0.000$						
Nagelkerke R Square= 0.456						

*, **, *** represents significance at 10%, 5% and 1%, respectively.

4.3.2.1 Elaboration of Significant Explanatory Variables

Aging (Age square): Many scholars use age square as a good proxy variable to estimate aging. This variable has positive effect on accessing credit. The possible explanation is as the individual becomes older, they are less likely to take risky business. As a result financial institutions favor old people. The odd ratio in favor of accessing formal credit is increasing by 1.002 as aging increase by 1 unit. The result of the study is similar to the finding of Zelleret *al* (2002).

The Age of Household Head (AGEHH): The age of household head has negative effect on access to credit. With increase age, the household accumulates enough wealth and depends on own finance to meet their

financial needs. They may not prefer to visit MFIs or SACCOs to get their services. As the age of the household increase by one year the odd ratio in favor of accessing formal credit declines by 0.806.

Number of Livestock in Tropical Livestock Unit (TLU): Livestock in the rural areas constitutes accumulation of wealth, security against emergencies, dowry, and also used as a cultural privilege. They can also be easily converted into cash when demand arises. Due to these reasons it was hypothesized to have a negative relationship with the dependent variable, as the total number of animals in the household increase, the household would be less likely to go for credit. This can be attributed to increase wealth and income base of farm households which makes more money available in the households. The result of the logit model also revealed that the variable has a negative relationship; farmer with lesser number of animals uses formal credit than farmer with larger livestock size. The odd ratio in favor of accessing formal credit use decreases by a factor of 0.87 when the livestock number increases by one unit. The result is consistent with the prior expectation.

Access to Extension Service: -Normally, extension service is expected to motivate farmers to use improved inputs and increase demand for credit. Access to extension by smallholder farmers was significant at 6% level of significance, however, with negative effects on access to credit. This implies that the cost of fertilizer is high compared to the amount of credit given by the finance institution as a result farmers may prefer not to request the service. Furthermore, there is no input credit scheme in the study area and farmers are expected to pay 100% cash up front to purchase fertilizer and improved seed.

Family Size of Households: Family size is significant at 5% significance level with positive sign. Proper management of farm and off- farm income generation activities requires adequate labor supply, thus household labor affect access to credit positively. On the other hand, households with large number of children may need credit for consumption smoothing purpose. The study result shows that as the family size increase by one unit the odd ratio in favor of accessing credit increases by 1.533. The finding of the study concurs that of Hussien (2007).

Sex of the Household Head: Gender of households affects rural households' access to credit and level of significance is 1%. The odd ratio in favor of accessing formal credit for Men is 7.9 compared to female households. Theoretical and empirical studies show that one of the disadvantaged groups from the economic point of view is women. Though microfinance institutions work to reach women, because of the existing gender differences women are still less accessed to use formal credit.

Ownership of Irrigable Land: Ownership of irrigable land is another important factor that affect rural household's access to credit in the study area and the significance level is less than 5%. The odd ratio in favor of accessing credit is 5 times higher for those who own irrigable land compared to those who do not have irrigable land. Cultivation of irrigable land demands higher inputs compared to rain fed agriculture. Hence it increases demand for credit in order to finance additional resource required.

4.4 Factors Affecting Credit Constraint

This section deals with factors constraining rural households' access to credit. Constrained household in this study include households who accessed credit from financial institution but replied that amount they

received is not enough, those farmers whose application is rejected and households who are discouraged to apply for credit due to lack of awareness and too small loan size. Access to credit does not imply absence of credit constrained; households may access credit and yet they can be credit constrained.

4.4.1 Credit Constraints

According to the survey result, 57.3% of the households in the study area were not benefitted by credit from financial institutions. The main reason for high credit constraint in the area is attributed to small size of loan offered by the financial institutions and lack of awareness regarding the requirements and procedures of financial institutions. The mean loan size accessed by households was only Birr 3851.00 (Table 7). When categorized, 28% claim they were not asking credit because the loan size was too small, lack of awareness about credit (20.5%), application rejected (1.2%) and only 28% of households responded that they have enough money to meet their financial needs (Table 8).

From those households who accessed credit from financial institution, 82.7% of them had indicated that the loan size was not enough. Hence, they are considered as credit constrained households. Given the average land holding size of the sample households, which is slightly above 2 hectares, the amount of credit they receive is not enough to cover cost of agricultural inputs like fertilizer and improved seed. Furthermore, many of the households in the study area need credit for grain trade and livestock fattening which need relatively higher capital. The survey result indicates that 68.5% of the households that accessed credit used it for trade and livestock fattening (Table 7).

Table 7: Categorical Variables and Constrained Households

Reason	Frequency	Percentage
Loan size is too small	45	28
Application rejected	2	1.2
Have enough Money	46	28.6
Afraid of risk	26	16.1
Lack of Awareness	33	20.5
Timeliness of loan	5	3.1
Shortage of household labor	2	1.2

Table 8: Reason for Not Taking Loan

	Credit Constrained Households	Unconstrained households	% of credit constrained
Gender			
Male	77	67	53.5
Female	32	14	69.5
Total	109	81	57.3
Access to Credit			
Yes	24	5	82.7
No	85	76	53
Total	109	81	57.3

4.5.1 Logistic Regression

Overall Significance and Goodness of Fit of the Model

- Overall Significance of the model or null hypothesis: Chi-square is used to test the existence of relationship between the dependent variable and independent variables as a whole. As indicated in Table 9, the Chi-square value for the model is 41.8 and significant at 1%, and it is statistically significant at 1% hence we reject the null

hypothesis which states that there is no relationship between the dependent variable, credit constraint and the independent variables used in the model. However, some of the variables are individually insignificant in explaining credit constrained households.

- Goodness of Fit: In order to assess the goodness of fit of the model, percentage correctly predicted, -2Log-likelihood and Nagelkerke R Square was used. The results obtained from the Table 9, shows that overall the model correctly predicts 70.5% of the cases, Nagelkerke R Square = 0.266 and - 2Log-likelihood is 217.39
- Therefore, given the above points, it is possible to conclude that the model is significant in explaining factors affecting credit constraint in the study area even though some of the variables are insignificant individually.

The result of the survey reveals that from the continuous variables, age of the household and number of livestock owned had significant impact on determining credit constrained households while number of dependent children, education, family size and land size seems to be insignificant in determining credit constraint. From the dummy variables, sex of households had impact on credit constraint while group membership is insignificant in identifying credit constraint.

In theory, educated rural household should easily understand loan procedure and relevant information and education is an indication for personal ability. But we could not find evidence that education relieve credit constraints. The finding of this survey concurs with that of Cheng (2009). This might be attributed to the fact that the level of education in the study area in terms of year of schooling was very low, 3.7.

Table 9: Summary of Logistic Regression Result for Credit Constraint

	B	S.E.	Wald	df	Sig.	Exp(B)
AGEHH	0.154	0.073	4.407	1	.036**	1.167
AGING	-0.002	0.001	6.106	1	.013**	0.998
DEPCHILD	0.057	0.19	0.089	1	0.766	1.058
EDUHH	0.062	0.05	1.495	1	0.221	1.064
FSIZE	0.061	0.128	0.225	1	0.635	1.063
GROUPMEM			3.559	2	0.169	
LANDSIZE	-0.349	0.218	2.547	1	0.11	0.706
SEXHH(1)	0.729	0.42	3.015	1	.082*	2.072
TLU	-0.051	0.031	2.729	1	.099*	0.95
Constant	-23.457	40191.7	0	1	1	0
Percentage Correct = 70.5						
- 2 Loglikelihood = 217.39						
Nagelkerke R Square =.266						
$\chi^2 =$ Chi-square = 41.8 Sign = 0.001						

*, **, *** represents significance at 10%, 5% and 1%, respectively.

4.5.1.1 Explanation of Significant Explanatory Variables

Aging (square of household head age): As indicated in Table 11, aging has significance in determining constrained households and it is significant at 5%. There is negative relationship between the age of the household and credit constraint. As aging increases by one year the odd ratio in favor of credit constraint declines by 0.998. The result of the survey supports findings of Zelleret *al* (2002). Old people are privileged and less demanding or risk averse. Old people seem to have accumulated wealth for long which may serve as collateral and increase their trust and confidence to financial institutions.

Age of Household Head (AGEHH):- The survey result indicates that there is a positive relationship between age of household and credit constraint and it is significant at 5% level. As age increases by one year, the odd ratio in favor of credit constraint increases by a factor of 1.167. This result enhances the findings of Cheng (2009). Hence, age has a positive effect on supply side of credit constraint which means the credit offered by financial institution may not be sufficient for them. With increasing age, households want to get larger loan size which might be beyond the capacity of financial institutions.

Number of Livestock in Tropical Livestock Unit (TLU): The result of the logit model revealed that the variable has significant impact on credit constraint; it's significant at 10%. As it can be seen from the table 11 there is a negative relationship between numbers of livestock owned and credit constraint. As the size of livestock increase by one unit, the odd ration in favor of credit constraint declines by a factor of 0.95. The negative relationship could be attributed to the fact that livestock ownership indicates accumulation of wealth in rural households and it can be easily converted to cash easily. Therefore, accumulation of the wealth or ownership of asset gives financial institution confidence to advance loan to them. On the other hand, people with large number of livestock may not prefer to go to financial institution to meet their financial needs and instead depend on sell of their livestock. As a result if they donot need credit, they are considered us unconstrained group.

Sex of Household Head: According to the survey result, gender has important impact on credit constraint and. The odds for credit constraint are higher for male households compared to their female counterparts. The result of this survey supports the findings of many similar researches.

5. Conclusion

The finding of the study had indicated that most of the explanatory variables expected to affect access to credit were found to be in line with theoretical and empirical findings of other studies. The unexpected insignificance of education level and size of land on credit access entails low level of farmers' education and land not being used as collateral. The amount of credit they receive is not associated with the size of land they own; it mainly depends on number of years they borrowed from the MFIs.

Analysis of impact of gender on access to credit indicates that men are more likely to access credit than their female counterparts in the study area. It shows that despite the various endeavors made to empower women-headed households to access credit, they are still disadvantaged groups. Unlike access to credit, male-headed households are more likely to be credit constrained compared to female-headed households..

Generally, farmers in the study area have limited understanding about services provided by financial institutions, credit and saving. Furthermore, the size of loan offered by financial institutions was too small compared to demand for the product.

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