

# Women Participation in Microcredit Service to Improve Families Livelihood: The Case of Sodo Zuria District, Wolaita Zone, Southern Ethiopia

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### Abstract

*Even though microfinance institutions have their principles and guidelines that have room for before women and working to improve their families' lives, women participation is not significant in all of the microfinance services and their activities. The situation is also similar in the study area. The study's objectives were to assess the extent and status of women participation in Microcredit, determine factors that affect women participation in microcredit service to improve livelihood and assess the constraints that hinder women's participation in microcredit service from enhancing their livelihood. The total number of rural women microcredit users in Omo and Vision Microfinance was 2331; from this 100 sample, respondents were selected using Yemane (1967) formula and based on PPS through a simple random sampling method. The extent and status of women participation in microcredit service have been measured by calculating the score value of the participation index. The participation status of women has been categorized into low, medium and high, which are 38, 20 and 38 respondents, respectively. Mean difference, percentage, one-way ANOVA, spearman correlation and chi-square test were used with an ordered logit model to analyze the data. Out of 17 hypothesized variables, 7 of them, namely, age, Family income, Livestock holding size, household expenditure, the experience of borrower, achievement motivation and attitudinal level, are significant to the dependent variable. According to the respondents' econometric analysis age, the respondents negatively influence the level of participation, and it is significant. It is better to consider the mean age between 37, which is the medium age group. Therefore, policy-makers, actors, MFI industries/institutions, and planners should develop a positive attitude and motivational achievement through training and awareness creation programs to promote women's equal opportunities control over their household economic resources.*

**Keywords:** Women participation, Microcredit service, Variables order logit mode

### Introduction

In Ethiopia, agriculture is the mainstay of the economy and the people. The agricultural sector is also proving the principal employer, accounting for 85% of the total employment in the country and an estimated 70% of the employment for rural women (ADB, 2004). Different Microenterprises, in particular, are considered important in contributing to the socio-economic empowerment of women.

However, access to credit continues to be a significant constraint for female entrepreneurs, particularly concerning access to loanable funds, lending conditions and repayment arrangements (Zewde and Associates, 2002). So, this shows a need to provide microfinance service for the poor, especially for women in rural areas.

Two-thirds of microfinance clients around the world are women. Under the first rationale for investing in microfinance (Integrated Poverty Programme), the focus tends to be on women because they are often the poorest and are responsible for household welfare. In contrast, in the second, women focus because they tend to have higher repayment rates (Ipedr, 2011).

Microfinance has come to play a significant role in many gender and development strategies because of its direct relationship to poverty alleviation and women's empowerment. "By giving women access to working capital and training, microfinance helps to mobilize the women's productive capacity to alleviate poverty and maximize the economic output." Additionally, investing in women has proven to increase the positive impact of microfinance programs since women are more likely than men to spend their income on household and family needs.

Rural women work long hours, and many of their activities are not defined as "economically active employment" in national accounts but are essential to the well-being of their households. They also constitute a significant proportion of the labour on their family farms, whether producing for household consumption or enterprise or both (UNIFEM, 2005). Their potential to do so has limited by multiple and diverse constraints by persistent structural gender disparities that prevent them from enjoying their economic and other rights.

The most challenging poverty hits Ethiopian women, who constitute about 50% of the population and comprise the majority of the segment of the community. Such women have the potential and energy to contribute to economic development. However, their potential too often go undeveloped and under-utilized. The aim is to empower the women in Ethiopia in general. In Ethiopia, this scheme has widely practised in providing financial services to the poor was assumed to solve the constraints of

stating capital for the poor. The poor will thus resume productive activity, improve income and increasing welfare.

Poor people engaged in the informal sector have limited access to credit from formal financial institutions. As a result, the government involved in supporting the informal sector operators and has taken micro-financing as one of the possible means to reach the lowest section of society. In this regard, women's are the most vulnerable due to the different cultural and social influences of the community. According to Reddy (2000), the microcredit program is highly successful, evidenced by the high rate of repayment, awareness generated among the target group, and beneficial development impact created on the borrowers.

Eventually, about 1000 to 2500 MFIs are serving 67.6 million borrowers around the world (Sengupta and Anbuchon, 2008). Hence globally, microcredit outreach shows the program's contributions to the poor (Ahmed, 2004). Thus, microfinance makes socio-economic conditions better for the poor.

According to Moll (1998), microcredit has emerged as an antipoverty instrument in many developing nations, targeting the poor, especially women, with financial services and to help them become self-employed. Similarly, in Ethiopia, microfinance is a critical instrument to improve the livelihood of poor people. The prevalent of poverty in Ethiopia is high because of a lack of assets, employment opportunities, income, skill, education, nutrition, health, etc. (Wolday, 2000). As a result, it necessitates the use of microcredit as an intervention mechanism.

In Ethiopia, the microfinance sector is relatively young as compared to other developing countries. They are established by the federal government proclamation no. 40/1996. Currently, 31 licensed microfinance institutions are operating in the country, where most of them have evolved either from the credit component of the governments or NGOs credit scheme.

The microfinance sector now plays a significant role in providing credit services to the poor in rural and urban areas. Therefore, it is vital to measure the role of a microcredit program on borrowers. Many studies have been undertaken on the financial

performance of microfinance. However, they provide an incomplete picture of program performance because methodologies primarily focus on outputs (to measure performance) and aim to identify outcomes (to assess impact) of the organizations' activities. Impact evaluation is understood as a systematic effort to identify the effects of actions on individuals, households, and institutions attributable to a policy or program. However, recent studies that shed doubts on Microcredit's effectiveness suggest that actuality of microcredit effectiveness may be less attractive than the promise (Adams & Bartholomew, 2010).

Interestingly, there are inconclusive findings on the effectiveness of microcredit program. For instance, borrowers have been burdened with multiple loans at excessive interest rates, often having to borrow from more than one MFI to make their microcredit payments (Glazer, 2010). In contrast, Microcredit is considered an effective means of poverty alleviation (Chowdhury et al., 2004).

Micro-credit has been claimed to be a solution to most of the problems that originated out of the state's efforts to alleviate poverty and women empowerment by using the instrument of credit. Micro-credit plays a vital role in accelerating economic growth in any developing country. It is believed that 25 million people worldwide are now using micro-credit to undertake income-generating or self-employment activities; 90% are women.

Micro-credit has not only made women more productive, but it has also empowered them (Chavan and Ramakumar, 2002). Micro-credit is a small loan system for income-generating activities, enabling poor communities to gain some economic stability.

The participation of the women is confined all too often to provide labour and support. Therefore, they lack information and effective voice in different community organization and other political activities. As a result, their interests are ignored. These factors link to de-motivate them to participate and access in social-economical and other developmental affairs. This will undermine women's confidence and keep them marginalized (Mantegbosh, 2008).

## Objectives

The general objective of this study was to examine the role of women participation in microcredit

service in the selected communities of Sodo Zuria district, Wolaita Zone.

## Specific Objectives

The Specific Objectives of the study are:

- To examine the current status of women participation in microcredit service in the study area
- To assess the challenges women face in accessing and using micro-credit in the study communities.

## Research Methodology

### Description of the Study Area

The study area, Sodo Zuria district, is one of the woredas found in the Wolaita zone with a distance of 387 km from the southeast of Addis Ababa (the capital city of Ethiopia). Geographically Sodo Zuria District is located roughly at 6°54'N latitude and 37°45'E longitude with an elevation between 1,600 and 2,100 meters above sea level. Different woredas of the Wolaita zone bound it. For instance, Damot gale at North, Offa and Humbo at the south, Damot Woide at east and Kindo Koisha at West. The Agroecology of the study area is about 87 % of the total area is dega, and the rest 17% is Woyne dega. There is no coverage of kola agroecology.

Most of the population, almost 99% of a rural community, heavily depends on agriculture and Small landholder. The farming system is affected by rapid environmental changes; human activities often accelerated natural soil erosion, leading to the deterioration of the natural resource base, threatening the suitability of the farming system. The potential to feed the growing population in the study area from farm production alone has reduced substantially over the past ten years. Households have become more vulnerable to crop failure through drought or other events (CSA, 2008).

## Sampling Technique

### Sample Size

Yamane's (1967) formula was employed to compute the sample size of the respondents with a 90% precision level, and the sample size is 96 for this study.

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

Where ‘N’ is the total population of women credit users who got the Microcredit, ‘n’ is the sample size, and ‘e’ is the level of precision. The total N is 2331, and a confidence level of 90% was used. Based on this, the error term would equal 0.1 using the total population of 2331 and the error margin of 0.1; the sample size was calculated as follows.

$$n = 2331 / \{1+2331(0.1)^2\} = 96$$

Therefore, out of the total population of 2331 women borrower, the total sample size was 96 in number. The sample respondents were identified by using a simple random sampling technique/ lottery method.

### Sampling Design

The study was used both probability and non-probability sampling technique. It was based on the data of the women population they belong to Soddo Zuria Woreda, Wolaita Zone, Ethiopia. The study area Soddo Zuria out of the 12 rural districts of the wolaita zone was selected purposively. The total sample population of the study area comprised the rural women under Soddo Zuria district and those who took Microcredit from HABP, RUSCCOs, Omo microfinance and Wisdom microfinance institutions. These institutions are legally organized microcredit service providing institution and purposively selected

because these credit providing organizations provide Microcredit for rural poor women. According to the Wolaita zone cooperative department annual report of 2014, RUSCOs and Omo MFI operate in all 31 rural PAs of soddo Zuria district. While WMFI, currently called Vision fund operating in eight rural PAs only. The total number of women borrowers who got the microcredit service from these institutions and one food security program are 2331 in 31 rural PAs of Soddo Zuria District. Therefore, by considering all the microcredit service conditions, the researcher provides institution, especially their operating area; four PAs were selected by using the purposive sampling technique. The total sample size of the respondents was chosen by using Yamane mathematical formula, and they are 96 in number. The number of sample in each Kebele was determined by probability proportional to size sampling (PPS). A simple random sampling technique was used to select a sample of women. In order to have quantitative information, the researcher used an interview schedule for a total of 96 respondents. See the Sampling Procedure below.

$$n = N / \{1+N (e)^2\} = 96$$

Where n = sample size, N = population size, e = Error margin (9%)

**Table 1: Sample of the Selected Kebeles**

District	Total population (N)	Selected rural PAs user of MFI	Total	Sample Size Households (n)
Sodo Zuria	2331(31 PAs)	Humbo Larena	45	17
		Wareza Gerera	57	25
		Shola Kodo	45	17
		Haba Gerera	85	37
Total			232	96

Source: Soddo Zuriya Woreda Microfinance Institutions (2012)

### Data Type and Source

The data was collected by producing semi-structured questioner and enumerators were recruited to collect data from individual members.

### Data Type and Source

In this study, both primary and secondary data had been collected. The collected data were based on the independent variables, which were hypothesized to influence the participation of women in rural

microcredit service. These independent variables include demographic, socio-economic, institutional and psychological factors. All the quantitative data were collected using an interview schedule from the respondents. The primary data were derived from the interview responses of the sample women credit users from four kebeles, VFMFI and Omo MFI. The Secondary data were derived from manuals, journals, books, bulletins, statistical reports of the branch.

## Data Collection

The primary data were collected from respondents through questionnaires and interview. The semi-structured questionnaires were designed and distributed to sample respondents. Primary data were used to collect information on pre-treatment characteristics of respondents for matching purpose and outcome variables to assess the impact of microcredit on the livelihood of household borrowers. The data collection process using a questionnaire followed the following approaches. Firstly, the respondents were identified concerning their participation in the microcredit program as participants and non-participants, but eligible where the same questionnaires were prepared and distributed for both. Next, the actual field survey was conducted to gather necessary data from the respondents using enumerators. Several secondary data were also personally reviewed to describe and demonstrate the current profile of DECSI microfinance and issues related to the research topic borrower.

The secondary data, which include reports, journals, books, bulletins, statistical reports, and unpublished thesis, were collected from Agricultural Offices of the Woreda, Marketing and Cooperative Department of Soddo Zuria Woreda and Zonal annual report, Omo MFI, Wisdom MFI, RUSCOS, Finance & Economic Department of Wolaita zone. In addition, different magazines, books, encyclopedia and websites were searched from the internet to conduct the research.

## Method of Data Analysis

After the information had been gathered, various tools were used to analyze it to capture the relevant findings and present them so that fellow researchers and other research users would understand.

The extent of women participation in rural microcredit service at different levels of participation in each activity has been analyzed by putting all those levels of participation into a participation index used to analyze "The Participation and Decision Making Role of Rural Women in Economic Activities in Bangladesh".

Women's participation in each rural microcredit service activity has been measured by putting the indicator activities with their score values of

frequencies from frequently to never participation. Respondents were asked to what extent they were participating in these activities. This is based on their intervention as frequently, occasionally, seldom and never. Each response was awarded sufficient scoring values like 3, 2, 1 and 0, respectively. Therefore, a respondent's score could be ranged from 0 to 288, where 0 indicates all women are not participating in a given activity and 288 indicates the high participation of all women in that activity, which means all are frequently experiencing. The frequency counts of responses have been recorded to compute the Participation Index (PI) of a woman for each selected activity. Then Participation Index for each activity has been computed by using the following formula:

$$PI = (N1 \times 3) + (N2 \times 2) + (N3 \times 1) + (N4 \times 0)$$

Where:

PI = Participation Index for different activities of participations in the cooperatives

N1 = Number of women who participate Frequently

N2 = Number of women who participate Occasionally

N3 = Number of women who participate Seldom

N4 = Number of women who Never participate

The participation index described above expresses to what extent women are involved in each activity of a given microcredit service. However, in order to measure the status of women participation in microcredit service as a general, the scores of these activities were calculated for each respondent and converted into a significant index value as Tilahun (2008) and Hirpo (2010) used the same procedure to measure access to and utilization of family planning information among rural women and the empowerment status of rural women by calculating the scores obtained from the different indicators.

The indicator activities used for this analysis include participation in meetings, participation in training and participation as members of different committees in the group collateral credit systems. Then respondents have different groups of participation levels. This was after getting the respondents' score about their participation level in each microfinance activities based on the frequencies like frequently, occasionally, seldom and never.

After identifying the extent and status of women participation in microcredit service, descriptive statistics tools such as mean, standard deviation and

percentages were used to analyze the quantitative data collected from primary sources. An independent t-test was used to test mean the difference among continuous variables. Pearson's 2 (Chi-square) tests for categorical variables were run to compare groups concerning variables of interest, and one-way ANOVA and spearman correlation have been employed. Order logit regression model was employed to identify the determinants of women's participation in microcredit services in the MFI. Then for the analysis, the collected data were tabulated and put into the software SPSS version 20 and STATA12.

### Specifications of Econometric Analysis

#### Ordered Logit Model

By the rationale of factors affecting women participation in microcredit service in the study area, the ordered logit model was employed to measure the extent of women participation while becoming a user in microfinance. In this study dependent variable has a categorical or ordered nature. Then ordinary linear regression is not appropriate because of the non-interval nature of the variable, and the 23 spacing of the outcome choices cannot be uniform. Ordinal logit and probit models have been widely used to analyze such data types (Liao, 1994). Some polychotomous dependent variables are inherently ordered. Although the outcome is discrete, the multinomial logit or probit models would fail to account for the ordinal nature of the dependent variable (Greene, 2008). The ordered probit and logit models have come into reasonably wide use as a framework for analyzing such responses. Hence, the Ordered Logit Model was used to assess the determinant of Women Participation having three distinct categories. That is low, medium and high participation categories.

#### Model Specification

By following Greene (2008) and Liao (1994), the functional form of the ordered logit model is specified as follows:

$$y^* = \sum_{k=1}^k \beta_k \chi_k + \varepsilon \tag{1}$$

$y^*$  is unobserved and thus can be thought of as the underlying tendency of an observed phenomenon  $\varepsilon$  is assumed it follows a specific symmetric distribution with zero means such as average or logistic distribution. What is observed is

$$\begin{aligned} y &= 1 \text{ if } y^* \leq \mu_1 \\ y &= 2 \text{ if } \mu_1 \leq y^* \leq \mu_2 \\ y &= 3 \text{ if } \mu_2 \leq y^* \leq \mu_3 \\ y &= j \text{ if } \mu_{j-1} \leq y^* \leq \mu_j \end{aligned} \tag{2}$$

Where  $y$  is observed in  $j$  the number of ordered categories  $\mu_s$  are unknown threshold parameters separating the adjacent categories to be estimated with  $\beta_s$ .

The general form of the probability that the observed  $y$  falls into the category  $j$  and the  $\mu_s$  and they  $\beta_s$  are to be estimated with an ordinal logit model is

$$Prob(y = j) = 1 - L\left(\mu_{j-1} - \sum_{k=1}^k \beta_k \chi_k\right) \tag{3}$$

Where  $L(\cdot)$  represents the cumulative logistic distribution The odds ratio on each participation status is calculated by

$$\frac{\partial Prob(Y = j)}{\partial \chi_k} = \left[ f\left(\mu_{j-1} - \sum_{k=1}^k \beta_k \chi_k\right) - f\left(\mu_j - \sum_{k=1}^k \beta_k \chi_k\right) \right] \beta_k \tag{4}$$

Where  $f(\cdot)$  represents the probability density function.

### Empirical Framework

#### Hypothesis and Definition of Variable

The collected data was based on the independent variables hypothesised to influence women's participation in microfinance. Among several factors, which have been influencing women empowerment to participate in the microcredit service, in this study, the following demographic, economic, institutional and psychological factors were hypothesized to explain the rural women empowerment in the study area.

**Table 2: Explanatory Variables Definition and Hypothesis**

Variables	Variable Types	Definition	Hypothesis	Result
AGE	Continuous	Age of Credit users	+ve	-ve
EDSTAT	Dummy	Educational status	+ve	+ve

FSIZE	Categorical	Family Size	+ve	+ve
MRSTAT	Categorical	Marital Status	+ve	-ve
FMINCO	Continuous	Family Income	+ve	+ve
LVSIZE	Categorical	Livestock Size	+ve	+ve
HHEXP	Continuous	Household Expenditure	-ve	+ve
INCSOR	Categorical	Income source	+ve	-ve
ACHIVMOT	Categorical	Achievement Motivation	+ve	+ve
HHSTAT	Dummy	Household Status	+ve	+ve
DISTMFI	Continuous	Distance from Microfinance institution	+ve / -ve	-ve
COLTR	Dummy	Collateral	-ve	+ve
EXBOR	Categorical	Experience of Borrower	+ve	+ve
DECMP	Dummy	Decision-Making power	+ve	-ve
ASOWN	Categorical	Asset ownership Right	-ve	+ve
ATLEV	Categorical	Attitudinal Level	+ve/-ve	+ve
LNSIZE	Categorical	Land Size	-ve	+ve

## Results and Discussion

### Descriptive Analysis

**Age of the Respondents (AGE):** Age is a personal characteristic essential to describing the respondent situations and can indicate those women in the area. The mean age of the respondents is 37.27, with a standard deviation of 7.695 years. The One-way analysis of the ANOVA test was conducted to see the mean difference among the three participation categories. The result revealed the significant mean difference in age among the three participation categories at less than one per cent level of probability. However, the mean also decreased going through low to high participation categories. It means that the age of respondents close to the mean age of 37.27, the level of participation becomes high; otherwise, it negatively influences it. At the same time, the bivariate correlation analysis, the hypothesis showing negative and strong association ( $r = -0.665$ ,  $P=0.00$ ) between age and women participation in microfinance service. So the result strongly supports the hypothesis.

**Educational Status of the Respondents (EDSTAT):** Education has the most significant correlation with Women's participation in microfinance, especially concerning using services and benefits. Some studies showed a positive relationship between the level of education and participation in microfinance service. Out of the

total 96 respondents, 39% are illiterate, and 61% are literate. In this regard, 71% of illiterate women have a low participation level in microcredit service, whereas 82% of literate women have participated in microcredit service activities. The Chi-square value in Table ( $\chi^2 = 28.130$  and  $P=0.001$ ) shows a significant relationship between education and the participation of women in microfinance activities. This shows that education contributes significantly to the participation of women in microcredit services.

**Household Status of the Respondents (HHSTAT):** The status of the women being housewives or households contributes to their participation in microcredit service. Then it was expected that household heads are independent to decide in their house and participate more in external activities. Out of the total household respondents, 51%, 24%, and 24% were under the low, medium, and high levels of participation. Whereas out of the total housewife respondents, 8%, 12% and 81% fall under the low, medium and high level of participation. It indicates that household participation decreases from 51% to 24%, whereas housewives' participation increases from 8% to 81%.

In general, from 96 respondents, 40% of them have a low participation level, 20% have a medium level of participation, and 40% of respondents highly participate in microcredit service. Therefore, the chi-square test ( $\chi^2 = 25.921$  and  $P\text{-value}=0.000$ ) shows

an association between household status and women participation in microcredit service is significant at a 1% probability level.

**Family Income of the Respondents (FMINCO):** Income is the total amount of money or capital that people earn every year from different income sources. The lower participatory group in the microcredit service has a mean income of Birr 6,389.47, and the medium participatory group has a mean income of Birr 6,205.00. On the other hand, the high participatory group of the microcredit service has a mean income of Birr 12,937.37. The value of Spearman correlation ( $r = 0.354$ ) shows that there is a positive relationship between the income of the respondents and their participation in microcredit service. The one-way ANOVA ( $F = 8.069$  and  $P=0.001$ ) shows a significant mean difference at a 1% level among the income of the different participatory categories in the microcredit service.

**Household Expenditure of the Respondents (HHEXP):** The amount of income and expenditure determines household livelihood. Based on these, data related to household expenditure was collected from credit users for household participation level. The lower participatory group in the microcredit service has a mean income Expenditure of Birr 2,999.713, and the medium participatory group has the mean income Expenditure of Birr 2,710.47. On the other hand, the high participatory group of the microcredit service has the mean income Expenditure

of Birr 3,629.51. The value of Spearman correlation ( $r = 0.397$ ) shows that there is a positive relationship between the expenditure of the respondents and their participation in microcredit service. The one-way ANOVA ( $F = 9.429$  and  $P=0.001$ ) shows a significant mean difference at a 1% level among the income of the different participatory categories in the microcredit service.

**Income Source of the Respondents (INCSOR):** The sources of income determine the household income. The significant sources of household income that women categorized are crop and animal production, petty trade/small trade, labour work and others. More than 42% of the respondents engaged in crop and animal production, and 38% of respondents engaged in petty trade/small-scale trade in addition to farming. Out of the total 40 respondents those who engaged in crop and animal production, 57%, 30%, and 13% participated in microcredit service as low, medium and high, respectively. Out of the total respondents who engaged in petty trade, 22%, 19%, and 59% have participated in microcredit service as low, medium, and high, respectively. On the other hand, out of 16 respondents who engaged in the crop, animal and petty trade, their level of participation is relatively high and 69%. Therefore, the chi-square test ( $\chi^2 = 50.53$  and  $P\text{-value}=0.000$ ) shows a strong association between income source and women participation in microcredit service and significant at 1% probability level.

**Table 3: Relationship between Family Size and Women Participation in Microcredit Service**

Performance Categories		Income Source				Total
		Crop and Animal production	Petty Trade	Labor Work	Crop, Animal & Petty trade	
Level of Participation	Low	23(57%)	8(22%)	3(100%)	4(25%)	38(40%)
	Medium	12(30%)	7(19%)	0(0%)	1(6%)	20(20%)
	High	5(13%)	22(59%)	0(0%)	11(69%)	38(40%)
Total		40(100%)	37(100%)	3(100%)	16(100%)	96(100%)
$\chi^2=50.53$ ; $P\text{-value}=0.000$ ***						

**Source:** Own survey, 2016; **Note:** \*\*\*Significant at 1% probability level

**Experience of the Borrower (EXBOR):** The average number of years women have stayed and borrowed from microfinance institutions is 2.95. Respondents in the low, medium and high participatory groups had stayed with an average year of 1.18, 2.05 and 5.19, respectively. The Spearman

Correlation ( $r = 0.926$ ) shows a positive relationship between the experience of credit users/borrowers and Women Participation in microcredit Service. The one-way ANOVA test ( $F = 373.3$  and  $P=0.000$ ) shows a significant mean difference of experience in years of credit users/borrowers among the different



participation categories at a 1% significance level. The result is consistent with Hirpo (2010), which stated that the duration of membership of saving and credit institutions significantly relates to women participation.

**Distance from a Microfinance Institution (DISTMFI):** The mean distance that the women travel to reach a microfinance institution is 7.29 Kms, whereas the mean distance of the low, medium, and the high participatory group travel to reach Microfinance are: 10.46, 7.3, and 4.1 Kms respectively. The Spearman Correlation ( $r = -0.578$ ) shows a negative relationship between women participation in microfinance and the distance they travel to reach the microfinance office to get the service. The one-way ANOVA ( $F = 25.23$  and  $P=0.00$ ) indicates a significant mean difference among the different participation groups at a 1% significance level.

**Decision-making Power of Women in Loan Usage (DCMP):** In microfinance institution, the microcredit service is given to voluntary loan seeker for different business, production and consumption purposes. The decision making power of the women is affected by her husband and others. Significance means the difference in women’s decision-making power among the participation categories of women in the Microcredit. The low, medium and high participation level has the mean value of 0.58, 0.75

and 1.00 respectively. As the mean value increases from 0.58 to 1.00, the level of participation also increases from low to high. The mean value near zero means the women have no power to decide on the loan usage, and their level of participation is becoming low. On the other hand, the mean value close to 1.00. Women can decide on the usage of Microcredit, and the level of participation becomes high in decision making power among the different participation categories at a 1% level of significance.

**Attitudinal levels of the respondents (ATLEV):** Attitude towards Microcredit was assessed in terms of their evaluative perceptions on credit importance using a scale developed for this study. The mean values of attitudinal scores for the low, medium and high participatory groups are 0.63, 1.75 and 3.53, respectively. The calculated score value of 3.53 for a high participatory group indicates that respondents who have a favourable attitude towards Microcredit participate better in Microfinance service than those who have less. The Spearman Correlation ( $r = 0.844$ ) shows a positive and robust relationship between women’s attitude and their participation in Microfinance service. The statistical result obtained from one-way ANOVA ( $F = 143.71$  and  $P=.000$ ) indicates significant mean differences among the attitudinal level of the respondents at a 1% level of significance.

**Table 4: Summary of the Relationship between Continuous Variables and Women Participation in Microcredit Service**

Variables	Mean of the participation categories			Mean value	Std. Deviation	R	F	P-Value
	Low	Medium	High					
AGE	43.66	33.90	32.66	37.27	7.695	-0.665	39.57	0.000***
FMINCO	6,389.48	6,205.00	12,937.36	8,942.92	5,705.23	0.354	8.069	0.001***
HHEXP	5,786.42	6,042.5	8,780.00	7,024.72	3,486.18	0.397	9.429	0.000***
DISTMFI	10.46	7.35	4.1053	7.23	4.59198	-0.518	25.23	0.000***
EXBOR	1.18	2.05	5.19	2.95	1.965	0.926	373.3	0.000***
DECMP	0.58	0.75	1.00	0.78	0.416	0.457	12.12	0.000***
ATLEV	0.63	1.75	3.53	2.01	1.497	0.844	143.71	0.000***

**Note:** \*\* and \*\*\* = Significant at 5 and 1% levels respectively and NS = Not significant

**Source:** Own survey (2016)

In general, the dummy/discrete variables were also tested with the chi-square test, and the summary of the result is given in the table. As indicated in the table, household status, educational status,

landholding size, income source, Achievement motivation, and asset ownership right are Significant at 1% and % probability level. Whereas the family size of the respondent is significant at less than 10%

significant level and the rest others are marital status and collateral are not significant at 10% level.

### **Econometric Analysis**

The different explanatory variables hypothesised to significantly impact the dependent variable that carried on the women participation in microcredit service were put into the ordered logit regression model. Except for seven variables out of seventeen total explanatory variables, the rest ten variables do not significantly impact the dependent variable. Variables that have a significant impact on women participation in microcredit service are age (AGE), Livestock Size (LVSIZE), Family income (FMINC), Household expenditure (HHEX), achievement motivation (ACHVMOT), the experience of the borrower (EXBOR) and attitudinal level (ATLEV).

**Age of the Respondents (AGE):** Age of the respondents was hypothesized that it has a positive relationship with the dependent variable as it increases the woman status in society. However, the ordered logit regression model has shown that age has negatively affected the dependent variable at a 1% significant level. The odds ratio in favour of women participation reduces by odds of 0.778 as age increases. The possible explanation for this condition is that younger women are risk-takers and less resistant to join in outside activities than older women. This finding is consistent with that age is negatively and significantly influenced the participation of women in microfinance institutions.

**Family Income (FMINCO):** Respondents are getting their incomes from different income sources. Income is one of the fundamental factors for people to increase their participation in different development activities. Therefore, this variable has been hypothesized to have a positive and significant relationship with the dependent variable, women's participation in microcredit service. The model output also supports the hypothesis and shows that income has affected the participation of women in microcredit service positively and significantly at <1% probability level. They controlled the influence of other variable constant, getting more income favouring women participation in microcredit service increases by an odds ratio of 1.00.

**Livestock Holding Size of the Respondents (LVSIZE):** In the study area, livestock is considered one indicator of wealth status and used as a source of social prestige. Households owning more livestock are considered wealthy farmers in the community. It is also one of the most essential and crucial assets that farmers heavily depend on to safeguard their household from internal and external shocks. The result from regression analysis shows a significant difference at less than 5% probability level. The model output also supports the hypothesis and shows that Livestock size has positively affected women's participation in the Microfinance Service. According to the result of the model output, the odds ratio favouring participating in microcredit service increases by a factor of 3.37 for those who have a favourable attitude towards microcredit service, keeping other factors constant.

**Household Expenditure (HHEXP):** Respondents have frequent food and non-food items such as expenditure for purchasing input, medical services, education, social issues and labour (wage). While the expenditure of the respondents getting more, the condition that forces take a loan from microfinance and increase the opportunity to participate in the microcredit service. Therefore, this variable has been hypothesized to have a positive and significant relationship with the dependent variable that women's participation in microcredit service becomes high. The model output also supports the hypothesis and shows that expenditure has affected the participation of women in microcredit service positively and significantly at <5% probability level. They controlled the influence of other variable constant, expending more money/income favouring women participation in microcredit service increases by an odds ratio of 0.029.

**Achievement Motivation (ACHVMOT):** It has been hypothesized that if a woman has a high degree of achievement motivation, she will have a better degree of intervention in microcredit service. As indicated in the model results, achievement motivation has a positive and significant association with women participation in microcredit service at a <10% significant level. Keeping other factors constant, the odds ratio favouring women's participation in microcredit service increases by

a factor of 0.623 for those with high achievement motivation.

**Experience of the Borrowers (EXBOR):** It was hypothesized that the existence of experience of the borrower in microcredit service positively affects women participation in microcredit service. The result of the ordered logit regression model also confirms a significant and positive relationship between the borrower's experience and the participation of women in microcredit service. The p-value (0.029\*\*) indicated the borrower entrepreneurial experience has a sign over the participation of women in microcredit service at a <5% significant level. Hence, the odds ratio in favour of the participation of women in microcredit service increases by the odds of 2.832 as their experiences increase, keeping other factors constant.

**Attitudinal Level of the Respondents (ATLEV):** Attitude refers to the degree of positive or negative influence towards some psychological object. It may

be either favourable or unfavourable feelings to that object. The attitudinal level of respondents was hypothesized to have either a positive or negative effect on the dependent variable. If respondents have favourable attitudes to microcredit service, it will positively affect the dependent variable. Otherwise, if they have unfavourable attitudes, then it will affect the dependent variable negatively. As it is indicated in the results of the model in Table 4 below, the attitudinal level has a positive and significant relation with women participation in microcredit service with <1% significant level; according to the result of the model, the odds ratio in favour of participating in microcredit service increases by a factor of 2.248 for those who have a favourable attitude towards microcredit service, keeping other factors constant. The result is consistent with the result of (Tilahun, 2008) that is attitude is positively and significantly related to access and utilization of family planning information by rural women.

**Table 5: Parameter Estimation of the Order Logit Regression Model**

Variables	Coefficient ( $\beta$ )	Std error	Wald Statistics	P-value	Odds ratio Exp ( $\beta$ )
AGE	-0.250	0.081	9.447	0.002***	0.778801
EDSTAT	1.348	0.988	1.862	0.172 NS	3.849718
FSIZE	0.743	0.815	0.831	0.362 NS	2.102233
MRSTAT	-1.215	0.864	1.978	0.160 NS	0.29671
FMINCO	0.000	0.000	8.838	0.003***	1
LVSIZ	1.217	0.616	3.900	0.048**	3.377041
LNSIZ	0.378	0.417	0.825	0.364 NS	1.459363
HHEXP	0.000	0.000	4.748	0.029**	1
INCSOR	-0.621	0.460	1.825	0.177 NS	0.537407
ACHVMOT	0.623	0.378	2.725	0.099*	1.864513
HHSTAT	0.532	1.139	0.218	0.640 NS	1.702334
DISTMFI	-0.171	0.118	2.082	0.149 NS	0.842822
COLTR	0.291	0.897	0.105	0.746 NS	1.337765
EXBOR	1.041	0.475	4.796	0.029**	2.832048
DECMP	-0.922	1.115	0.683	0.409 NS	0.397723
ASOWN	0.666	0.512	1.693	0.193NS	1.946436
ATLEV	2.730	0.662	17.010	0.000***	15.33289

Source: Own survey, 2016

\*\*\* Significant at < 1 % probability level, \*\* Significant at < 5 % probability level,

\* Significant at < 10 % probability level, NS: Not significant

## Conclusion

This study has attempted to analyze the participation of women in microcredit service and identify the key factors that affect the participation of women borrowers to improve their families livelihood in the study area. The participation of women in microcredit service is low in the study area, but the registration for loans was relatively high. This does not necessarily increase the participation of women in different microfinance activities. According to the study result, only 38% of the respondents within the highest participatory group have better participation in microfinance activities. Different factors affect women's participation in microcredit service. Those are respondents' age, family income, borrower experience, household Expenditure, livestock size, attitudinal level, and achievement motivation, which have affected the participation of women in microcredit services.

The age of the sampled respondent effective means a difference in age among the three participation categories at less than one per cent level of probability. Women ages increase at a certain level their participation also increase in microfinance service. The analysis indicates that the family income of sample respondents was significant and positively affects the women participation in microcredit service in the study area. This could result from the sampled households with more income; the probability of participating in microcredit service could be high.

The analyzed information indicates that the livestock holding size of the sample respondents was significant and positively affects the women participation in microcredit service in the study area. This could result from the sampled households with more livestock size/unit; the women's confidence would be increased to participate in microcredit service and serve as security for the loan.

The result indicates that household expenditure was positively and significantly affects the participation status of women in microcredit service. The expenditure of the households getting more, the social circumstance that forces the women to take a loan from microfinance and increase the opportunity to participate in the microcredit service. It means that household consumption, input purchase, general food and non-food items, and other fundamental

social issues (Idir, Ikub, tekemach) always insist on women participating in microcredit service to solve them quickly.

The result indicates that experience in years of sample respondents was significant and positively affects the women participation in microfinance service in the study area. This is due to previous experience and knowledge gained from microfinance and the activities performed under the MFI service.

Achievement motivation is the driving force behind all individual and group participation in all development activities. The result revealed that Achievement motivation has been conceptualized in many different ways and has relevant effects, cognition, and improve participation. It was tested and positively affects the participation of women in microcredit service. Our understanding of achievement is our success of objective. Attitudes towards MFIs are positively associated with the participation of women and significantly affect the level of women participation in the microcredit service.

## Recommendations

Analysis of the determinants of women's participation in the microfinance services has revealed that age, family income, borrower experience, household Expenditure, livestock size, attitudinal level, and achievement motivation have a positive relationship. However, the age of the women has a negative relationship with the participation of women.

**Age:** The age of respondent influenced the participation of women in microcredit service negatively and significant. Relatively Younger women mean that the mean average year under 37 mostly is risk-takers and less resistant to join into the microcredit service than older women whose mean age is beyond 43. So the microfinance credit officers select the medium age, which is between 24 to 37, rather than selecting the old age.

**Family Income:** Income is one of the significant variables that positively affect the participation of women in microcredit service. Regarding income, women have played such a significant role to create family income. Then this creates an implication to strengthen the economy of women to have better

women participation groups in the MFI. Therefore, the MFI should establish different income-generating loan products for different women group in the study area and diversify MFI microcredit products based on the demand.

**Livestock Holding Size:** Livestock husbandry is one of the determinant factors for women participation in microcredit service and is a common livelihood strategy of rural households in the study area. The size of livestock increases in a specific unit the level of women participation also increases. In addition, the rearing of goat and poultry production and milk production is practised mainly by rural women; in general, livestock holding size directly associated with women participation in microcredit service. So, microfinance should give loan for purchasing different livestock, especially small ruminants, and the officer should follow up on the existence of livestock purchased by MF loan.

**Household Expenditure:** It is obvious that households with high income have high-income expenditure and have the opportunity to participate in microcredit service to fulfil their financial needs. Households with high-income expenditure have a high need for microcredit service, and their participation has become high. Therefore, the MFI should encourage and provide trouble-free credits for the objective of highest participation.

**Achievement Motivation:** This is based on reaching success and achieving all of our aspirations in life. Achievement goals can affect how a person performs a task and represents a desire to show competence. Again according to the American Heritage dictionary (2000), achievement means something accomplished through exertion, skill, practice and perseverance. It is not viable to expect to be successful with low achievement motivation in any development activities. Therefore, the MFI should encourage and practice the achievement motivation through awareness creation, avoid the fear of failure through training, incentive bases, modifying interest rate and make accessible the eligibility criteria for the benefit of poor women.

**Experience of Borrower:** is refers to years of the borrower stayed in the microfinance institution. It is believed that if the borrower has long-year experience in borrowing and stayed in the institution

is assumed to be active and not a defaulter. Through this experience, the borrower gained knowledge and skill and the level of participation increase. This type of clients avoided risk averting nature or fear. Therefore, the institution should encourage such clients and should make scale up the strategies to others.

**Attitudinal Level:** The positive attitude is the driving force for the participation of women in microcredit service. Attitudes will be improved by sharing information, awareness creation, training, discussion and successful performance of different activities. Therefore, the microfinance industry should give special attention to the improvement of attitude in their clients.

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