

Full Length Research Paper

Assessment of rural women participation in farmers' multipurpose cooperatives: The case of Agarfa District, Bale Zone, Oromia Region, Ethiopia

Teferi Taye Aduna¹ and Zenebe Worku Woldeyes^{2*}

¹ Department of Rural Development and Agricultural extension, college of Agriculture and Natural Resource, Salale University, Fitcha, Ethiopia.

² Department of Rural Development and Agricultural extension, Faculty of Environment, Gender and Development Hawassa University, Ethiopia.

Received 3 May 2022; Accepted December 13 2022

Rural women face different obstacles in joining and being active participants in typically male dominated farmers' cooperatives. The purpose of this study was to assess factors affecting rural women's participation in multipurpose cooperatives in the Agarfa district. A multi-stage sampling technique was used to select 204 women members of the multipurpose farmer's cooperatives from whom data were obtained through semi-structured interview, key informant interview and focus group discussion. Findings revealed that the women have low, medium and high participation in cooperatives with 23.5, 60.8 and 15.7% respectively. The result of the ordered regression showed that education level, land holding size, years of membership, attitudinal level, source of information use and access to training have a positive and significant effect on women's participation in multipurpose farmer cooperatives, while household working hours, family size and cooperative distance have a negative and significant effect. The study concluded that women have medium level participation which is attributed to a lack of economic and culture embedded gender equality. The study recommended that there is a need to design and implement policies and legal enforcement that will plan training and intervention programs; income-generating farms; off-farm schemes; introduce and promote the use of appropriate technologies that will help to reduce women's domestic workload; support women's participation in cooperatives leadership and management.

Key words: Education level, family size, land holding size, multipurpose cooperatives, rural women

INTRODUCTION

Reports by United States Agency for International Development, USAID (2012) emphasized that greater attention is being paid to ensure that agricultural policies and programs are gender sensitive and address barriers to women's equal participation and benefit in rural

producer groups and cooperatives. Moreover, Food and Agriculture Organization FAO (2016) has reported that rural women play critical roles in bringing about food and economic security for their households and communities. This recognition, however, according to Thomas et al.

*Corresponding author. E-mail: zenebewld@gmail.com. Tel: +251 982 06 8383.

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(2018), has not yet translated into policies and programs in the cooperative sub-sector that are effectively facilitating women's equal and meaningful participation in these formal organizations (Thomas et al., 2018). In different research studies, for instance, Kaaris et al. (2016) asserted the importance of gender integration and active and equitable participation of members to make sustainable cooperative development happen. The same study argued that active participation in a cooperative context means that members are actively involved in all activities of a cooperative such as, socio-economic activities, planning, decision making, implementation and marketing and other activities of cooperatives. Involving women in cooperatives has high returns at both the individual and the macro level such as poverty reduction and development. The same study further, reported that rural women face different obstacles in joining and being active participants of typically male dominated cooperatives. Such limited participation according to these findings, is attributed mainly to unequal gender roles and relations, where women have a lower socio-economic status, compared to their male counterparts, which in turn restrict them from accessing and participating in formal groups like cooperatives (Kaaris et al., 2016). Major factors hindering women's membership and leadership participation in formal groups like cooperatives are the lack of access and control of resources compared to their male counterparts (FAO, 2016). According to the same report, men who are often entitled as landowners are the dominant members of agricultural cooperatives. Apart from economic factors, reports have shown that there is a sociocultural embedded dimension of the problem hindering women's participation in agricultural cooperatives (Birtukan and Yishak, 2017; CSA, 2012). The report stated that women's mobility freedom is constrained by their men counterparts. For instance, women often face cultural barriers that restrict their involvement in public meetings, and they are assumed to discharge their domestic responsibilities before their economic or social involvement in agricultural cooperatives (Birtukan and Yishak, 2017). There are gender biased socio-cultural expectations that women are primarily responsible for all domestic work-reproductive roles, even though women are playing important productive and community work roles (CSA, 2012). According to Agarfa District Cooperative Promotion Office (ADCPO) 2020, more than 95% of the population of Agarfa District is engaged in agriculture .In the district there are 19 Farmers' Multi-Purpose Agricultural Cooperative Societies (FMPCS) having 9,351 members. From the total members of FMPCS, 7,994 are male and 1,357 are female members according to Agarfa District Cooperative Promotion Office (ADCPO), 2020).The same report stated that compared to men, women participation in FMPCS activities is very low. The report further explained that such low women participation manifested in different forms among which,

low business participation and profit dividend benefit, management and decision making process. For instance, women constitute only 7.5% leadership positions in FMPCS in the District (ADCPO, 2020). However, no empirical study has been carried out in the area about identifying the factors that such low status participation of women in multipurpose cooperative societies attributed to. Therefore, the aim of this study is to systematically and empirically identify context specific determinant factors that are affecting women participation in farmers' multipurpose cooperative societies. In doing so the study has contributed a new body of knowledge about the cooperative movement in the study area, which will be a valuable source of information for policy makers and stakeholders to make sound and gender sensitive decision in planning and implementation of pertinent development intervention in the study area.

REVIEW OF LITERATURE

Cooperatives have a unique feature that represents a hybrid of a voluntary social association and a business making firm characteristics (Levi and Davis, 2008). Such hybridized organizational feature is said to be embedded in the International Cooperative Alliance [ICA], 1995) identity statement that defined a cooperative as 'an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise'. The definition essentially depicts the philosophical and theoretical foundation constituting the unique organizational feature of cooperatives underlining the concerns of members' ownership and participants of their socio-economic enterprises. As membership-based organizations, Jussila et al. (2012) and Jussila and Tuominen (2010) stated that co-operatives rely on long-term and repeated exchange relationships with their members to generate a collective benefit that is greater than the sum of inputs of individual members. Participation is a very broad concept and there is no single common definition used by different scholars. Even though there are varieties of views on how participation is defined, they all are agreed that the concept underlines the aspects of: who it is expected to involve, what it is expected to achieve, and how it is to be brought about (Agarwal, 2001). Relating the concept of participation to empowerment, Lyons et al. (2001) argued that participation and empowerment are inseparably linked, they are different but they depend on each other to give meaning and purpose. Participation represents action, or being part of an action such as a decision-making process. Empowerment represents sharing control, the entitlement and the ability to participate, to influence decisions, as on the allocation of resources. As membership-based organizations, Jussila et al. (2012) and Jussila and Tuominen (2010) stated that co-

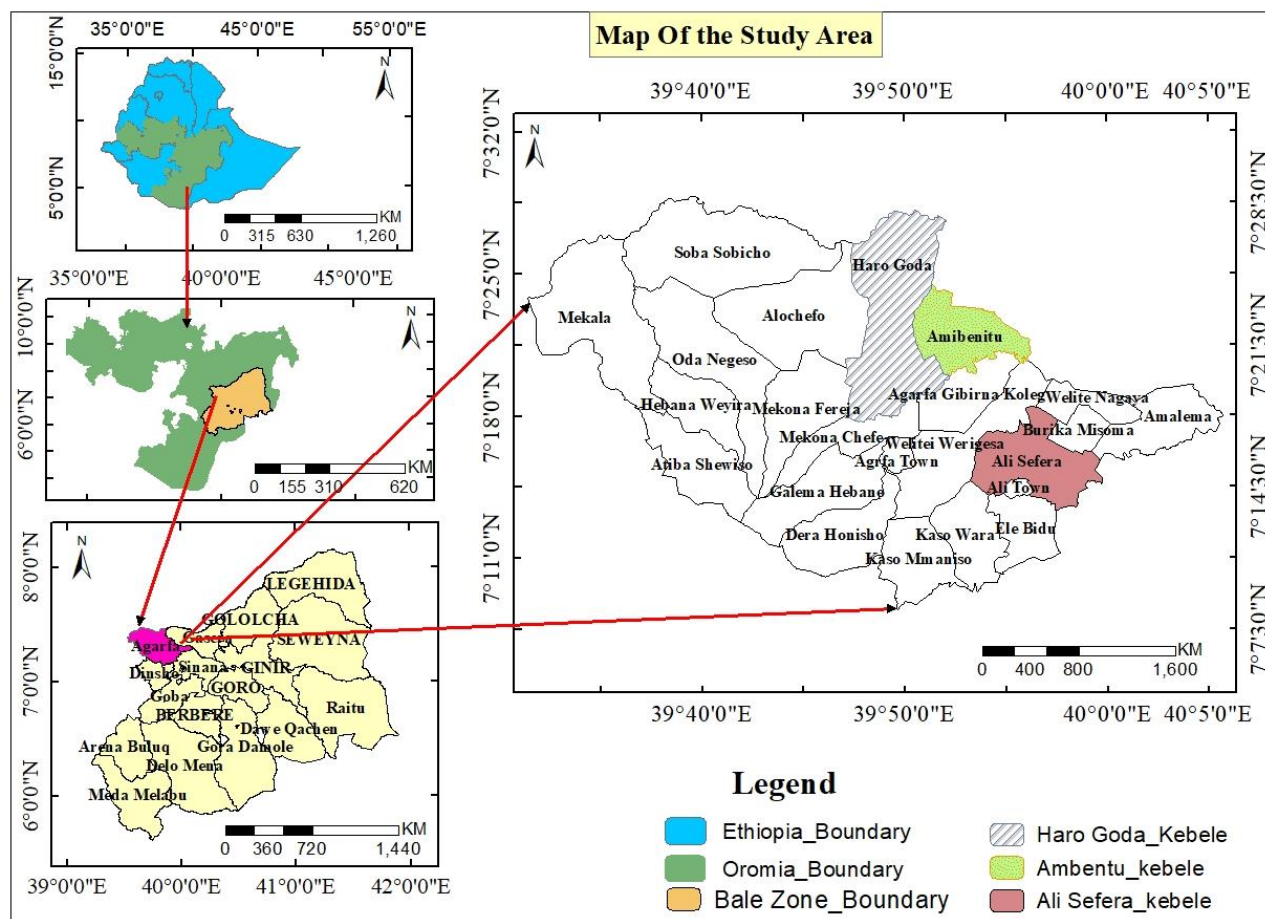


Figure 1. Map of study areas.
Source: Agara District Agricultural Development office (2019).

operatives rely on long-term and repeated exchange relationships with their members to generate a collective benefit that is greater than the sum of inputs of individual members. The participation of men and women members in cooperatives is conditioned by economic, social and cultural factors, including their access to natural and other productive resources. Different authors (IFAD, 2011; Oxfam International, 2013; Coleman and Mwangi, 2012) have examined the factors affecting women's participation in cooperatives and identified major barriers for women's participation. These include: socio-cultural norms and gender perceptions; women's double burden and triple roles; women's status, age and previous membership in an organization; access to assets and resources; organizations' rules of entry; legal and policy environment; women's preferences and motivations; and women's education, training and access to information. This study, therefore, guided by the contextualizing the above theoretical concepts of cooperation and participation to assess the position of women in relation generating a collective benefit from the cooperative societies in the study area.

METHODOLOGY

The study was carried out in Agara district, Bale zone, Oromia Regional State; Southeast Ethiopia, which is, located 446 km and 31 km away from Addis Ababa, the capital of the country. Longitudinally, the district is located between $7^{\circ}11'N$ to $7^{\circ}32'N$ and between $39^{\circ}40'E$ to $40^{\circ}5'E$ (Figure 1). According to Central Statistics Agency (CSA, 2012), the population of Agara district has been 102,110 out of which 52,136 is male and 49,974 is female. More than 95% of the population is engaged in agriculture according to Agara District Agricultural Development Office (ADADO, 2019). In the district there are 19 multipurpose Agricultural cooperatives which include 9,351 registered members. From this 7,994 are male and 1,357 are female members according to Agara District Cooperative Promotion Office (ADCPO, 2020). The primary target population of the study was all the women who are members of selected cooperatives in Agara district. A multi-stage sampling procedure was employed in selection of sample women members of multipurpose farmer's cooperatives. In the first stage, Agara district was purposively selected based on the relative better practice of multipurpose cooperative movement in Bale administrative zone. In the second stage, from 19 multipurpose cooperatives in the district 3 farmers' multipurpose cooperatives (Abenttu, Amigna and Ali) with the total women membership of 415 were selected purposively for their high women membership. Using the members register book of the three FMPCS

Table 1. Status of women participation In FMPCS (n=204).

Participation category	N	%	Participation score	Mean score	F	Sig.
Low	48	23.5	0-4	3.59	317.90	.000**
Medium	124	60.8	5-9	6.89		
High	32	15.7	10-15	11.16		
Total	204	100	0-15	6.93		

** = Significant at less than 0.01 level.
Source: Own survey (2021).

as a sampling frame, 204 women members were selected through systematic random sampling technique. The study sample size was determined by applying Yamane (1967). The study employed a cross sectional design in which data were collected in the sample kebeles during the period of 2020 for three consecutive months. All the quantitative data were collected using semi-structured interview from the respondents. The qualitative data were collected using focused group discussion (FGDs) and key informant interviews. A total of three FGDs were conducted. Within those FGDs, two FGDs were conducted using women members only. Key informant interviews were collected from development Agent and District cooperative and Gender experts by using check-list question. Relevant secondary data including reports, published and unpublished documents were collected, reviewed in complementing the primary data findings. The study data were analyzed using descriptive statistical techniques and econometric models. The status of women participation in FMPCS was analyzed by setting a participation index (PI) adopting from Hoque and Itohara (2008). Eight participation type indicators were specified to establish the participation index. These were; participation in: leadership, meetings, voting or election, buying and selling, sharing profits, membership of different committees, purchasing share and participation on cooperative training. After getting the respondents' score about their participation level in each cooperative participation type activities, respondents were categorized in to low, medium, and high participation categories using total score values representing their participation level. The Participation Index (PI) computed for each individual activity specified as follow:

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

Where: PI = Women participations level for respective participation activities of types in the cooperatives; N1 = Number of frequently participating women denoted by 3; N2 = Number of occasionally participating women denoted by 2; N3 = Number of seldom participating women denoted by 1; N4 = Number of never participating women denoted by 0.

The study employed Ordinal logit models to analyze such types of data (Liao, 1994; Greene, 2008) to determine what factors affecting women's participation in FMPCS in the study area. The econometric model specified as follow:

$$Y = \sum \beta X_k + \epsilon \tag{2}$$

Y^* = is unobserved and thus can be thought of as the underlying tendency of an observed Phenomenon. ϵ = we assume it follows a certain symmetric distribution with zero mean such as normal or Logistic distribution.
What we do observe is:

$$y = 1 \text{ if } y^* \leq \mu_1 (=0) \tag{3}$$

$$y = 2 \text{ if } \mu_1 < y^* \leq \mu_2$$

$$y = 3 \text{ if } \mu_2 < y^* \leq \mu_3$$

$$y = j \text{ if } \mu_{j-1} < y^* \leq \mu_j$$

Where y is observed in j number of ordered categories, μ_s were threshold parameters separating the adjacent categories to be estimated with β_s .

The general form for the probability that the observed y falls into category j and the μ_s and the β_s are to be estimated with an ordinal logit model is:

$$\text{Prob}(y = j) = 1 - L [\mu_{j-1} - \sum_{k=1}^k \beta_k X_k] \tag{4}$$

Where L represents cumulative logistic distribution.

The marginal effect on each participation status is calculated

$$\frac{\partial \text{prob}(y = 1)}{\partial X_k} = f(\mu_1 - 1 - \sum_{k=1}^k \beta_k X_k) + f(\mu_1 - 1 - \sum_{k=1}^k \beta_k X_k) \tag{5}$$

Where f represents the probability density function.

RESULTS AND DISCUSSION

Women's participation status in FMPCS

The result (Table 1) revealed that, there was a significant mean difference among the three participation groups at less than 1% probability level. The results show that 48 (23.5%) of the sampled respondents were under low level participation category, 124 (60.8%) were under medium level participation category, and 32 (15.7%) of the respondents were under high level participation category.

Factors affecting women participation in FMPCS

The Chi-Square test was used to examine the existence of statistically significant differences between the five (5) dummy variables of the three participation categories. Accordingly, as indicated in (Table 2) except decision making role all dummy variables were found to be statistically significant at 1% probability level. In terms of status in the households the majority of respondents (62.5%) of them were head of household which tells majority of women low participating women in FMPCS were women household heads. Respondents who access to credit and saving service participate better than those

Table 2. Association between dummy variables factors and women's participation in FMPCS.

Variable		Participation category						X ²	P-value
		Low		Medium		High			
		n	%	n	%	n	%		
Household status	Head of household	18	37.5	94	75.8	23	71.9	12.37	0.002**
	House wife	30	62.5	30	24.2	9	28.1		
Access to training	No	33	68.8	57	46	8	25	9.47	0.009**
	Yes	15	31.2	67	54	24	75		
Use of credit and saving	No	40	83.3	71	53.3	8	25	21.32	0.000**
	Yes	8	16.7	53	42.7	24	75		
Decision making role	No	32	66.7	69	55.9	18	56.2	0.13	0.935NS
	Yes	16	33.3	55	44.4	14	43.8		
Community affairs participation	No	27	56.3	23	18.5	6	18.8	12.96	0.0002**
	Yes	21	43.7	101	81.5	26	81.2		

** = significant at less than 0.01 probability level, NS=Not significant.
Source: Own survey (2021).

Table 3. Association between continuous variables and Factors of women's participation in FMPCS.

Variable	Participation categories			Total mean	Std. dev.	r	F
	Low	Medium	High				
Age	36.08	39.12	42.03	38.99	9.18	0.20	3.84*
Family size	5.41	3.33	2.10	3.53	1.85	-0.60	44.69**
Education status	1.03	1.68	6.91	2.41	3.48	0.49	48.48**
Landholding size	0.78	1.35	2.21	1.37	0.75	0.56	46.03**
Annual income	2982.05	3559.68	4350.00	3573.85	1639.74		6.48**
Distance	6.56	4.47	3.30	4.70	1.97	-0.51	35.65**
Year of member ship	6.73	8.47	11.67	8.42	3.31	0.42	25.27**
Use of info source	3.98	4.85	6.38	4.92	2.66	0.27	7.88**
Household working hours	13.45	12.14	8.65	11.83	3.73	-0.38	18.58**
Attitude	8.51	12.76	16.06	12.45	5.17	0.44	23.91**

*and** = significant at less than 0.05 and 0.01 probability level respectively.
Source: Own survey (2021).

who did not or less access to this service. Access to training was one of the important variables that affect women participation in FMPCS. The result obtained from the analysis, Table 2 shows that those women who had access to cooperative training achieved a better participation in multipurpose cooperatives. The majority of sample respondents (75.0%) in the high participatory group had access training. On the other hand from the medium participatory group 54.0% of them had the training. But in the case of low participatory group only 31.2% of women had access to cooperative training. The F-tests result (Table 3) depicted that out of 10 continuous variables, the three categories were found to differ significantly in 10 of them. The computed F-values indicate the mean differences for ten variables, namely

Family size, Education status, Landholding size, Annual income, Distance, Year of membership, Use of information source, Household working hours and Attitude were found to be significant at 1% probability level while age was found to be significant at 5% probability level. The study revealed that the sample respondents under high participation category have more aged mean than those respondents in the low participation category. As indicated in (Table 3) the average family sizes of the respondents which are less than fifteen years of age for those who are under the low, medium and high participation groups were 5.41, 3.33 and 2.10 respectively. The higher mean values of participants under high participation category imply that women's participation increases along with the decrease

in family size especially children below fifteen years old.

In terms of education levels, the mean value for respondents' educational attainment is 2.41 whereas the mean values for the low, medium, and high participatory groups are 1.03, 1.68, and 6.91 respectively. The higher mean values of participants under high participation category imply that women's participation increases along with the progress in education level. Average land holding size of the respondents was 1.37 hectare. The mean land holding size of high participation category was greater than low and medium participation categories (Table 3). This result shows that women with larger land size holding have better participation level in the activities of cooperatives. The mean income in Table 3 shows that the lower participatory group in the FMPCS had a lower mean income than medium and higher participants. As indicated in the Table 3, the mean distance the women traveled to reach their cooperatives was 4.71 Km. While the mean distance of the low, medium and the high participatory group traveled to reach their cooperatives were 6.56, 4.47 and 3.30 Km respectively. This shows that as distance increased the women participation in cooperative decreased. The average year women have stayed as membership in their cooperatives was 8.42. Respondents in the low, medium and high participatory groups have stayed with an average years of 6.73, 8.47 and 11.67 respectively. The mean value for respondents who use information sources was 4.92. Whereas the mean score value of the high, medium and low participatory groups who access to information were 6.38, 4.85 and 3.98 respectively. As indicated in the (Table 3) the high, medium and low participatory groups have spent the average working hours of 8.65, 12.14 and 13.45 for household activities respectively. This shows that respondents who spent more times in household were lower participant than those who had lower working hours.

Respondents had different attitude toward their cooperative which affected their participation in multipurpose cooperatives. The score value (Table 3) of 16.06 for a high participatory group indicates that, respondents who have positive attitude towards cooperatives were participating better in MPCs than low participatory groups those who had 8.51 score value. The study run Ordered Logistic Regression econometric model to identified further factors affecting women participation in FMPCS. Prior to running the logistic regression analysis both the continuous and dummy explanatory variables were checked for the existence of Multicollinearity and high degree of association using variance inflation factor (VIF) and contingency coefficients. The VIF values for continuous variables were found to be very small (much less than 10) indicating the absence of Multicollinearity between the independent variables. Similarly, the results of the computation of contingency coefficients ranges between 0 and 1 and as a result of chi-square variable with

contingency coefficient below 0.75 shows weak association and value above 0.75 indicates strong association of variable, that there was no serious problem of association among dummy variables. The model result (Table 4), shows that, out of the hypothesized 15 independent variables ten (10) variables were found to influence the participation of rural women in multipurpose Cooperatives. These are education level, family size below fifteen years' total annual income, land holding size, domestic work load hours, year of membership, cooperative distance, attitude, access to, and access to cooperative training are the predictory variables that have significant influence on the women participation in FMPCS. The model result for each predictory variables discussed below.

Education level of the respondents was found to be correlated positively and significantly at less than 1% probability level. This result consistent with the findings of Coleman and Mwangi (2012) which found that, education (measured by years of schooling) significantly affects women's participation in producer organizations. The marginal effects for women's education level suggest that, other variable remain constant, one years of schooling increase in education is associated with being 0.67% less likely to be in the low level participation, 0.22% more likely to be in medium participation, and 0.45% more likely to be in the high level participation in cooperatives. This result also agrees with the finding of (Birtukan and Yishak, 2017) which stated that, women's participation in cooperatives was positively associated with education level at 1% significance level. The model result for family size below fifteen of the also reveals that there was negative and significant relationship between women participation in multipurpose cooperatives and family size below fifteen years at 1% probability level. The marginal effects for family size below 15 years suggest that, other variable remain constant, one unit increase in family size below fifteen years is associated with being 1.30% more likely to be in the low level participation, 0.42% less likely to be in the medium participation, and 0.88% less likely to be in the high level participation in FMPCS. This result is in line with the findings of Thomas et al. (2018) and Tanwir and Safdar (2013) which stated that the labor burden of rural women exceeds that of men, a significant proportion of which is unpaid household responsibilities related to child bearing, breastfeeding, preparing food and collecting fuel wood and water. Respondents' annual income found to be having positive and statistically significant effect on women's participation in FMPCS at 5% probability level. The result is consistent with the results of Abebe (2011) which stated that women's participation in rural cooperative and income was significant at 1% probability level.

The marginal effects for annual income propose that, other variable being constant, one unit increase in income is associated with being 0.001% less likely to be

Table 4. The ordered logistic regression (OLR) model result.

Ordered logistic regression			Marginal effects (mfx)		
Participation categories	Coeff.(Std.Err)	z	Low	Medium	High
AGEW	0.0101257 (0.0252727)	0.40	-0.0002747	0.0000884	0.0001863
EDULEV	0.247911** (0.0768042)	3.23	-0.0067262	0.0021655	0.0045607
FAMSIZE	-0.477956** (0.1433178)	-3.33	0.0129676	-0.0041749	-0.0087927
INCOME	0.0003472* (0.000168)	2.07	-0.00001	0.000003	0.000001
LANDHSIZ	0.9507151* (0.4029764)	2.36	-0.0257943	0.0083044	0.0174898
HHWHRS	-0.1661952* (0.0695337)	-2.39	0.0045091	-0.0014517	-0.0030574
YERMBSH	0.1785456* (0.0739026)	2.42	-0.0048442	0.0015596	0.0032846
INFOUSE	0.2114983* (0.0948504)	2.23	-0.0057382	0.0018474	0.0038908
COOPDIST	-0.4485973** (0.1370767)	-3.27	0.0121711	-0.0039185	-0.0082526
ATTDE	0.1344683** (0.0497973)	2.70	-0.0036483	0.0011746	0.0024737
RHH	-0.3925982 (0.507198)	-0.77	0.0106517	-0.0034293	-0.0072224
PCOMMAS	0.347385 (0.5125587)	0.68	-0.0103008	0.0044145	0.0058862
DECMKG	0.2881985 (0.4549971)	0.63	-0.0077063	0.0022928	0.0054135
COOPTRAI	1.054135* (0.4642522)	2.27	-0.0310189	0.0116918	0.019327
CREDIT	0.3613135 (0.5061991)	0.71	-0.0096346	0.0028051	0.0068295
Cut1	-2.570236 (2.441879)				
cut2	4.937954 (2.508807)				

Log likelihood = -72.54; LR chi2 (15) = 208.40; Prob > chi2 = 0.0000; Pseudo R2 = 0.5896; * and ** = Significant at 5 and 1% probability levels respectively.

Source: Model Output and data survey (2021).

in the low level participation, 0.0003% more likely to be in medium participation, and 0.0001% more likely to be in the high level participation in FMPCS. It was found that farm size had positively and significantly influenced the probability of women's participation in the affairs of agricultural cooperatives at 5% significance level. The result of the study consistent with the findings of Birtukan and Yishak (2017) which stated that, farm size had positively and significantly influenced the probability of women's participation in the affairs of agricultural cooperatives at 1% significance level. This result is also supported by the finding of Idrisa et al. (2007) which concluded that the relationship between farm size and women's participation in agricultural cooperatives is significant at 5% significance level. Assuming that other variable remain constant, one unit increase of land holding size will have the 2.56% marginal effects association with being less likely to be in the low level participation, 0.83% more likely to be in the medium participation, and 1.75% more likely to be in the high level participation in FMPCS. The result of the model shows that women's domestic workload has a significant and negative effect on women participation in FMPCS at 5% significant level. The result of the study consistent with the findings of Tanwir and Safdar (2013) which states multiplicity of roles reduces women's time that would be available for participation in cooperatives. The marginal effects for household working hours suggest that, one unit increase in household working hours is associated

with being 0.45% more likely to be in the low level participation, 0.15% less likely to be in the medium participation, and 0.31% less likely to be in the high participatory levels. The results of the study are also supported by the findings of Thomas et al. (2018) which stated that as women's work load increased in household, their involvement in cooperatives activities reduced.

Number of year's women's stay in cooperative membership was found to be correlated positively and significantly at 5% probability level. This result supported by the finding of Maysoon (2015) which stated that as women farmers advance in years of farming experience, their participation in the adaptation of soil and water conservation practices also increase. With the assumption that other variable remain constant, one year increase of in cooperative membership would have the 0.48%, 0.16% and 0.33% marginal effects of less likely association with being in the low level participation, more likely to be in the medium level participation, more likely to be in high participation respectively. The results of the study are also in line with the findings of Derib and Nega (2014) who found that there is a positive and significant relationship existing between duration of membership and women participation since people who stayed a long period have developed more experience and was more aware of the cooperatives than those who joined the cooperative at recent year. Women's use of information was found to be correlated positively and significantly at

5% probability level. The marginal effects for use of different information sources suggests that, one unit increase in use of different information sources is associated with being 0.57% less likely to be in the low level participation, 0.18% more likely to be in the medium participation, and 0.39% more likely to be in the high level participation in FMPCs. This result is consistent with the findings of Amaechi (2014) which stated that right information on cooperative activities provided to the women at the right time and place, using the right media is a catalyst in sensitizing and empowering women to take active part in cooperative activities. The study results indicate that Distance from cooperative service center to women's residence has negative and significant effect on women's participation in FMPCs at less than 1% significance level. The negative correlation suggests that the likelihood of participating in the activities of agricultural cooperatives declines as the distance from cooperative service center increases. This is because the proximity allows women to participate easily as it requires less time, energy, and cost to travel. This means that, those women who are in the areas close to cooperative service center may have better chance to participate in the activities of multipurpose cooperatives. The marginal effects for distance to cooperative service center suggest that, one unit increase in cooperative distance is associated with being 1.22% more likely to be in the low level participation, 0.39% less likely to be in the medium participation, and 0.83% less likely to be in the high participation categories. This finding also coincides with the findings of Birtukan and Yishak (2017) which stated that distance to cooperative service center is significant to women participation in rural cooperatives at 5% significance level.

It also agreed with the findings of Derib and Nega (2014) which stated that there is a negative and significant relationship between participation and distance of the cooperative office to respondents home. Women's attitude towards the functioning was found to be affecting women's participation positively and significantly at less than 1% probability level. This positive association reveals that the probability of participating in the activities of agricultural cooperatives increases with the positive perception of members towards their cooperative. With the assumption of other variables remain constant, one unit increase in women's positive attitude towards their cooperative had the 0.36, 0.11 and 0.25% marginal effect association with being less likely low level participation, more likely to be in the medium participation, and more likely to be in high level participation respectively. This result is consistent with the results of (Tilahun, 2008) which stated that women perception is associated positively and significantly with the level of their participation in accessing and utilization of family planning information. Women's access to cooperative training found to have positive and significant influence on women's participation in FMPCS at less than 5%

probability level. This means that the probability of participating in the activities of multipurpose cooperatives increases with the increase in the access to cooperative training. Considering other variables remain unchanged, women's access to cooperative training had the marginal effect 3.10, 1.17 and 1.93% association with being less likely to be in the low level participation, more likely to be in the medium level participation, respectively. This result is consistent with the findings of Birtukan and Yishak (2017) which revealed that access to training had influenced women's participation positively and significantly at less than 10% probability level. This is due to the fact that women who had access to cooperative training got more knowledge and information about the values, principles, importance of cooperative as well as high confidence than those who did not have training.

CONCLUSION AND RECOMMENDATION

The study contended to conclude that, in the study area, majority of women (60.8%) are having medium level participation, whereas only 15.7% have high level participation. With regard to factors, that such variability of women participation in FMPCs attributed to includes: education level, family size below fifteen years, total annual income, land holding size, household working hours, year of membership, cooperative distance, attitude, source of information use and access to cooperative training are the important variables which have influenced the participation of rural women in multipurpose cooperative. For the betterment of women cooperative participation and with the overall aim supporting rural women participation in FMPCS; the study suggested that; government and other stakeholder, particularly the district cooperative promotion office need to plan and implement women focused development interventions among others, including: (a) enhancing the women tailored educational training interventions. So that low participation of women can be improved. This is in line with addressing one of ICA cooperative education and information; (b) design and implement women focused cooperative promotion extension advisory services; with objective creation of women's positive attitude towards their cooperatives which is a crucial factor in improving their participation in MPCs; (c) Plan and implement women targeted farm and off-farm income generating schemes so that women can have active business participation and able to buy more shares which in turn enhance their ownership position; (d) reducing women's domestic work load; through provision of appropriate domestic labor reducing technologies so that women can have time to involve in decision making process like participating attend cooperative meetings, election etc.; and (e) Design and implement affirmative policy and legal enforcement support for women's leadership in cooperatives management participation for instance reservation of sits

in board of directors and other committees particularly at primary cooperatives level.

CONFLICT OF INTERESTS

The author has not declared any conflict of interests.

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