

Role of Agricultural Cooperatives in Building Sustainable Livelihood of Rural Women: Evidence from a Transition Country

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Abstract

The paper attempted to analyze the contribution of primary agricultural cooperatives in enabling women to build sustainable livelihood, which is capable of coping with and recover from vulnerability. By using the sustainable livelihood framework adopted from Development Fund for International Development, the study tried to illustrate how the cooperatives as transforming structure enabled women to build sustainable livelihood by accessing livelihood capitals. The study employed cross sectional survey as research design and employed both quantitative and qualitative approach of data collection and analysis. Simple random sampling technique was employed so as to select sample respondents, to address the specific objectives. To analyze the collect data, descriptive and inferential statistics aided by SPSS version 23 were used. The findings revealed that the cooperatives provided women with various services including supply of agricultural inputs, credit services, marketing of agricultural input and output as well as training. Access to these services in turn enabled women to improve their productivity, augment their income and build livelihood assets, which are capable of withstanding risks and shocks. Despite these benefits, the cooperatives encountered various problems that hampered the potential benefit of women, which calls for the due attention of concerned bodies.

Key Words: Agricultural Cooperatives, Sustainable livelihood, Rural Women

1. Background the Study

Rural based cooperatives can contribute to reduce vulnerability of rural women through improving women's access to productive resources. FAO (2012) stated that cooperatives play an important role in supporting small

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agricultural producers and marginalized groups including young people and women. Through enabling them to access credit services, agricultural input supply and marketing services, the cooperatives enhance their productivity. Cooperatives reduce vulnerability by empowering their members economically and socially and create stable rural employment through business models that are resilient to economic and environmental shocks (ICA & ILO, 2014). Cooperatives help to create more equitable growth by making markets work better for poor people, by generating economies of scale, increasing access to information, and improving bargaining power. They also have role in tackling rural poverty by increasing the productivity and income of small scale farmers by helping them collectively negotiate better prices for seeds, fertilizer, transport and storage. Cooperatives expand poor people's access to financial services, including credit, savings and in some cases insurance and remittance. These services can support startup and expansion of enterprises; enable the risk taking that can lead to increased profitability; and reduce vulnerability by allowing the poor to accrue savings, build assets and smooth consumption (Gicheru, 2012).

As to Chambers and Conway (1991), livelihood capability in the context of change and unpredictability requires being adaptable, versatile, quick to change, well-informed, and able to exploit diverse, complicating and changing resources and opportunities. Cooperatives are believed to enhance the capability of small holder farmers, including women, through education and training, providing access to productive resources and paving way for gender equality. Poor households typically face a range of risks, which are both economic and social in nature. Vulnerability to risk, and its opposite, resilience, are both strongly linked to the capacity of individuals or households to prevent, mitigate or cope with such risks (WHO, 2007, cited in Jones, Yisak and Tassew, 2010).

Women typically have lower levels of education, have less access, ownership and control of productive assets and different social networks to men, which results in lower economic productivity and income generation, and weaker bargaining positions in the household (Holmes & Jones, 2011). In the context of Ethiopia, a host of factors contribute to the vulnerability of households and individuals. Ethiopia has witnessed various frequent disasters such as drought, famine, epidemics, flood, landslides, earthquakes, civil war, and mass displacement. Women are among the most affected groups by these shocks. Their low social status and lack of access to and ownership of productive assets makes their

coping mechanism futile. The 2005–2010 development plan of the Ethiopia (Plan for Accelerated and Sustainable development to End Poverty – PASDEP) placed due emphasis on the role of cooperatives, to promote market linkage (commercialization) of smallholder agriculture (FDRE, 2002; MoFED 2002). This emanates from the firm belief, that cooperatives will contribute to the capacity building efforts of small holder peasants and attaining increased productivity.

Despite the aforementioned benefits which cooperatives are believed to render, cooperatives also suffer from various problems, which in turn affect the potential benefits of members, including women. The problems ranges from those problems embedded in organizational structure of the cooperatives to external problems (Gray & Kraenzle, 2002). The lack of suitable legal framework, lack of available data on issues like the size, typologies, scope and resources of cooperatives, and poor managerial skills and lack of consciousness of entrepreneurship are among obstacles to cooperative development that adversely affect the benefit of members including women. The overregulation and increased effort to control cooperatives is also among problems the cooperatives suffer from (Borzaga & Spear, 2014).

2. Statement of the Problem

Cooperatives are known to expand poor people's access to financial services & increase their investment in income generating activities. They can also reduce vulnerability by allowing the poor to boost saving patterns, enhance their livelihood capabilities and improve consumption.

Despite their far-reaching benefits, cooperatives still are not well studied, particularly with regard to gender dimension. Pullet (2009) stated that whilst cooperatives may have a significant direct impact on people's life through the services they deliver (e.g. credit, agricultural inputs, access to markets, storage and transport, housing, among others), evidence of their significance, another social and societal domains has not been particularly for the coming.

Various literatures in the area of cooperatives and women's livelihood are also mainly confined to discussing the role of cooperatives in empowering members, particularly economic empowerment. However, the study doesn't discuss empowerment in the context of the various shocks and stress that women face, the livelihood assets they have at their hand, and

the structures and processes, like agricultural policy of cooperatives, which can enhance or constrain the capacity of people.

Berhane (2013), in his empirical study argued that women in Ethiopia have benefited a lot from participating in cooperatives which enriched them with what they want in their lives and cooperatives are playing key role in augmenting income for women, providing them with gainful employment and enhancing their social status. His study however, refrained from discussing the various problems, which women face in joining cooperatives as well as after joining it. The perception of women towards the role of cooperatives, and how these in turn affect their participation is also not addressed. The same is also true to the findings of Bezabih (2009), which discusses how cooperatives are vital in terms of employment creation, income generation, poverty reduction, and social protection. His study however doesn't deal with gender dimensions & doesn't adequately deal with how cooperative as mediating institutions enabled members to effectively deal with vulnerability context. Another empirical study carried-out by Abiyot (2010), tried to address how cooperatives are working towards empowering women, and building their livelihood. The study has identified institutional and members related factors affecting the performance of cooperatives. Yet the issue of how cooperatives address the stresses and shocks which women face, and how women perceive the role of cooperatives is not addressed.

As it is discussed before, though there are ample of studies carried-out in the country which tried to investigate cooperatives and gender issues, there is a clear gap in terms of analyzing the role of cooperative in the context of vulnerability of rural women, and the contribution of cooperatives to their livelihood. Most studies inclined towards studying the problems women face in joining cooperatives, but face ample problems while participating in cooperatives & not studied so far. The gap in existing literature therefore justifies carrying-out this study. Therefore, the study assessed the role that cooperative membership towards building sustainable livelihood of women by focusing on essential outcomes of sustainable livelihood; increased income, improved productivity & reduced vulnerability.

3. Specific Objectives

- To measure the extent of women participation in the sample Cooperatives.
- To identify the factors influencing women participation in cooperatives in study area.

- To describe the role of cooperatives in enabling women to access livelihood capitals
- To evaluate the role of cooperatives in promoting social and economic capability of women members.

4. Methodology Adopted

The study employed approximating longitudinal survey design. This is because approximation technique combines the benefit of efficiency of cross-sections surveys in collecting data at one point of time, and advantage from longitudinal survey in answering research questions involving process or the notion of change overtime (Yeraswork, 2010). While the cross-sectional survey is used to obtain data regarding the participation of women in cooperatives, the services and supports deliver to them and the benefits obtain from the participation, to provide data relevant to their past situations. By utilizing data form life experience of the women, approximating longitudinal study design is offered better understanding of the role of cooperatives in enabling women to build sustainable livelihood.

For the purpose of the study Hawela Lida district was selected and in this District, only two multipurpose cooperatives are operational and two of them were selected purposely. The higher span of cooperatives as enterprise since their establishment also makes them best suited to see their impact on women's livelihood. There are 207 women have registered as members in the two cooperatives. To arrive the sample size of 136 members by using Yamane (1967) sample size formula $n = \frac{N}{1 + N(e)^2}$ with

95% precession level. Both primary and secondary data with mixed approach (Quantitative and Qualitative) was collected, to answer the basic questions and to attain desired objectives. The collected data was analyzed using descriptive statistics such as percentages, mean and standard deviations. Correlation and t-test were also employed for bi-variate analysis of quantitative data. Inferential statistics like chi-square was used to field out the level of significance of inferences of x and y by cross tabulation. Qualitative interpretation is given so as depict the pattern of data from the figures. In addition, binary logistic regression model was used to identify the factors influencing the women participation in multi-purpose cooperatives in the study are.

Model Specification

Binary logistic regression is a form of regression measures the relationship between a categorical dependent variable and a set of independent variables which is used when the dependent variable is categorical or dichotomous and the independent variables may be continuous or categorical (Hosmer and Lemeshow, 2000). Binary logistic regression mentions to the instance in which the observed outcome can have only two possible types. Logistic regression is used when the dependent variable is dichotomous and used to predict the odds of being a case based on the predictor(s).

In the terminology of logistic regression analysis the odds of a success is defined to be the ratio of the probability of a success to the probability of a failure. Let Y be an $n \times 1$ vector of response variable with $Y_i = 0$ if the women is not participated and $Y_i = 1$ if the women is participated, X is an $n \times (k+1)$ design matrix of explanatory variables and β is a $(k+1) \times 1$ vector of parameters to be estimated. Let $\pi(x)$ denotes the conditional probability that the outcome is participated (probability of success).

$$\begin{aligned} \pi(x) &= P(Y=1/X) = 1 - P(Y=0/X) \\ &= \frac{\exp(\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k)}{1 + \exp(\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k)} = \frac{\exp(X'\beta)}{1 + \exp(X'\beta)} \end{aligned} \tag{1}$$

We obtain the odds of success by using the above equation.

$$\text{Odds } (Y=1) = \frac{\pi(x)}{1 - \pi(x)} = \frac{\exp(X'\beta)}{1 - \pi(x)} \tag{2}$$

A transformation of $\pi(x)$ that is central to our study of logistic regression is the logit transformation. This transformation is defined, in terms of $\pi(x)$, as:

$$\begin{aligned} \text{Logit}(\pi) &= \text{Log}\left(\frac{\pi(x)}{1 - \pi(x)}\right) \\ &= \text{Log}\left(\frac{\exp(\beta_0 + \beta_1 X_1 + \dots + \beta_k X_k)}{1 - \pi(x)}\right) = \text{Log}(\exp(X'\beta)) \end{aligned} \tag{3}$$

The importance of this transformation is that it has many of the desirable properties of linear regression model. The logit function is linear in its parameters, may be continuous, and may range from $-\infty$ to $+\infty$, depending on the range of x .

The transformed variable, denoted by $\text{logit}(\pi)$ is the log-odds and is related to the explanatory variables as:

Logit (π) =
 $\eta(x)=\beta_0+\beta_1X_1+\dots+\beta_kX_k=X'\beta$3.5

Where $\beta=(\beta_0,\beta_1,\beta_2\dots \beta_k)$ are the model parameters and $X'=(X_0,X_1\dots X_k)$ with $X_0=1$,are explanatory variables.

5. Results and Discussion

This section presents the findings of the research using different statistical tools such as frequencies, percentages, mean, minimum and maximum value results as well as inferential statistics and presented in the form of tables followed by discussion.

4.1 Extent of Women Participation in the Cooperatives

It is obvious that all women members of the cooperative do not necessarily participate to the same level. Degree of their participation in turn affects the performance of the cooperatives in which they are members, and the possible benefits that women may obtain from the cooperative. Table 1 illustrates the degree of participation of women in affairs of sample cooperatives.

Table 1: The extent of participation on the affairs of the cooperative

Variables	Rarely	Sometimes	Frequently
	n (%)	n (%)	n (%)
Attending Regular Meeting	41(30.1)	80(58.8)	15(11.0)
Approving annual plan and budget	48(35.3)	69(50.7)	19(14.0)
Organizing annual exhibitions	39(28.7)	81(59.6)	16(11.8)
Approving Audit Report	44(32.4)	74(54.4)	18(13.2)
Evaluating & approving executed activities report	33(24.3)	90(66.2)	13(9.6)
Decide Share value	34(25.0)	78(57.4)	24(17.6)
Purchasing	22(16.2)	85(62.5)	29(21.3)

As it can be depicted from the table, 58.8% of the respondents most of the time attend regular meeting, while 30.1% of them attend rarely, and 11% frequently. Therefore it is possible to argue that majority of them frequently participate in regular meeting. Respondents who participate in approving annual plan and budget, 35.3% of the total respondents rarely while 50.7% sometimes, and 14% frequently. Since approving annual plan and budget significantly affect the overall performance the cooperatives, the relatively higher participation of women in these affair can have favorable impact on the performance of the cooperatives, and increase their potential benefits from the cooperatives. 32.4% of the respondents participate most of the time, 54.4% of them participate sometime, and 13.2% of the respondents did not participate in approving audit report at all. The fact that women participation in approving audit report is moderate implies that the inspection of financial system in the cooperatives is liable to mischief and corruption. Here the relatively low educational status of the respondents could be a challenge in ensuring better participation of women in the cooperatives.

Evaluation and approval of executed activities is another affair of the cooperatives in which women members participate. 24.3% of the respondents answered that they took part in evaluating and approving executed activities, while majority (66.2%) reacted that they participate only sometime and 9.6% frequently. From the results, it is possible to conclude, that women do not participate actively in evaluating and

approving the executed activities of the cooperatives. Asked how often they participate in deciding the share value in the cooperatives, 25% of the respondents answered that they participate rarely and above half (57.4%) sometimes and 17.6% frequently. Majority of the women participate in deciding the share values, and this in turn contribute the fair distribution of benefits to the members, particularly for women.

Regarding buying products, 16.2% of the respondents reported that they rarely participate in purchasing and selling products. Majority (62.5%) reported that they sometimes participate and 21.3% frequently participate in purchasing and selling of products. This in turn could have positive implications for better functioning of the cooperatives as well as the potential benefits which could be obtained from cooperatives.

Position of Women in the Cooperatives: Despite the fact that women largely predominate in cooperative membership and meeting attendance, cooperative leaders tend to be the men. This is also true in selected cooperatives in which only 15 women are participating as leaders. This entails that paying due attention in ensuring women's representativeness in managerial positions is necessary. If leadership bodies exclude women, competitiveness, product quality, productivity, and profits of cooperative could suffer a lot (Aris, 2012). Through gender mainstreaming, the cooperative development policy places women at center of its policy priorities. Establishing women federation, conducting regular trainings, organizing women in development networks so as to provide supervision and support, as well as to allow experience sharing, and making home visit are among the activities (Sintayehu, 2003). It is evident from the results (Table 2) that 8.5% of the respondents are the members in administrative committee. While, 42.3% of the total works as credit committee members, 33.8% working as management committee members, 4.2% in the control committee and 11.3% just only members. Yet only few women still occupy managerial positions in the cooperatives as compared to their male counter parts. This in turn raises the question of social empowerment of women which is of course one of the expected benefit from joining a cooperative.

Reasons for joining the Cooperatives: During the formation of the cooperatives, the number of members, particularly women members were very few. But, in due course of time, as the cooperative became better organized in terms of both financial capacity and service delivery, it was able to attract many members including women. The positive changes, which the cooperative brought in lives of women, is also one of pulling factors to attract more women. There are also efforts to raise awareness

among people towards the benefit of participating in cooperatives which also had influence in attracting more members.

Table 2: Position and Reasons for joining the Cooperatives

Variables	Categories	No. of Respondents	%
Position in cooperative	Administrative committee	6	4.4
	Credit committee	27	19.8
	Management board	20	14.7
	Control committee	3	2.2
	Member only	80	58.8
	Total	136	100
Reasons to join the cooperative	Due to government compulsion	2	1.5
	To access financial	76	55.9
	To access farm inputs	52	38.2
	Changes in lives of people	8	5.9
	Total	136	100

As the study revealed, the respondents joined the cooperative for different reasons, during different periods of time. The reasons for joining the cooperatives depict that majority (55.9%) of the respondents joined the cooperative to avail financial support, followed by 38.2% to avail the farm inputs. Others are due to the government compulsion (1.5%) and observing the changes took place for others (5.9%).

4.2. Factors Influencing Women Participation in Cooperatives

In a broader sense, women's participation in cooperative societies is a function of socio-cultural and economic factors. In a cooperative form of business organizations women were constrained by multifaceted problems, which in turn adversely affects their level of participation in cooperative affairs. As discussed in the methodology, binary logistic regression analysis was conducted in order to identify the factors influencing the women participation in multi-purpose cooperatives in the study area. The results are presented in Table 3.

Table 3: Regression results on factors influencing Women participation

Variables	B	SE	Wald	p-value	Exp(B)
Age	-.042	.071	.349	.555	.959
Education level	.565**	.207	7.474	.006	1.759
Family size	-1.030**	.320	10.327	.001	.357
Annual income	1.621	1.325	1.498	.221	5.060
Access to information	.278	1.024	.074	.786	1.320
Attitude towards cooperatives	4.736**	1.588	8.894	.003	113.973
Training	3.285*	1.369	5.755	.016	26.698
Support given by DA	4.148**	1.399	8.793	.003	63.318
Land size	5.164**	1.973	6.852	.009	174.870
Involve in off-farm activities	3.205*	1.603	4.000	.045	24.665
Access to credit	2.509*	1.180	4.524	.033	12.295
Distance to the cooperative	-.407**	.128	10.084	.001	.666
LR $Chi^2(12)$	140.828				
Prob> Chi^2	0.000				
Pseudo R ²	0.860				

Note: * $p < 0.05$ and ** $p < 0.01$

The results indicate that overall the selected variables are contributing 86% of influence and remaining is due to other factors. Out of 12 predictors included in the model, nine variables are significantly influencing the women participation out of which two of them i.e family size and distance to the cooperatives are influencing negatively. From the descriptive result of the depicted table, one could observe that age, family size in the household, education, awareness or training about cooperatives, information, income, attitude of people towards women, land size, access to credit, distance to the cooperative and involving off-farm activities are influencing the participation of women in the cooperatives.

For the underlining, problems influencing women's participation in cooperatives as most respondents replied the remedy should be in the hands of the cooperatives, the community and the government. However, the Focus Group Dissection (FGD) conducted among the district administrators and the women's affairs offices indicated that in addition to these efforts, other measures should also be adopted. Some of these are attitudinal and behavioral change of the society, development agents, health workers, as well as the Non - Governmental Organizations.

4.3 Services Rendered by the Cooperatives

The cooperatives used to provide credit to its members but now it is facing difficulties in delivering the service. Since the numbers of members with demand for credit service outweigh the financial capital of the cooperatives, look for alternative means and created opportunity for credit services with Omo micro finance. The cooperatives provide institutional support to the members, so that they can avail the credit services.

Markets play key role in the development of rural economy and ensuring sustainable livelihood for rural poor. Due to lack of access to suitable markets, women may face challenges such as difficulties in obtaining inputs, labor, credit, adoption of new technologies, insurance against risks, or obtaining consumption goods at low prices. As they are cut off from markets, they are forced into self-insufficiency, whether for food, labor, or other items. Under the current free market situation, small holder farmers have faced the difficulty of high competition in the market. To alleviate this difficulty, the role of cooperatives has become bigger than ever before (Alemu, 2011). In the case of output market, the market share of cooperatives is very low due to shortage of finance, poor infrastructure, inadequate and poor quality warehouse, and weak entrepreneurship skills including business management, planning and financial management. The marketing services which the cooperatives provide to their members, refer to bargaining for better prices (3.7%), providing market information (45.6%), and purchasing for better prices (50.7%).

Also women were provided with the inputs to earn their subsistence through farming, either through mixed farming or crop cultivation only. 95% respondents reported that the cooperative provides fertilizers, mainly UREA, DAP and high yielding seeds. The fertilizers are provided based on the willingness of women to use them, their farm size, and purchasing power. Since the cooperatives subsidize the price of the fertilizers, it is not costly and many can afford it. Yet some of them complained that the input delivery is not timely and the distribution is not fair. The marketing service mainly includes marketing of agricultural input and output.

Among the respondents from both cooperatives, only 42.6 % of them had participated training provided by the cooperatives whereas the remaining (57.4%) did not receive any training. Also, the frequency of attendance shows significant variation. Training is given to women on different aspects such as cooperative values and principles, rules and regulations, and organizational structure of the cooperatives. This is with intention to attain

the better understanding of women so that they can participate in the cooperatives effectively, and get benefits in sustainable way. The cooperatives also provide training on agricultural activities with the aim of inducing the productivity including appropriate use of fertilizers, conservation of soil, trees, grazing areas, water bodies and other natural resources, effective farming system, efficient use of financial resources, creating business and investing further and accumulation of assets for the livelihood of women.

4.4. The Role of Cooperatives in Accessing Livelihood Capitals

One of the objectives of the study is to understand the perception of women towards the role of cooperatives in helping them to attain sustainable livelihood. Cooperatives functioning to ensure the member's economic and social needs and thereby to scale up their satisfaction. When members are satisfied in the performance of the cooperative, they are likely to be more active, in the affairs of the cooperative (Jamal, 2008). Various strategies are adopted in this study to determine the perceptions of respondents towards the role of cooperative in improving their livelihood. Accordingly, majority (98%) of the respondents replied that they are planning to continue in their cooperatives. This shows that majority of respondents held favorable perception towards the role that cooperative in improving their livelihood.

Farming is the mainstay of majority of the respondents participating in the cooperatives. Majority (70.6%) of them are engaged in farming activities, which consists mainly of crop cultivation and producing cash crops. Respondents who earn their livelihood through cattle rearing consist of 7.4%, Petty trading (11%), daily labor (3.7%) and 7.4% crafts work respectively. Almost all of the respondents combine three or more economic activities in order to earn their subsistence. There is no significant variation among the respondents from the two cooperatives in terms of their means of earning livelihood. In addition to the aforementioned economic activities, some of respondents engage in pottery, charcoal production, and other small-scale business activities. Majority of the respondents meet their annual food need through own crop production. They produce maize, sweet potato, yam, wheat, bean and *enset*.

Table 4: Economic activities engaged to earn livelihood

Activities	Number of Respondents	Percentage
Farming	96	70.6
Cattle rearing	10	7.4
Petty trading	15	11.0
Daily labor	5	3.7
Crafts work	10	7.4
Total	136	100

Yet they face risks and shocks with regard to their farming activity including crop failure and death of valued animals. 53% of the respondents identified crop pests cause for shock from crop failure whereas 54% identified epidemic of animals as causes for death. Declining fertility of soil, declining farm size, declining common property resources and variability of rainfall are among stress leaving women prone to risks. In order to cope up these risks and shocks, they need mediating institutions, which would enable them to better access livelihood capitals. This signifies the important role of cooperatives as a mediating factor enabling women to access these capitals.

The asset pentagons lies center of the livelihood of women are human assets, financial assets, social assets, physical assets and natural assets. Cooperatives can play crucial role in improving the livelihood of women as far as they operate by taking in to account how women own or/and access these assets. The increased opportunity of women to own and access these assets means their reduced vulnerability and better opportunity to have sustainable livelihood.

Human Capital: Education, training and nutrition are keys as far as development of human capital is concerned. They also affect women's opportunity to access other assets. Isola and Alani (2009), argued that well-educated human resource encourages technological innovation and effective production and contributes to the development of the community. Training in return develops the skills of individuals, allows them to experience new things, facilitates technological transformation and shapes their attitude.

Joining the cooperatives provide an opportunity for women so as to access means of developing their human capital. The cooperatives provide training for its members with a view to increase their productivity, profitability

and investment skill. Marketing and cooperative development officers work with other stakeholders in order to develop human capital through training and financial support. Training and skill upgrading is one element of women participation. The FGD and interview results also affirm this idea. With training, their bargaining skills improve, leading to increased profitability in the market. They now witnessed improvement in agricultural productivity with skill to use better farming technology.

The cooperatives have indirect impact on the nutrition of women. They have contributed at least in two ways. First, the improved agricultural productivity allowed women to address the problem of food shortage, which they used to suffer. As respondents participated in the FGD has replied, they sometimes fail to eat three times in a day before joining cooperatives but now they started to produce surplus. Second, the cooperatives have impact on the nutrition habit of women by augmenting their income & increasing purchasing power for food items. Since some of the women purchase food particularly when the harvest is low or the rainfall is variable, the income guaranteed them with food source through purchase.

Financial Capital: The cooperatives also improved access of the women to financial assets. Feguson (2012) argued that cooperatives address the financial needs of the members by providing credit, commercialization and/or marketing support to their members. By doing so, cooperatives played their transformative structures in generating wealth, building on one asset category while also strengthening other assets. As the findings of this study show, that though the cooperatives are not performing better in delivering credit services, they performed well through commercialization and technical support which enabled the women to enhance their financial capital.

As far as the outcomes of sustainable livelihood framework is concerned, increased income is one of the key indicators for sustainable livelihood (Turner, 2001). With increased income, they can better access social services, diversify their livelihood sources and cope with stress and shocks. Cooperatives served as source of income to the women by distributing the profit in the form of dividend. The Cooperative Code of Conduct of the Federal Cooperative Agency of Ethiopia dictates that 70% of the profit generated by the cooperatives must be distributed to the members regularly. As mentioned before, the members obtained an average 570 Birr (National Currency) from the cooperatives annually.

They invest that money on seeking health service, spending for the education of their children, purchasing farm inputs, and for purchase of non-durable goods. As to the respondents, though the money obtained in the form of dividend is not enough to cover all the expenses, it at least lessens their financial stress. 69% of the respondents affirmed that their income from all sources is increasing after joining the cooperatives. Improved productivity and increased income due to participating in cooperatives doesn't hold true to all respondents. Various factors could be responsible for productivity and income difference among the respondents. The women vary in terms of their educational level, household size, ownership of farm land, and experience of farming and trading, have implication for variation in level of productivity and income. From the data, it is possible to understand that the cooperatives are serving their members with better marketing services. The purchasing of agricultural input for lower price and marketing of agricultural output for higher price contributed its part in augmenting the income of members and safeguarding them from unpredictable market trend.

Physical & Natural Capital: Though the contribution of cooperatives in building of physical and natural capital is not significant as compared to building of human assets and financial capital, there is still some contribution to mention. Regarding the physical capital, some of the women from cooperatives stated that they are able to change their house roof from grass to iron ones. Improved income due to the participation in the Cooperatives is the reason for changing the structure of their houses. With increased income, they are able to buy materials for their homes, including kitchen utensils, tools for farming activities, and information they obtained is also one of the benefits which helped them meaningfully. The cooperatives also enabled women to better utilize the natural capitals through introducing better management mechanisms. Cooperatives also serve as a means of collectively managing scarce natural resources such as land and water (Spielman & Bernard, 2009). In this regard, the training and information that the cooperatives render to their members are crucial in managing natural resource, particularly land and forest.

Improved Agricultural productivity

As per cooperative Proclamation 85/1994, one of the objectives of establishing multi-purpose cooperatives is improving the living condition of rural peasants through improved production and productivity. This is through provision of modern technologies, products which are capable of increasing agricultural production and materials necessary for their livelihood easily and at fair price. The study attempted to measure the improvement in agricultural productivity of the respondents as a result of

Obtaining membership in cooperatives. Improved agricultural productivity is vital as far as building sustainable livelihood for women is concerned. For instance, food storing is one mechanism of coping with stresses and shocks. When there is surplus food, producers can store it for the time of emergency. But in the light of the shrinking size of farm land, erratic rainfall and diminishing fertility of soil, it is not easy to produce surplus food and store it. Yet the cooperatives contributed their part in enhancing the women's productivity by providing agricultural inputs, and introducing advanced farming system.

As the data from survey sample shows, the average production for respondents shows considerable improvement for majority of crops as compared to their productivity before joining the cooperatives. The mean production for cereal in a given year after joining the cooperatives has shown 26% of increment. The cereals mainly include maize, teff, and wheat. The standard deviation of 25.3 in production of cereals shows that there is significant variation in productivity level among the members.

Table 5: Amount of crops produced per year before and after joining the cooperative (in Quintal)

Types of crops	Before joining		After joining		t-test	p-value
	Mean	SD	Mean	SD		
Cereal crops	10.8462	9.52056	42.24	25.382	-4.023	.002
Pulses	9.5000	6.78903	45.20	23.251	-3.508	.005
Cash crops	7.35	4.158	10.72	4.402	-7.648	.000
Vegetable and fruits	5.86	2.564	11.06	4.640	-14.091	.000

It can be observed from Table (5) there is a tremendous increase of mean production of different crops after joining the Cooperatives. This is because the services rendered by the Cooperatives facilitate in improving production. The p values also affirmed that the increment is significant in nature. Better access to high quality seeds and fertilizers, training on new and better agronomic practices, improved post-harvest processing and handling, with enhanced financial capacity with access to credit services contributed to boosting purchasing power of women to farm inputs, all contributed to improved crop production. Regarding the production of cash crops, it shows improvement of 56% productivity after joining

cooperatives. The cash crops which women produce are coffee and ginger. As the respondents replied, among crops which they produce, cash crops own the lion's share as source of cash for the women. The fact that the women earn increased cash through producing quality coffee and ginger has important implication for their livelihood. Yet, there is no such significant improvement in productivity of vegetables and fruits.

Promoting Social capital: Social capital is one of the asset pentagons which is crucial as far as the livelihood of women is concerned. Holmgren (2011) has reported that even being member of the cooperative invokes feeling of belonging and purpose. They discuss over their life matters when they gather and share risks particularly if they are neighbors. The cooperative also served as a network, which connects its members with market, government, NGOs, civic societies, and other formal and informal groups. This in turn enhanced their opportunity to access other sources of livelihood.

The FGD & key informant interview discussions also shows that the cooperatives played important role to the women by serving as a network, building trust among members and being bridge to connect members with other groups which contributed to improvements of the women's lives. The cooperatives also acted as bridge between the government and women, serving as a channel through which support from the government is delivered. These support include financial support, training, material provision for operation of cooperatives, follow-up and evaluation of the cooperatives' performance. Added to this, when the respondents asked whether they have equal voting rights with men members, 91% of them replied that they have equal voting rights and 95% of them replied that they equally own the economic capitals of the cooperative with other members. This shows that the cooperative had contributed some part in developing the trust among members, at the same time ensuring the social empowerment of women.

Access to livelihood sources for rural women is also impacted, by different factors. Among these, livestock, land, labour and capital are the crucial ones. These factors in turn affect access to each other, and access for other sources of livelihood including food and income. For instance, women participating in FGD discussion exposed that those women who own ox are more likely to access land than women who do not own. This is because ownership of ox enables women to access sharecropping with others who own land. In addition, share and taking care of cattle, mainly cow and ox, provides women with access to food and cash. They can access

milk for their children, and also earn cash by selling part of the milk. The manure from the cattle provides access to natural fertilizer. The care taker women can also own assets as the cow gives birth to a calf. During the selling, the profit is also to be shared with the owner.

Table 6: The role of cooperatives in improving Respondents' Livelihood

Statements	Rating Scale				
	SDA	DA	N	A	SA
I feel more secured now than before joining the cooperative	07 (5.1)	08 (5.9)	22 (16.2)	88 (64.7)	11 (8.1)
Cooperative helped me in economically independent	05 (3.7)	10 (7.4)	12 (8.8)	67 (49.3)	42 (30.9)
Cooperative helped me to access resources otherwise which I couldn't	28 (20.6)	55 (40.4)	24 (17.6)	19 (14.0)	10 (7.4)
I think other women also should join cooperative if they need to improve their lives	06 (4.4)	07 (5.1)	20 (14.7)	69 (50.7)	34 (25.0)
I thought cooperative help me better	10 (7.4)	14 (10.3)	30 (22.1)	42 (30.9)	40 (29.4)
I am afraid to with stand if troubles occur to my life	20 (14.7)	53 (39.0)	50 (36.8)	09 (6.6)	04 (2.9)
In my opinion cooperative lacks ability to change women's lives	24 (17.6)	63 (46.3)	30 (22.1)	06 (4.4)	13 (9.6)

Note: SDA- Strongly Disagree; DA- Disagree; N- Neutral; A- Agree; SA – Strongly Agree Figures within brackets show percentages

As shown in the Table (6), majority of respondents reported that they are more secured than before joined the cooperative. Similarly, due to the increment in income after joining cooperative the change in relation to health also observed among the women respondents. In general, the findings

of the descriptive result revealed that there is improvement in the quality of life for the majority of respondents as the result of their involvement and participation in the cooperative. This was true because the discussion groups responded that they were growing wheat and barley in agricultural production then the cooperative provides them inputs through credit such as improved seeds, fertilizers with a reasonable price compare to the market. In addition, they were also frequently contact the extension agents for advice on agricultural matters. The total effect of the cooperative society was that it helped to generate income, winch they used to buy fixed and consumable item for their family.

Coping with Vulnerability after membership in Cooperatives

As the above discussion exposed, women participated in the cooperatives were vulnerable to various stresses and shocks such as markets, sickness, death of valued animal, loss of crops, and other suddenly occurring troubles. Declining soil fertility, variability of rainfall, declining common property resource, declining farm size, and indebtedness are among stresses leading to the risks, which the women suffer. Majority of the respondents employed negative means of coping with stresses and shocks before joining the cooperatives. This was due to the fragile nature of their asse,t which makes them easily prone to the risks and shocks. But as the data obtained by approximating longitudinal survey has revealed, the frequency of respondents who employ the negative mechanisms decreased after joining the cooperatives. Since employing positive coping mechanism lessens the likelihood of further vulnerability and entails resilience of livelihood, the role cooperative in building sustainable livelihood is undeniable.

Cooperative has a role in enabling women to cope up with vulnerability through laying conducive ground so as to diversify their livelihood sources and access additional source of income for them. Accordingly, by joining cooperatives, women began to adapt and cope up with vulnerability by diversifying income sources through engaging in different non-farm and off-farm activities in addition to farming. As mentioned before, petty trade was vital source of off-farm income. Yet joining the cooperative encouraged the women to employ a market oriented approach, and earn better income. With the improved income, they were able to diversify their livelihood activities.

Besides diversification, joining cooperative allowed women with better adaptation strategies to escalate and sustain their productivity, as well as to better utilize their of farming land. This involved the use of yield increasing

seeds, and soil fertility enhancing inputs (chemical fertilizers and improved seeds), increased annual cropping frequency, improved extension of area under cultivation, and the use of different cropping patterns. Some respondents responded that the use of drought resisting seeds reduced their vulnerability to food shortage. Access to fast maturing seeds ensured women with food security in the light of erratic rainfall patterns.

4.5. Problem Faced by the Cooperatives

This section of the paper deals with the problems of the cooperatives, which adversely affect the potential and actual benefit for the members. Despite the positive impact which cooperative intervention had on the lives of women, there are also problems, which women face while participating in cooperatives. The problems are classified as organizational or internal problems, external problems, and infrastructural related problems.

4.5.1 Internal Problems

Inefficient Managerial System: Despite the fact that inefficient management is a less important problem to majority of the respondents, FGD participants and Key Informants interview discussants in both the cooperatives raised various issues that signify the existence of the problems. The low educational level of the managers and their public representativeness are among factors believed to limit their efficiency. They spent most of their time in running the political activities at the expense of the affairs of the cooperatives. The loose financial administrations, inability to coordinate the confronting external relations, reactive to the challenges confronting the cooperatives are the implications for their low efficiency.

Lack of Transparency and Accountability: Lack of transparency and accountability are other aspects of the problems of cooperatives, which the respondents explained. The result of FGD discussions and interview reveals features that indicate the existence of lack of transparency and accountability. For instance, some of the respondents complain the delay or sometimes absence of report for executed activities including audit report, and even they doubt the report as it reflect the real situation. When the managerial staff or some of the members commit mistakes against the principles and regulations of the cooperatives, the cooperatives fail to take timely measures. In addition to this, some members replied that there were problems with regard to distribution of fertilizers and improved seeds but they were unable to clearly describe the nature of the problem.

Inadequate Capital: Inadequate capital is the problem which most of the respondents (85%) ranked as important problem. The FGD and interview results also confirmed that inadequate capital is a serious problem of the cooperatives. It was not only a problem by its own stand, but it was also considered responsible for many other problems of the cooperatives including inability to provide credit service, inability to hire full time staffs, limitations to supplement the cooperatives with necessary facilities and to provide better training service so as to capacitate both the members and administrative staff. Both the members and administrative bodies provide different reasons for the inadequate capital.

As viewed by the administrative organ of the cooperative, the delay as well as cut-off credit service from money lenders, the shrinking financial fund from NGOs and the trend in international market that challenge profitability of the cooperatives are the causes for inadequate capital. But for the respondents, the reasons are a bit different from what the managerial staffs claim. While they agree with the challenges from market trend, they question what would be the role of cooperative if it could not handle this role. Of course they agreed that the cooperative was performing well in bargaining for better price. But, the inefficiency still hampered better opportunities, as viewed from the respondents' stand.

Unequal Participation of Men and Women: Unequal participation of men and women is another important problem. The FGD and interview discussion also show that there is no such considerable gender based discrimination among members of the cooperative in terms of accessing the services. Though the respondents demand increased presentation in the administrative positions, they are happy with positive treatment from both the managerial staffs and men members of the cooperatives

Lack of Knowledge about Responsibilities: It is also an important problem observed by most of the respondents. FGD and interview discussions have exposed that for members of the cooperatives the low educational level of the managers is held responsible for their limited knowledge about their responsibilities. Increased training and awareness creation however, revealing promising improvement in tackling of the problem.

4.5.2 External Problems

The external problems prevalent in the sample cooperatives are high cost of production, low price of produces, interference by the government and long distance from the cooperatives, inadequate transportation services, lack of electricity services etc, are reported by the most of the respondents.

5. Conclusion and Recommendations

According to FAO (2011), closing the gender gap in agricultural inputs alone could lift 100-150 million people out of hunger. It also makes significant contributions to the rural economy in all developing countries. Despite roles women assume in food security and rural development, they consistently have less access as compared to males for resources and opportunities that they require in order to become more productive. Increasing women's access to land, livestock, education, financial services, extension, technology and rural employment would boost their productivity and generate gains in terms of agricultural production, food security, economic growth and social welfare. To attain this, there is the need for healthy functioning institutions and processes, which play an enabling role in accessing productive resources and service.

Cooperatives are among the mediating processes and institutions, which could determine accessing productive resources and services by rural women. As the finding of the research revealed, primary agricultural cooperatives are vital for the livelihood of rural women whose lion's share of income is driven from farming. The discriminatory practices embedded in the societal structure denied the access of women to livelihood capitals. This calls for mediating institutions and processes, which could play enabling role in accessing the assets. The cooperatives therefore have a meaningful impact in the lives of the women by enhancing them to better access livelihood capitals. It contributed to their increased access of human, social, financial, and physical capitals and also contributed to better management of the natural capital and enabled them to make better use of it. The increased access to these assets has implication for reduced vulnerability and attaining sustainable livelihood

Cooperatives are among the agents that strived to facilitate the capabilities and choices of the women by providing with credit service and input supply thereby increasing the economy of scale for women. They contributed significantly in terms of providing training and information aimed at enhancing their efficiency. The marketing service helped the women to compete in fluctuating market and earn profit, there by augment their income.

The perception of women also entails that the cooperatives have made meaningful contribution towards building sustainable livelihood for rural women. Yet there are internal, external and infrastructural related problems that hampered the effectiveness of members of the cooperatives

and limiting their potential benefit. Based on findings of the study, it can be argued that cooperatives are important tools of transformation, which increased access of women to livelihood capitals and enabled them to build sustainable livelihood. Participation in cooperatives allowed women to improve their agricultural productivity, augment their income and to cope up risks and shocks in positive way. Despite such significant improvements there are still bottlenecks which demand due attention of the concerned bodies.

This paper therefore provides the following implications for research, policy formulation, and implementation so as to improve the role of cooperatives in enhancing the capability of women and their livelihood's resilience to withstand shocks and stress thereby ensure sustainable livelihood:

- Despite promising improvements in livelihoods of women, the vulnerability contexts and trends are still prevalent with some members and demand the attention of concerned bodies. Efforts should be made so as to clearly identify the triggering factors that still keep the vulnerability of these women's livelihood. Increased research activities could provide more empirical evidence on the vulnerability context of women.
- Cooperatives need effective management and guidance and the ability to adapt to prevailing business conditions. To achieve this, they must develop professional management, be democratic, inclusive, fair, and transparent, and have strong leadership. Efforts therefore shall be made so as to ensure increased collaboration among the cooperatives.
- The inadequate capital of the cooperatives in turn is hampering the almost all aspects of cooperative activities, including hiring skilled manpower, investing in human capital, providing credit services, purchasing better farm inputs and accessing better market opportunities. This consequently calls for increased effort for boosting the financial capital of the cooperatives. Cooperative development policies must be geared towards enhancing the capital power of the cooperatives.
- Autonomy and freedom from government control is positively associated with success of cooperatives. The existence of public representative as managerial bodies of the cooperatives is a good

example from the study to depict the interference of government in internal affairs of the cooperatives and its attempt to control their functioning. The government may provide technical and financial support, but shall let the cooperatives to be governed by their own regulations and the cooperative principles.

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