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# The Role of Agricultural Cooperatives in Achieving Socio-economic Development of Its Members: In Case of Addiskidam Town, Gojam

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**Abstract:** This research was conducted on analyses of the Role of Agricultural Cooperatives in achieving Socioeconomic Development of its Members in Addiskidam town, Gojam, Ethiopia. Thus, the general objectives of the study was to examine Role of Agricultural Cooperatives in achieving Socioeconomic Development of its Members and more Specifically; to assess the socio-economic contribution of the agricultural cooperative for its members and to identify factors affecting the success of agricultural cooperatives in the study area. Multistage sampling technique was used; and the samples of 65households were interviewed. Both descriptive and econometric analysis was made so as to achieve objectives. This cooperative is a form of farmers multipurpose cooperative which is a village-based and community-based farmers' cooperative with several socio-economic functions. The functions include supplying agricultural inputs, agricultural output marketing, and agricultural credit services. Data gathered were analyzed by using tables, and percentages. Using the Logistic Regression Model the study found that the variables, sex of household head, age of household head, educational level of household head, and income of household determine household's socio-economic development. The first three variables, i.e. sex, age, and education were significant at 5% levels of significance. And the last variable, income of a household was significant at a 1% level of significance. Based on the results of this study, some challenges hinder the activities of the cooperative: lack of well-trained manpower, lack of member's education, and corruption are the major challenges to the activities of the cooperative. Besides, there were some recommendations for each problem that were arrived by us. So, there should be education for the members on how to keep financial and organizational records as well trained manpower and employees should be hired by the organization.

**Keywords:** Agricultural Cooperative, Socioeconomic Development, Logistic Regression

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## 1. Introduction

### 1.1. Background of the Study

With almost half of the world's people living on less than two dollars a day, alleviation of poverty has become the biggest challenge to human society. In response, the global campaign against poverty has gained momentum, with various development actors suggesting the use of different instruments to alleviate poverty" [1]. Poverty reduction is an area of concern not only to the government of a nation but also to non-governmental organizations and the society itself. This is the reason why many organizations including

cooperatives are established and are being worked in any part of the world aiming to ensure the wellbeing of people. There is an emerging consensus among many actors of development including UNDP, that the cooperative enterprise is one of the new forms of organization that meet all dimensions in the reduction of poverty [2].

The cooperative movement in Ethiopia, the spirit of self-help and cooperation, has a long history as part of the farming community. Various self-help co-operatives still exist. The rural poor in developing countries are often at a competitive disadvantage in the wider economy because of the deep and persistent market, state, and institutional failures. However, there is growing evidence to suggest that membership-based

rural producer organizations (RPOs) can help the small-scale, resource-poor farmer to overcome these failures, participate more actively in the economy, and benefit from processes of growth and development. Policies and programs designed in recognition of this potential have succeeded in many parts of Asia, and have contributed significantly to reducing food insecurity and rural poverty, while also stimulating agricultural development and wider economic growth [3].

These issues are particularly relevant in Ethiopia, a country where food insecurity and rural poverty persist despite a range of forward-looking policies and investments in the agricultural sector. Indeed, Ethiopia represents one of the world's greatest challenges in terms of agricultural development and economic growth. The country's agricultural sector accounts for about 40 percent of national GDP, 90 percent of exports, 85 percent of employment, and 90 percent of the poor. Yet 37 percent of its farming households cultivate less than 0.5 hectares, 87 percent cultivate less than 2 hectares, and just 28 percent of total agricultural output is commercialized. The marginal productivity of rural labor is estimated at close to zero, while rural access to rural infrastructures such as roads, water, and electricity is extremely limited [4].

Over the 15 years, the Government of Ethiopia has embarked on an ambitious plan to promote farmers' cooperatives throughout the country. The plan aims to extend cooperative services throughout the country to supply production inputs to smallholders and market surplus output from smallholders. What remains to be seen is whether the implementation of this plan is contributing to the improvement of rural livelihoods in the country [3].

International Journal of Community and Cooperative Studies Vol. 1, No. 1, pp. 15-26, September 2014 Published by European Center for Research Training and Development UK with an organizational base that is indigenous at the local level, such as Debo, Iddir, and Iqub. These traditional informal cooperatives could be a base for the development of formal cooperatives. In Ethiopia, modern types of cooperatives were officially introduced on decree No. 44/1960 [5]. The main objective of this proclamation was for improving the standard of living of the farmers, ensure better business performance, and improve methods of production [6].

As per the cooperative society's proclamation number 147/98, to provide for the establishment of cooperative societies had been also declared by the Federal Government of Ethiopia to bring all types of cooperative societies under one umbrella [7]. The amendment number 402/2004, Council of Ministers Regulation No. 106 /2004, became important instrumental documents in the cooperative movement of the country and Cooperative Union is composed of more than one primary cooperative society that has similar objectives; a federation is a group that consists of unions, and primary cooperative societies with similar objectives [8].

Currently, there is a strong assertion in Ethiopia about the potential role that cooperatives could play in terms of smallholder commercialization and poverty reduction. Some success stories already achieved include direct export of

coffee, oilseeds, and vegetables to markets in Europe and the USA by cooperative unions in which smallholder farmers are represented as members through primary cooperatives. However, empirical evidence on the livelihood development and poverty reduction impact of cooperatives is yet to be established. Few cases of empirical study include [9].

This paper tries to contribute to our understanding of the livelihood and poverty impacts of cooperatives among rural communities by considering the case of multipurpose agricultural cooperatives in Ethiopia as the most important forms of rural cooperatives in the country. The paper contributes to the existing body of literature on the impact of cooperatives by providing empirical evidence about the role of Third Generation Cooperatives in Ethiopia in terms of livelihood development and poverty reduction among the rural poor.

### **1.2. Statement of the Problem**

It is well known that the smallholder farmers who comprise the majority of the rural poor need effective production support and marketing services to facilitate the production and sales of their produce. Production sales comprise the major source of income for the rural poor. It, therefore, constitutes a major means of poverty reduction for the majority of the rural poor. Many scholars have indicated that cooperatives could play a very crucial role in various socio-economic development areas if they operate by the universally accepted cooperative organizing principles and core values.

For instance, [10] argued that cooperative link is important for several reasons such as developing high social capital, reducing labor mobility, and in the utilization of indigenous resources such as local capital for local development. Moreover, [11] stated that "cooperatives have a lot of opportunities in lifting the poor out of poverty and all other forms of deprivation. More precisely, cooperatives respond to three key concepts associated with poverty as defined by the World Bank; opportunity, empowerment, and security [12].

The broad argument is that cooperatives have the advantages of identifying economic opportunities for the poor; empowering the disadvantaged to defend their interests; and providing security to the poor by allowing them to convert individual risks into collective risks." However, empirical evidence is necessary to show how cooperatives contribute to growth and development in smallholder-based agriculture to help realize their potential. As a result of the initiatives made by the current Federal government, as mentioned earlier, various cooperative organizations are being established in different parts of the country.

Agricultural cooperatives are among these organizations which operate to ensure food security, accelerate rural development and reduce poverty. To be more specific, they are expected to serve the rural poor in such areas including; provision of market and market information for members, and the supply of modern agricultural inputs (such as fertilizer and improved seeds).

However, the cooperatives in the study area are constrained by problems like good infrastructure, shortage of

financial sources, seasonal weather variation, unorganized market and price fluctuation, Lack of incentives from the government.

This study assessed the multiple services that the members get from this farmer's cooperative in Adiskidam town, and also identified specific factors that are responsible for the poor performance of these agricultural cooperatives.

### **1.3. Objective of the Study**

#### **1.3.1. General Objective**

The General Objective of the study is to analyze the role of agricultural cooperatives in achieving the socio-economic development of their members in Addis kidam town, Gojam, Ethiopia.

#### **1.3.2. Specific Objective**

- a. To assess the socio-economic contribution of the agricultural cooperative for its members.
- b. To identify factors affecting the success of agricultural cooperatives in the study area.

### **1.4. Research Question**

- a. What are the socioeconomic contributions of cooperative for its members?
- b. What factors hinder the contributions of agricultural cooperatives for their members?

### **1.5. Scope and Limitation of the Study**

The was confined only in Addis kidam town. Due to time and resource constraints, the study did not address the other town kebeles. Cooperatives are considered as appropriate institutions for socio-economic development in general and to promote agricultural production and rural development in particular in the Amhara Regional State. This study addresses the case of Addis kidam town west Gojam Zone of the Amhara Region using 65 purposely and randomly selected farm households.

Socio-economic and demographic data were collected from the selected farm households using the questionnaire method of data collection. The sample households were selected purposely and randomly from the population of farm households in the Addis kidam town. Some respondents were also reluctant to provide relevant information because they saw the questionnaire politically even though orientation has been made, as a result, five questionnaires became invalid and in this case, there was a problem with collecting the distributed questionnaire. There was also no available separate data from this agricultural cooperative office, for instance, farmers' membership and initial capital of the cooperative. Therefore, these conditions might affect the quality of the paper to some extent.

### **1.6. Significance of the Study**

In brief, the general significance of this study has assessed the role of agricultural Cooperative in achieving the socio-economic development of its members.

The study on the role of agricultural cooperatives in reducing rural poverty provides some new empirical evidence that may help us to understand the conditions under which agricultural cooperatives are promoting the standard of living to the rural poor and generating rural welfare improvements in the study area in particular at Addis kidam town. I hope this research project will provide new insight for policymakers, researchers, and development practitioners.

### **1.7. Organization of the Study**

The study is organized into five chapters. The first chapter includes a background of the study, statement of the problem, objective of the study, the significance of the study, scope, and limitation of the study which are the introduction part of the study. In which the remaining parts of the research report are structured in four chapters. The second chapter provides the synopsis of related theoretical and empirical literature while the third chapter provides the methodology pursued in answering the research questions. The fourth chapter on the other hand presents the empirical data collected and briefs out its results, analysis, and discussions. The final chapter concludes the results and forwards recommendations based on the findings of the study.

## **2. Review of Related Literature**

### **2.1. Theoretical Review**

#### **2.1.1. Cooperatives in Transitional and Developing Countries**

The introduction of a free-market economy posed many challenges, particularly for smallholder farmers and youth entrepreneurs that have limited bargaining power, skills and capacity. Thus, collective efforts through the cooperative organization have been chosen by many disadvantaged groups as a means for accessing the benefits associated with a liberalized market system. As a result, different types of cooperatives have been formed to meet different objectives over the years [2].

The growth of cooperatives in transitional and developing countries at first faced many challenges. In the transitional countries, cooperatives have been viewed as state enterprises; with the collapse of communism, these cooperatives collapsed as well. In developing countries, cooperatives in the 1950s and 1960s operated under the sponsorship of nationalist governments. These governments saw cooperatives as instruments, taking them over and using them as a parasite within a controlled economy and as mass organizations through which the ruling party could reach the rural population [11].

In the USA, some of the largest health providers are consumer cooperatives; in the Pacific Northwest one cooperative provides health care for 570,000 members; in the Mid-West another has as many as 630,000 members. In Japan, 120 consumer cooperatives provide health care for around three million members, who meet in small 'hen' groups to discuss preventive health issues. Consumer

cooperatives, which emerged in Britain in the 1840s along the Rockdale system, are today the market leaders in Italy, Switzerland, Singapore, and Japan. They are also very active in the Scandinavian countries and Atlantic Canada [13].

There were success stories in sugar and cotton cooperatives in India, dairy cooperatives in India and Bangladesh, coffee cooperatives in Tanzania and Kenya, and several countries with a more independent credit sector. Nevertheless, with market liberalization in the 1990s and the withdrawal of government support, many state-sponsored cooperatives could not compete with the private sector and had to shut down. After these experiences, independent cooperatives have since formed. In the transition economies, new laws were passed and old cooperatives were returned to their members and new ones have formed [14].

The USAID has been active in the Balkan region in promoting cooperative formation; governments in Eastern and Central Europe and the CIS countries can go a long way in promoting the formation of autonomous cooperatives [15].

Despite the dominant role of agriculture in the Ethiopian economy, the number of non-agricultural cooperatives outweighs the number of agricultural cooperatives. Approximately 37 percent of the primary cooperatives are engaged in agricultural activities. Multipurpose agricultural cooperatives dominate the list of primary cooperatives (28 percent) followed by SACCOs, which are organized both in the rural and urban centers (26 percent) [16].

### 2.1.2. Advantages of Cooperatives

A. Cooperatives can be significant economic players that contribute to sustained growth processes

The top 300 global co-operatives have a combined turnover of US \$1.1 trillion. Cooperatives employ over 100 million people (more than multinational corporations) and contribute to increased agricultural productivity, expanded access to financial services, and critical utilities such as electricity. Cooperatives can make a significant contribution to GDP [17].

B. Cooperatives help create more equitable growth

Cooperatives can help make markets work better for poor people, by generating economies of scale, increasing access to information, and improving bargaining power. Cooperatives can have millions of members and many operate in the informal sector where they can transform the survival activities of the poor into viable livelihoods. Cooperative profits are re-invested in the business or shared with members so the rewards of enterprise are retained locally. Coalitions between the poor and not-so-poor in one cooperative can help improve the performance of the enterprise and reduce the poverty of its poorer members [17].

C. Cooperatives help tackle rural poverty

Cooperatives increase the productivity and incomes of small-scale farmers by helping them collectively negotiate better prices for seeds, fertilizer, transport, and storage. Cooperatives help farmers expand market access and capture more of the value chain - for example, by getting involved in processing activities. Farmer groups can help farmers move

out of poverty, and cooperatives are one form that these groups can take. Cooperatives are often the main channel through which smallholders can access fair trade [17].

D. Cooperatives expand poor people's access to financial services

These include credit savings and in some cases insurance and remittances. These services can support enterprise start-up and expansion; enable the risk-taking that can lead to increased profitability; and reduce vulnerability by allowing the poor to accrue savings, build assets and smooth out consumption. Cooperatives are active across the financial sector - from microfinance to mainstream banking. Cooperatives are one of the largest providers of microfinance services to the poor, and some cooperatives have become major financial sector players. A 2007 IMF study found that cooperative banks are more stable than commercial banks. This finding is due to the lower volatility of the cooperative banks' returns, which more than offsets their lower profitability and capitalization. This is most likely due to cooperative banks' ability to use customer surplus as a cushion in weaker periods [17].

### 2.2. Empirical Review

Cooperatives can effectively create and maintain employment (both direct/ salaried/ employment, and self-employment) in both urban and rural areas of the world. They can provide self-employment through millions of worker-owned production and service delivery activities (producer cooperatives); by promoting resource mobilizing and saving for productive investment as in the case of (financial cooperatives); and provision of affordable goods and services, and thereby enable the community to save a proportion of their income for investment (consumer cooperatives). Similarly, user-owned cooperatives such as housing, utility, health, and social care cooperatives provide affordable access to basic services and help them to get access to various self-employment opportunities [18].

On the other hand, cooperatives can create enormous direct or salaried employment opportunities by engaging themselves in various sectors of the economy such as production, marketing, processing, and so on. According to [19], in several African countries and some other countries around the world, cooperatives are said to be the second-largest employer surpassed only by the government. The practical employment data of many countries around the world seems to justify this theoretical foundation.

For instance, the data on self-employment and direct employment indicated by the Committee for the Promotion of Agricultural Cooperatives (COPAC) for some African countries shows that there were 220,713, and 58,468 self-employment and direct employment respectively in South Africa in 1997; while the 1996 corresponding figure for self-employment and direct employment were 91,035 and 3,235 in Ghana; 27,792 and 42,709 in Morocco; 32,168 and 8,455 in Uganda; and 23,424 and 494 in Zimbabwe respectively [18].

By doing so, they permit a large resource mobilization than what could be possible within the capacity of most

individuals and small enterprises, and can serve as a catalyst for local entrepreneurial growth; retain the capital mobilized by the communities within the communities and the surplus derived from outside transactions, both of which are very crucial in bringing further development to give local area. Moreover, cooperatives have the greatest direct economic impact at the micro-level in creating additional income for their members Cooperative form enterprises can assure any group of individuals an effective means to combine their resources, however small they are [20].

### 3. Methodology

#### 3.1. Description of the Study Area

Geographically the study area is located at Addis kidam town at two kebeles in Fagetalokolma district in Awi zone of Amhara Regional state. Fageta lokoma woreda is located at 11°04'30" - 11°05" latitude and 36°52"-36°54"longitudes (EMPA, 2007). Its capital town Addiskedam is one of 8 woredas in Awi zone located approximately 101KM southwest of Bahir Dar, the capital city of Amhara National Regional State and about 446km northwest of Addis Ababa. The woreda is borderd by Dangila woreda on the North, Sekela woreda on the south, and Guanga woreda on the west.

Climatic conditions in the highlands of Ethiopia are generally a result of differences in altitude. Climatic conditions in fagetalokoma woreda, Awi zone are divided into three agro-climatic zones (Daga (16%), weynedega (84%), and kola. Altitude ranges from 2000-3200masl. The average annual rainfall is 2379mm with a unimodal rainy season. The rainy season for the area is the beginning of June- the end of September. Temperature varies between the mean annual maximum of 25 degrees centigrade and the mean annual minimum of 11 degrees centigrade across the elevation gradient (BoPED, 2000). Fagetalokoma woreda has 25 kebeles and the population is mainly rural (95.4%).

The economic activity of the area: is a mixed farming system (animal husbandry and crop production activity) that can grow different crops but largely the farmers adopt cereal crops like; maize, sorghum, teff, and wheat.

#### 3.2. Type and Sources of Data Collection

The researcher was used both qualitative (to appraise the belief and perception of the socioeconomic developments of its members regarding the importance of participation in agricultural cooperative, and the improvement it bought in their livelihood) and Quantitative data to measure the relationship between the dependent variable and each explanatory variable that were considered in the study.

To collect reliable data, both primary and secondary sources of data were used as the major sources. The secondary data has included information that is obtained mainly from different reports, websites, and literature, which are relevant to the theme of the study. Primary data was collected by using questionnaires and interviews. The primary sources of data questionnaires were also distributed

to member farmers that live in this kebele and interviews were taken to Organizers and managers of Agricultural cooperatives of this kebele.

#### 3.3. Sampling Technique and Sample Size Determination

A multistage sampling technique was used for this study. In the first stage, Awi zone and Fageta Lokoma woreda were selected purposively based on prior knowledge of the researcher about the area regarding agricultural cooperative. In the second stage, Addis kidam town were randomly selected from Fageta Lokoma woreda, out of the 25 kebeles because the population was homogeneous. In the third stage, 65 households were selected out of 1500 households in the two kebele by using probability proportional to sample size (PPS)- sampling techniques. From these total households, 65 households were selected randomly who are members of agricultural cooperatives found in this kebele from both sexes for questionnaires.

Purposive, probability and non-probability sampling techniques were applied in the selection process. A simple random sample was employed to select the sample respondents by taking their list from the sample areas.

#### 3.4. Method of Data Collection

To collect the quantitative and qualitative data, this study was used the following main instruments namely questionnaire, interview, and organizational document for quantitative and qualitative data.

##### 3.4.1. Primary Data

###### (i). Key Informant Interview

The data collection instrument interview is essential to collect quantitative and qualitative data. The data was gathered by interviewing some government Agricultural cooperative officials as well as coordinators of cooperatives who have better knowledge and experience in the subject matter or the field. In this study, the key informants were the main actors of the study area such as Agricultural cooperative managers. A face-to-face interview was held for various issues of the cooperative to identify the true nature of the problem.

###### (ii). Questionnaire

To collect relevant data from the selected samples a questionnaire that consisted of both open and closed-ended questions was applied. To get reliable data from respondents both structured and unstructured (i.e., close-ended and open-ended type) questionnaires were prepared and administered to the targeted respondents.

##### 3.4.2. Secondary Data

Secondary data was collected using reviewing and careful examination of documents, research reports, published and unpublished writings, internet websites, etc. It was also collected from documents of the agricultural cooperative office of Addis kidam town, and governmental bodies concerned for the sector.

**3.5. Methods of Data Analysis**

Different types of analytical methods were used to evaluate the research results and make a sound conclusion for given survey information. In this study, data were analyzed using different quantitative and qualitative tools and methods.

**3.5.1. Descriptive Analysis**

Descriptive analysis is used to reduce the data into a summary format by tabulation (the data arranged in a table format) and measure of central tendency (mean and standard deviation). Moreover, the percentage was also used to describe the general services given by the cooperative. The reason for using descriptive statistics is to compare the different factors.

Quantitative data were analyzed by using descriptive statistics such as mean, percentage, standard deviation, and frequency.

**3.5.2. Econometric Analysis**

A common and important econometric model, logistic, was applied to determine and predict the current quantitative findings and their effects on the socio-economic development of members of an agricultural cooperative. In analyzing the data both statistical and econometric methods that fit the data were employed. For qualitative data analysis methods like concept explanation, elaborations of respondent's feedback were used.

**(i). Binary Regression Analysis**

*The logit model*

Binary explanatory variables can be represented as dummy variables and a binary choice model assumes occurrences between two alternatives (in this case achieve socioeconomic

$$Li = \ln \frac{P}{1-p} = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \beta_5x_5 + \beta_6x_6 + \beta_7x_7 + ui, \text{ (Gujarati, 2004)}$$

Where  
 Ln=natural logarithm;  
 P=probability to achieve socio-economic development;  
 1-p=probability not to achieve socio-economic development;  
 β<sub>0</sub>=constant term;

development or not). There are several methods to analyze the data involving binary outcomes. However, for this particular study, the logit model was selected. In the logit model probabilities are bound between 0 and 1. Moreover, logit best fits the non-linear relationship between the probabilities and the explanatory variables. The dependent variable, in this case, is a dummy variable, which takes a value of zero or one depending on whether or a farmer is achieved socioeconomic development or not. However, the independent variables are both continuous and binary. In this study, the logistic econometric model was used to identify the factors (the independent variables) that affect farmers' potential of achieving socioeconomic development in the study area.

**(ii). Regression Functions**

The equation of regressions on this study is generally built around two sets of variables, namely dependent variable, Y<sub>i</sub>, (socio-economic development), and independent variables, (sex, age, education, land, income, credit, distance,).

The basic objective of using regression equations in this study is to make the study more effective at describing, understanding, and predicting the stated variables.

Regress development of socio-economic (Y) on Selected Variables: X<sub>1</sub>, X<sub>2</sub>, X<sub>3</sub>, X<sub>4</sub>, X<sub>5</sub>, X<sub>6</sub> and X<sub>7</sub>.

Where: X<sub>1</sub>=sex, X<sub>2</sub>= age, X<sub>3</sub>= education X<sub>4</sub>= land, X<sub>5</sub>= income, X<sub>6</sub>= credit and X<sub>7</sub>= distance are the explanatory variables.

**3.5.3. Definition of Dependent Variables**

*Model Specification:*

As stated above the dependent variables affect each other in a cause and effect relationship, a simultaneous equation approach will be employed. The model is specified as follows:

β<sub>1</sub>, β<sub>2</sub>, β<sub>3</sub>, β<sub>4</sub>, β<sub>5</sub>, β<sub>6</sub>, and β<sub>7</sub>, are coefficients of explanatory variables; x<sub>1</sub>, x<sub>2</sub>, x<sub>3</sub>, x<sub>4</sub>, x<sub>5</sub>, x<sub>6</sub>, and x<sub>7</sub> are predictor variables included in the model;  
 ui=error term.

From the above equation, we can derive p as follows:

$$P = \frac{e^{\beta_0 + \beta_1X_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \beta_5x_5 + \beta_6x_6 + \beta_7x_7}}{1 + e^{\beta_0 + \beta_1X_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \beta_5x_5 + \beta_6x_6 + \beta_7x_7}} \text{ Law of exponential function}$$

$$P = \frac{P}{1-p} = \text{odd ratio}$$

$$\text{From this, } p = \frac{\text{odd ratio}}{1 + \text{odd ratio}}$$

Where, e=natural exponential function.

**3.5.4. Definition of Independent Variables**

**(i). Sex of a Household Head (X<sub>1</sub>)**

Females show a desire to join the agricultural cooperatives than males. Joining would probably promise higher expected returns to them relative to an outcome of not joining. As

females are engaged in cooperative activities their tendency in participating in building their socioeconomic status and the community is greater than those who are not. Cooperative can increase the confidence of females in their daily life activities; they can cope in terms of moral, labor requirement of working conditions with their counterparts, males. It is, therefore, hypothesized that sex might take a positive sign in

the membership equation and socioeconomic development.

**(ii). Age of a Household Head ( $X_2$ )**

It is hypothesized that the age of the household head will take a positive sign in the socio-economic development and membership equation of agricultural cooperatives, in the range of working age. But as age exceeds the working age of the household it will be negative signifying that a household may become less risk-averse and may not achieve socio-economic development.

**(iii). Education of Household Head ( $X_3$ )**

The education level of the farmer is expected to have a positive effect on the decision-making process. It is expected that heads of households with more years of education will be able to understand the benefits of membership to a cooperative and they may join it. It is expected that education will positively affect agricultural cooperative acquisition and incomes. This is consistent with other studies which have shown that education is a great asset if farming is to be productive. Educated farmers may not find it hard to be productive; they are always ready to develop their socio-economic status.

**(iv). Land size of Household Head ( $X_4$ )**

Land ownership possessed by the household in hectares has a positive sign in the development equation because, above certain hectares, people with more land may have moral and incentive to join the cooperative than those without enough land. The land will, therefore, positively affect agricultural cooperative acquisition and income per capita.

**(v). Income of Household Head ( $X_5$ )**

Household income sources included selling crop

production, livestock selling, charcoal selling, etc. Farmers with more sources of income can afford to achieve socio-economic development. Therefore, income is expected to have a positive relationship with socioeconomic development.

**(vi). Credit Access of Household Head ( $X_6$ )**

Credit acquired before the start of a growing season will have a positive effect on the amount of fertilizer used in the following growing season as well as on incomes realized from farming at the end of that farming year. Fertilizer use, as well as credit, will, therefore, have positive signs in the development. Thus, this variable is expected to have a positive sign in the socioeconomic development equation.

**(vii). Distance of the Agricultural Cooperative Office from the Household Head ( $X_7$ )**

Distance is the location of the offices of the agricultural cooperative from the village where the household head is located. It is hypothesized that the greater the distance from one's household head to the cooperative offices less likely the household would have heard about the importance of cooperative groups from field officers and hence the less likely they might want to join the club affiliated to the cooperative. The sign for this will be negative.

**3.6. Hypothesis**

Hypothesis- The study was hypothesized the following factors affecting the socio-economic development of its members in the study area.

Independent variable: Sex, Age, Education, land, Income, credit, distance.

Dependent variable: Socio-economic Development.

*Table 1. Summary of Hypothesis of Explanatory Variables.*

Independent Variable	Dependent Variable Socio-economic development of its members	Hypothesis
Sex		Positive
Age		Positive
Education		Positive
Land		Positive
Income		Negative
Credit		Positive
Distance		Negative

N.B. Sex, Age, Income, Credit, and Education, will have a positive influence on the socio-economic development of its members and income and distance will have a negative on it.

**4. Result and Discussion**

This chapter presents and analyzes the data collected accordingly. First, the demographic profile of respondents is analyzed and presented followed by the economic interpretations and analysis. Thirdly, the discussion is made based on the data presented and analyzed based on the distributed 70 questionnaires and only 65 of them were valid. The rest five questionnaires were invalid because the respondents were reluctant to give a proper answer to the questionnaires.

Finally, the services that are given to members of agricultural cooperatives are analyzed and discussed briefly. Percentages are used for the presentation analysis of these parts. And also the data related to the factors that affect the performance of farmers' agricultural cooperatives are presented and analyzed by ranking.

**4.1. Demographical Description of Sampled Respondents**

**4.1.1. Sex of the Respondents**

Cooperatives enhance the participation of women in their scheme to promote women's empowerment in socio-economic aspects. So in this kebele, the participation of

females in agricultural cooperatives was satisfactory according to the randomly selected sample, especially according to the current policy of government this increment of participation of females around the socio-economic development of society puts a light on the economy of the country. Thus, among randomly selected 65 households, 26 of them were female-headed households, and 25 (96.2%) of them were members of agricultural cooperatives. Compared to females the number of males who were a member of a farmers' cooperative was less. Among the total randomly selected 65 respondents, male and female, male-headed households were 39, i.e. 60% and only 31 of them were members of this cooperative. This is shows 79.5% were participating in the development of socio-economic development through these cooperatives (see Table 2).

#### 4.1.2. Educational Status of the Respondents

Educational status is also one of the aspects of demographic factors that can affect the participation of the household in agricultural cooperatives. Most literature reviews stated educated households are more participants than their counterparts. Those who are better educated can make better decisions which may be crucial for them. During their life span education also plays a critical role in the

development and performance of the cooperatives in those individuals (members) who have better educational levels may make a better decision in cooperatives.

To see this relationship respondents were interviewed to know their educational level and the effect of education on cooperative participation. Of 65 randomly selected households only 34 of them were literate, and their educational level was mostly, 87% of them were, less than the second cycle. Thus, in this kebele among randomly taken respondents only 52.3% were literate, and the rest 47.7% were illiterate. Furthermore, the following table shows the educational background of the randomly sampled members of the cooperatives was poor.

#### 4.1.3. Credit Access of House-Hold

Households' access to credit helps them to fully participate in socio-economic development activities, especially for farmers who were a member of agricultural cooperatives. Of the total randomly selected 65 household heads, only 69.2% of them were willing to use and able to get credit access around their living area. The rest, i.e. 30.8% were did not use credit for socio-economic development activities, whether the access of credit is found or not around their area.

Table 2. Summary of discrete variables.

Discrete variable		Frequency	Valid percent
Sex of household head	Female	26	40
	Male	39	60
	Total	65	100
Educational status of household head	Illiterate	31	47.7
	Literate	34	52.3
	Total	65	100
Credit access of household	No access to credit	20	30.8
	Access to credit	45	69.2
	Total	65	100

Source: Own Field Survey, 2021.

#### 4.1.4. Age of the Respondents

From the descriptive statistics of the age of the respondents were assessed and the result is discussed as below: The classification of age into different groups implies that the performance of the household in achieving socio-economic development and in being a member of the cooperatives was affected by the age of each member in the cooperatives. Most of the respondents were aged in the range of 21- 64 years and they were productive economically. Only some of them were unproductive labor economically. Of the randomly taken households, the mean value of their age was 49.9 years.

#### 4.1.5. Land Size of the Household

Land ownership of the households is very important in achieving socio-economic development activities. In study area, of the total of the randomly sampled 65 head-households, 89.5% of them were owned land by government arrangement and the rest of them, 10.5%, were acquired and used land in hiring terms. The mean value of land ownership, whether it was government arrangement or hiring system, of

these head-households was 2.2 hectares of land.

#### 4.1.6. Income of the House-Hold

The basic hypothesis was that since the agricultural cooperative group engages households in entrepreneurship activities that might be considered as increasing household income as well as helping them achieve socio-economic development. And members should be well placed (at least compared to those outside it). The respondents of this kebele answered as they were in a position to have, on average, higher incomes than non-members of similar household characteristics since they have got better training on the production system and better awareness of marketing conditions. Of totally randomly taken household heads the main value of their income in birr per year was 16558.4. Table 3 below presents the mean value of the income status of household heads.

#### 4.1.7. Distance of a Household Head to Agricultural Cooperative Office

The greater the distance from one's household to the

agricultural cooperative office in Addis kidam, the less likely the household would have heard about the importance of agricultural cooperatives and hence the less likely they might want to join the agricultural cooperatives. Of the randomly sampled respondents, only 9.7% of them were far from agricultural cooperatives more than 2km, and they were less

informed about cooperatives. The rest of them, 90.3%, were far from agricultural cooperatives less than the indicated figure. The mean value of the distance of household heads from farmers' cooperatives was 1.2 km. Table 3 below shows the distance of household head to agricultural cooperatives office.

**Table 3.** Summary of continuous variables.

Continues variables	Mean	Standard deviation
Age of household in a year	49.9	15.57
Land ownership of household	2.2	1.22
Income of household in birr per year	16558.4	9208.93
Distance of household from the agricultural cooperative	1.2	0.50

Source: Own Survey result, 2015.

#### 4.2. Econometric Interpretations and Analysis

**Table 4.** Summary of Logistic Regression Statistics of explanatory variables.

Socioeconomic development	Odds Ratio	St. Err.	z	P> z
Sex	0.0105579	0.0239446	-2.01	0.045*
Age	1.278654	0.1527782	2.06	0.040*
Education	237.7178	601.7991	2.16	0.031*
Land	3.138001	3.62874	0.99	0.323
Income	1.000814	0.0002981	2.73	0.006**
Credit	2.033725	2.591953	0.56	0.578
Distance	0.5421476	0.6665818	-0.50	0.619
-cons	4.29	5.01	-2.44	0.015

Source: own regression result, 2021

\*significance at 5%, \*\*significance at 1%; Number of observation 65;

**Note:** Use the odds ratio of sex 1/0.0105579 which is 94.71 in interpretation.

The most significant factor that determines the socio-economic development is the income of the household head. When households have a habit and performance of encouraging amount of income, the livelihood status of the households becomes improved.

As it is seen from the above Table 4, R Squared has a value of 0.7491 and adjusted R square has a value of 66.10, it may be realized that 74.9% of the variation in socioeconomic development was explained by the independent variables. The remaining 25.1% of the variance is explained by other variables not included in this study and the F test shows the model's goodness of fitness because the prob> F is 0.0000.

##### *Multicollinearity problem*

Before interpreting the result, the result of the study was checked whether the variable has a Multicollinearity problem or not. *Note that:* To identify the multicollinearity problem of the continuous variables the study used VIF (variance inflation factor), and contingency coefficient for discrete variables. As a general rule of thumb, the VIF of each quantitative variable less than 10 indicates the absence of series problem of multicollinearity in the regression equation, and the contingency coefficient of discrete variable less than 10 also indicates the absence of series problem of multicollinearity in the regression equation as indicated in the table (Appendix B & C).

##### *Goodness of Fit*

One of the techniques used to assess the goodness of fit of

a model is R square and F test. The test is used to accept or reject the alternative hypothesis "the model adequately describes the data". If the significance level of the test is less than 0.05, it indicates that the alternative hypothesis is rejected and the null hypothesis which states the inadequacy of the model to describe the data is accepted. In the case of this study, the significance level of the test was found to be less than 0.05 (see model summary). Thus, the alternative hypothesis which states that the model is adequate to describe the data was accepted. The R square is also greater than 50%.

As we see from the above table 4 only four explanatory i.e. sex of household, age of household, educational status of a household, and income of household per year, were significant. And those variables can be mandatory to interpret the data neglect of the insignificant variables.

From the above logit regression result we have tried to interpret and discuss the econometric influence of explanatory variable (sex, age, education, and income) on the dependent variable (socio-economic development) by one as follows:

*Note:* Source for interpretations was taken from GUJARATI, 2004 (page 614-625).

##### A. Sex of household head

The coefficient for discrete variable sex is a positive sign. This is consistent with theory and implies females are more willing in participating in socio-economic development by forming groups, like farmers cooperatives than males.

Participating in such like cooperative help females to fill the vacancy of lack of labor which they may face during working on their selves. For example, there may be carrying of UREA/DAP per 50kg for transportation purposes that females may see it a problem individually. But they can overcome such problems when they bring their labor together. Table 4 shows that sex has a significant influence on households' achieving socioeconomic development at a 5% level of significance. Thus, the odds ratio in favor of socioeconomic development increases by a factor of 94.71 as the participation of females in agricultural cooperatives increases by 1%.

**B. Age of household head**

The coefficient for the variable age of household head is positive. This is theory consistent in terms of the signs. This means there is a tendency for older farmers to achieve socioeconomic development. Because as they become mature, farmers will become more willing to promote their effort on economic development of their own and society too. And the continuous variable age is significant at a 5% level of significance (Table 4). Thus, the age of the household head does determine the households' capacity to achieve socioeconomic development. The age of the household head has an odds ratio of 1.28. Therefore, other variables keeping constant, the odds ratio in favor of the socioeconomic development increases by a factor of 1.28 as the age of household head increases by one year.

**C. Educational status of household head**

The coefficient for discrete variable education is positive. This is consistent with the theory. Education was expected to have a positive sign because household heads with more years of education will be able to make better decisions, understand the benefits of agricultural cooperative membership, and able to achieve socio-economic development than illiterate households. From the results in Table 4, education is significant at a 5% level of significance. Since the odds ratio for education is 237.72, other factors being kept constant, the odds ratio in favor of socioeconomic development increases by a factor of 237.72 as the educational status of the household head changes from illiterate to literate.

**D. Income of household head**

Income is a continuous variable stating whether a household is in a position of achieving socioeconomic development or not. A household with a greater income level is certain to achieve socio-economic development than a household whose income level is less. The odds ratio for variable income of the household is positive and consistent with the theory. The variable is significantly related to the dependent variable at a 1% level of significance. This might mean that households with higher income per year have a higher probability of achieving socio-economic development. In Table 4 above income of household has an odds ratio of 1.0. Thus, the odds ratio in favor of socio-economic development increases by a factor of 1.0 as the income of the household increases by 1%, being kept other variables constant.

**4.3. Types of Services Agricultural Coops Provide for Its Members**

Multipurpose farmers cooperatives give different services for their members that the members are enjoying those services given to them; even though members are willing to diversify and increase the type as well as the amount of service of the cooperative in that Kebele. The table below shows the types of services the multipurpose farmers cooperative provides for its members.

*Table 5. Types of Services and Cooperatives That Provide Services for Their Members.*

Types of Services	Valid percent
Agricultural input supply	75.1%
Agricultural output marketing	5.7%
Agricultural credit services	8.5%
Provision of agricultural equipment and machinery	3.2%
Other services	7.5%
TOTAL	100%

Source: Own Field Survey, 2021.

From the above table, multipurpose farmers cooperatives in the Teda are giving different services for their members such as Agricultural input supply, Agricultural output marketing, Agricultural credit services, Provision of agricultural equipment and machinery, and also other services which includes oil and sugar. As it is possible to see from the table, it provides about 75.1% agricultural input supply. In the above table, there are different agricultural inputs that both members and non-members get from the agricultural cooperatives. These are input, chemical fertilizers (UREA and DAP), improved seed supply, and pesticides.

Agricultural output marketing is not the main function of the multipurpose farmers' cooperatives in this Kebele. This is due to the area is not known by cash crops (like sesame, coffee, etc) growing area, the members sell their products to the nearby market than selling to this agricultural cooperatives with almost comparable price. The other services provided by this cooperative, which are described above are not significantly carried out by the cooperatives. They are in the progress to function well in the future.

**4.4. Factors Affecting the Success of Agricultural Cooperatives**

Agricultural cooperatives found in this Kebele are influenced by different factors like social factors including poor infrastructure, lack of incentives from the government and non-government organizations: financial shortages and lack of efficient and effective managers, lack of linkage with other cooperatives and other sectors. The living condition of the society is also another factor that affects the success of agricultural cooperatives. These and other factors are described in the below table.

**Table 6.** Factors Affecting the Success of Agricultural Cooperatives.

Factors	Rank
Poor infrastructure and warehouse	1 <sup>st</sup>
Lack of incentives	2 <sup>nd</sup>
Lack of well-trained manpower employees	3 <sup>rd</sup>
Low Women participations	4 <sup>th</sup>
Insufficient management and decision making	5 <sup>th</sup>
Corruption	6 <sup>th</sup>
Lack of member education	7 <sup>th</sup>
Lack of satisfactory record keeping	8 <sup>th</sup>

Source: Own Field survey, 2021.

From the table, one can understand that most of the sampled members of cooperatives said lack of suitable infrastructure, lack of member education; lack of satisfactory record keeping, and lack of well-trained manpower and employees were the main factors that impeded the success of agricultural cooperatives. There are also a few members who said the factors were Low women participation. On the other hand, there were also considerable problems in issues like Corruption, Ineffective management, and decision making.

## 5. Summary, Conclusion, and Recommendation

### 5.1. Summary and Conclusion

From the survey result as discussed in chapter four, the researcher conclude that the Socio-economic Development of its Members is the first and foremost important activity that brings change in income in Addiskidam town. Sex, age, and education were significant at 5% levels of significance play dominant role on the Socio-economic Development of its Members and income of household was significant at a 1% level of significance.

Logit analysis results show that sex of household head ( $p < 0.045$ ), age of household head ( $p < 0.04$ ), educational status of household head ( $p < 0.031$ ) and income ( $p < 0.006$ ) determines household socio-economic development.

The results also show attract females more than males. The results show that land ownership of households, credit access of households, and distance of household from the cooperative office do not determine household socio-economic development.

The members of the agricultural cooperatives had a habit of working together, self-help through mutual help and honesty and friendly kind but they lacked honesty and friendly kind in their organization.

Sex of household was negative and significant at 5% level of significance this implies that male were less in Socio-economic Development of its Members when compared with females.

Age was positive and significant at 5% significance level. This implies that Yong aged household was less Socio-economic Development of its Members than old aged households. When age increases the probability of the Socio-economic Development of its Members was increased by 0.04 percent.

Income is one of the continuous and significant variables at 10% significance level that determine Socio-economic Development of its Members. As we have seen, the probability of the household with much amount of money can less participate in different activities.

Multipurpose farmers' cooperatives are located nearby the small town of the kebele along the main road. These accesses to the main road, updated information on market outlets especially in Microbusiness activities, access to technology such as telecommunication, electricity, etc made it become a competent cooperative with other cooperatives and private suppliers.

According to the member's perception of the cooperatives performance status was relatively good which was resulted in the distribution of surplus to members according to the service they used with the cooperative. As explained in the study result there was a lack of member education, lack of satisfactory record keeping, and lack of well-trained manpower.

### 5.2. Recommendation

According the findings of the research, the study suggests that cooperative organizations should be given access to market and main infrastructures such as agricultural input supply, agricultural output marketing, agricultural credit services, provision of agricultural equipment and machinery.

Although membership is voluntary and open to anyone who wants to join the cooperatives without any restriction by gender the data showed that men's membership was low in cooperative, i.e. more than 59% of the members of the cooperative were female-headed households. Socio-economic will be realized when both sexes equally participate and contribute to economic activities. So, there should be gender sensitization and encouragement in that cooperative organization.

A household head with more experienced (older) is needed in Cooperative organization so as encourage the younger household head to fully participate in economic activities that might be carried out by those agricultural cooperatives. Therefore older members should have to be included in cooperation so as honesty and friendliness promote their experience in their organization to make their cooperation continuous and successful in all directions.

The cooperative management committee of the district should take the issue of the variability of input distribution in to consideration and should give educational service in order to adopt the farmer to buy input on cash.

The illiteracy rate of the household should be minimized by the cooperative organization to make the member an active participant in the decision-making process. Since an educated household easily can understand the ways and value of saving, production, market information; when and where to sell his/her production, adopting new technologies, and more.

The income status of the household significantly shows whether a household is on verge of achieving socio-economic or not. Income plays a great role in the contrition of the economy of the household. Therefore income of a household should be encouraged to the amount needed to achieve the socio-economic development of the household.

It is better if the government of the district gives regular

extension education to around societies to use modern farming system.

## List of Acronyms and Abbreviation

CC	Contingency Coefficient
CIS	Central Institutional Statistics
COPAC	Committee for the Promotion of Agricultural Cooperative
DA	Developmental Agent
EC	Ethiopian Calendar
EU	European Union
FNG	Federal Negarit Gazeta
GDP	Gross Domestic Product
HIV/AIDS	Human Immunity Various Acquired Immune Deficiency Syndromes
ILO	International Labor Organization
LPM	Linear probabilities Model
RPO	Rural Producer Organization
UK	United Kingdom
UN	United Nation
UNDP	United Nation Development Program
USA	United State of America
USAID	United State Agency for International Development
VIF	Variance Inflation Factor

## Appendix

### Appendix A: Logistic Regression Result

Table 7. Logistic regression.

Logistic regression Number of obs = 65

LR chi2(7) = 66.10

Prob > chi2 = 0.0000

Log likelihood = -11.070963 Pseudo R<sup>2</sup> = 0.7491

socioeconomicdvt	Odds ratio	Std. Err.	z	p> z	[95%conf.	Interval
sex	.0105579	.0239446	-2.01	0.045	.0001239	.8995929
Age	1.278654	.1527782	2.06	0.040	1.011692	1.616661
education	237.7178	601.7991	2.16	0.031	1.664124	33957.65
land	3.138001	3.62874	0.99	0.323	.3253388	30.26708
income	1.000814	0.0002981	2.73	0.006	1.00023	1.001399
Credit	2.033725	2.59195530.560.578	.56	0.578	0.1672816	24.725
distance	.5421476	.6665818	-0.50	.619	.0487021	6.035144
-cons	4.29e-13	5.01e-12	-2.44	0.015	4.84e-23	0.003801

Note: 1 failur and 2 success completely determined.

### Appendix B: Summary for Multicollinearity for Discrete Variables

Table 8. Summary for Multicollinearity for Discrete Variables.

Variable	Contingency coefficient	Chi-square	Sig.
Sex	0.368	10.168	0.038
Education	0.871	1.139E2	0.871
Credit	0.844	1.604E2	0.953

### Appendix C: Summary for Multicollinearity for Continuous Variables

Table 9. Summary for Multicollinearity for Continuous Variables.

.vif variable	VIF	1/ VIF
Income	6.00	0.166732
Land	5.74	0.174186
age	1.30	0.771705
sex	1.29	0.778077

.vif variable	VIF	1/ VIF
distance	1.24	0.806866
education	1.23	0.815157
credit	1.20	0.834921
Mean VIF	2.57	

#### Appendix D: Marginal Effects After Logit

Table 10. Marginal Effects After Logit.

Variable	dy/dx	Std. Err.	z	P> z	[95% C.I.]	X
Sex*	-.8113624	0.18837	-4.31	0.000	-1.18057 - .442155	0.6
age	.0603222	0.02904	2.08	0.038	0.003408.117236	49.9538
education*	.8701491	0.14758	5.90	0.000	0.580892 1.15941	0.523077
land	.2806404	0.28468	0.99	0.324	-0.277327.838607	2.20385
income	.0001998	0.00008	2.64	0.008	0.000051.000348	16558.4
credit*	.1686819	0.28887	0.58	0.559	-0.397497.73486	0.692308
distance	-.1502404	0.30622	-0.49	0.624	-.750426.449946	1.13692

(\*) dy/dx is for discrete change of dummy variable from 0 to 1

Marginal effects after logit

y = Pr (socio-economic dev't) (predict)

=.4322047.

#### Appendix E: Questionnaire Part

##### A. Household Characteristics

1. Sex of respondent
  - a. Male
  - b. Female
2. Age of respondent \_\_\_\_\_
3. Marital Status
  - a. Married
  - b. Divorced
  - c. Widowed
  - d. Separated
  - e. Single
4. Level of education
  - a. illiterate
  - b. literate
5. Are you the head of the household? If yes, go to question 7.
  - a. Yes
  - b. No
6. Sex of the household head
  - a. Female
  - b. Male
7. What is your household Size? \_\_\_\_\_
8. Among your house hold how many of them are working-age and are not? \_\_\_\_\_ & \_\_\_\_\_
9. What is the primary occupation of the household head?
  - a. Smallholder Farmer
  - b. Small Scale Business
  - c. Worker (employed)
  - d. No, I don't have
  - e. Others (specify)

##### B. Sources of Income and Expenditure

10. What are your major sources of income?
  - a. Livestock Sales
  - b. Crop Sales
  - c. charcoal sales
  - d. Agricultural cooperative Small Scale businesses
  - e. Small scale businesses other than agricultural coops activities

f. Others (specify)

11. What are your major sources of expenditure?

- a. access to fertilizer and improved seed
- b. for raring animals
- c. monthly/yearly contribution of coops
- d. Others (specify)

*C. Membership*

12. Are you a member of any group?

- a. Yes
- b. No

13. If not, what factors hinder you?

- a. initial capital requirement
- b. distance from cooperatives
- c. lack of coordination and management of coops
- d. lack of awareness
- e. others (specify)

14. If yes, what type of group is it?

- a. Club
- b. Association/trust
- c. Cooperative (agricultural)
- d. Other (Specify)

15. If you are a member of agricultural coops what factor influenced you to join the group? Yes (=1) No (=0)

- a. Access to credits d. Lack of working capital/cash
- b. Save money e. Lack of market access
- c. High price of fertilizers f. Other (Specify)

16. What are the benefits you got from being a member of agricultural coops?

- a. easily access to fertilizer and improved seed
- b. proper management of production
- c. access to credit and training
- d. no benefit
- e. others (specify)

17. How do you see the pricing strategy of the agricultural cooperatives in input/output marketing?

- a. Poor
- b. No Difference
- c. Reasonable
- d. Attractive/Very Good

18. Membership Duration in Number of Years \_\_\_\_\_

19. Share Contribution in Number \_\_\_\_\_

20. Total Annual Income before membership \_\_\_\_\_

21. Total Annual income after membership \_\_\_\_\_

22. Total expenditure before membership \_\_\_\_\_

23. Total expenditure after membership \_\_\_\_\_

*D. Land Holding Size*

24. Do you own land?

- a. Yes
- b. No

25. If yes, what type of landholding arrangement? Yes (=1) No (=0)

- a. Customary
- b. Freehold
- c. Leasehold
- d. Others (specify)

26. What size of land do you own? \_\_\_\_\_

*E. Distances to Agricultural Coops Office*

27. How far do you stay from agricultural coops local office? \_\_\_\_\_

*F. credit*

28. Is/are there any access to credit institutions around you?

- a. Yes

- b. No
- 29. If yes, what benefit(s) do you get from it?
  - a. borrowing money for the capital requirement of coops
  - b. borrowing money to buy fertilizer and improved seed from coops
  - c. access to owning land
  - d. others (specify)

### **Appendix F: Interview Part**

#### **A. Checklist for agricultural coops coordinators and managers Interviews**

1. Interview the coordinators and managers on the specific information regarding:
  - a. Foundation of the coop in year
  - b. The initial capital of the coop
  - c. The annual income of the coop
  - d. The annual expenditure of the coop
  - e. Several agricultural coops activities
  - f. Number of members per agricultural coops
  - g. Location of local agricultural coops offices.
2. Are agricultural coops formed at Kebele, woreda, or zone level?
3. What is the eligibility criterion for a household/individual to join agricultural coops?

#### **B. Perceived Constraints of Agricultural Cooperative: Yes (=1) No (=0)**

1. Organizational/ Internal Problems
  - a. Limited Capacity of organizations & Management
  - b. Inadequate initial capital
  - c. lack of coordination from top management
  - d. Poor participation of members
  - e. Others (specify)
2. External Problems
  - a. Small and fragmented farm holdings
  - b. Lack of interest of the household
  - c. Price increase for agricultural inputs
  - d. Existence and dominance of other competitors
  - e. Low price of produces
  - f. Others (specify)
3. Infrastructural Problems
  - a. Availability of trained manpower
  - b. Information on market-oriented production
  - c. Communication Technology
  - d. Marketing Infrastructure
  - e. Storage and transportation facility
  - f. Linkage with Financial institution
  - g. Electrification

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