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## **Determinants of Household Economic Sustainability of Members of Agricultural Cooperatives in West Shoa Zone, Oromia Regional State**

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### **Authors' contributions**

*This work was carried out in collaboration between both authors. Author TM designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors TM and SN managed the analyses of the study. Author SN managed the literature searches. Both authors read and approved the final manuscript.*

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### **ABSTRACT**

The study analyzed is the of determinants of Household Economic Sustainability of Members in Agricultural Cooperatives in West Shoa Zone, Oromia Regional State. The study units and the sampled respondents were 1112 and 294 respectively. The study units were selected purposively. To address the objective of this study, both qualitative and quantitative data were used. For the data analysis SPSS (version 20) was used. Based on this, the outcome of the study showed that (62.6%) were economically unsustainable; at 95% confidence level. Large family size, inefficient use of family labor, less saving habit, less members' education and training were found to be determinants of household economic sustainability.

**Keywords:** *Agricultural cooperatives; economic sustainability; house hold.*

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## 1. INTRODUCTION

Cooperatives have been established mostly because of socio-economic issues that have been existed and still remained unresolved of their members. Cooperatives have been around the world for many years, have made and continued to make tremendous contributions to social and economic development of members and for the countries in which they operate [1].

The concept of human being, even though they are often overshadowed by market mechanisms, technological development, is the prime determinant of economic systems and is hardly new. To this point, Menger [2] clearly expressed that man is the beginning and the end of every economy.

Economic value is not intrinsic in things, but results from the way people react to conditions in their immediate environment. Education may affect economic growth not merely the private returns to individuals' greater human capital, but also a variety of externalities. The most frequently discussed externality is education investments' fostering technological innovation, thereby making capital and labor more productive, generating income growth. There is enormous interest in the relationship between education and growth. Countries that are richer, faster growing, or have better institutions probably find it easier to increase their education spending. Thus, there is a distinct possibility that correlations between education and investments and growth are due to reverse causality (Aghion et al, 2009).

The same author complains that researchers most often study education and growth, neglecting intermediating variables that are likely to reveal the mechanisms at work. To be more clear with education, it is useful to highlight both high brow and low brow education. High brow education fosters technological innovation and invention, while low brow education fosters technological imitation, which is to mean relying more on combining physical capital with less educated labor. Hence, in cooperative atmosphere, the low education seems appropriate because of its proximity to technological frontier that immediately benefits members through increased income. More importantly, education is used for people (members' education) to adopt and preserve the values of sustainability. Education is a vehicle through which sustainability more easily to be utilized. The ultimate aim of focusing on

education is to create behavior, transform people and internalize sustainability concepts in the everyday routine works of members [3].

Financial status to cope with fast changing of economic conditions through the intensification of traditional crop production, diversification into new high value crops, and off-farm activities would result in economic sustainability of the entities in focus members [4].

### 1.1 Statement of the Problem

The important point worth noting about economic sustainability of agricultural cooperative members was that there should exist a balanced integration and interaction among economic, social, and environmental factors effectively and sufficiently [5].

The most readily available opportunity by which the masses can escape the corporate power is through vibrant cooperative societies that are well managed and economically sustained [6].

### 1.2 Objective of this Study

To analyze determinants of household economic sustainability of members in the study area.

## 2. MATERIALS AND METHODS

### 2.1 Description of the Study Area

West Shoa Zone is one of the zones of Oromia Regional State located between Latitude of 8°36' North and Longitude of 39°11'57"East. It is situated in the central part of the Regional State bordering in the South with South West Shoa Administrative Zone, in the West with Jimma and Wellega Zones, in the North with North Shoa Zone, and in the East with special Oromia Finfinnee surrounding Zones.

Ambo Town is the Town of the Zone with the 2<sup>nd</sup> Towns status of the country. It is located along Addis Ababa- Nekemte Road having pleasant climate and attractive scenery covered with small discrete bushes spread all over the areas.

There have been 78,684 primary registered Agricultural Cooperatives in Oromia Regional State with 14,902,340 total numbers of members, FCA (2008), out of the 26,993,933 total population of Oromia Region [7]. West Shoa Zone alone has the population of 2,058,676 of all ages that accounts for 7.63% of the population.

The cooperative members account for (3.25%) of the total population of the Region. Besides this very small percentage of established Agricultural Cooperatives out of the given population, Agricultural Cooperatives in the Region still are at a cross-road because of the ever increasing stiff competition facing them from globalization, challenges of forthcoming technologies, and lack of appropriate and sufficient support from the government agencies. Notably, nearly all cooperatives found in the Region have been ill-formed without fulfilling the necessary prerequisites such as initiation, attraction, training on cooperative matters, conducting need assessment, and voluntarism of members to work together in a group for more advantages.

## 2.2 Research Design

The study captured both quantitative and qualitative research design for the fact that economic sustainability captures quantitative data of environmental, some managerial factors and social aspects while most aspects of sustainability need qualitative data to be analyzed.

## 2.3 Sampling Methods and Techniques

Through multi-Stage Sampling techniques, the Zone was selected purposively for the study. Sampled respondents were selected from the randomly selected five districts (Woredas) of the Zone as each Primary Farmer Society has its own cooperative. The sample frame (1112) benchmark was 3-5 years of establishment and membership respectively. Sample (294) selection employed Yamane [8] formula taking precision level at, 95% confidence level. Probability Proportional to size (PPS) was employed in drawing respondents through systematic random sampling techniques;  $N/n=k$  to draw total sample from list of members as follows:

$$n = \frac{N}{1 + N(e)^2} = \frac{1112}{1 + 1112 * 0.005} \approx 294; \text{ Yamane [8]}$$

## 2.4 Data Sources, Types and the Instrument Used for the Data Collections

To attain the objectives of this study, both primary and secondary data were collected; the primary data were collected by using the questionnaire, for further triangulation purpose FGD and KIs were conducted; and the secondary data were collected through the document review methods and these have been

collected from the report, published and unpublished articles related to the economic sustainability of the members and were collected from the audit reports, minutes of the societies, etc.

## 2.5 Methods of Data Analysis

The data required for the study were collected using questionnaire that were distributed to statistically selected respondents, semi-structured interview was conducted to collect relevant and missed information from management and audit committee members and focus group discussion (FGD). The collected data were analyzed with support of the Statistical Package for the Social Sciences (SPSS) version 20.

The specification of analytical model adopted in this study was depicted as follows:

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \beta_5 X_{5i} + \beta_6 X_{6i} \dots \beta_k X_{ki} + \epsilon$$

Where;

$Y_i$  = dependent variable (household economic sustainability of members)

$\beta_0$  = Baseline (constant term) of economic sustainability (i.e., initial capital of members without membership)

$\beta_1 \dots \beta_n$  were parameters and coefficients of attributes of independent variables and coefficient of estimation

$X_1$  = sex of household head

$X_2$  = Age of household head

$X_3$  = educational level of household head

$X_n$  = attributes of different independent variables

$\epsilon$  = error terms at 0.05 confidence level

Demographic factor data were interpreted using descriptive statistics such as percentage, frequencies, mean and standard deviation as shown below.

## 3. RESULTS AND DISCUSSION

Sex of respondents revealed from the above Table 1 that most (94.2%) of the household member respondents were male which indicated only male household heads were joining the societies and this practice affected the household income negatively which otherwise increased the income of the same. The male membership practice in Agricultural Cooperatives in these study areas reflected the traditionalistic of the

practice that inhibited harnessing of the productive labor that could contribute to the economy of household members for better lifestyles.

The Table 2 depicted the age structure of the household member respondents which was essential in this study that it has direct linkage with economic sustainability of members in terms of material production that contributed to the economic sustainability of member respondents. Most (71.4%) of the respondents in the cumulative percentage were in the age range of productive (20-50) force that could uphold their family members to live in relatively decent lifestyles (i.e. better nutritional food, comparatively better housing with reference to their inhabitants, better clothing, affordability of their children education, obtaining better health

services, going for savings and investment to earn more returns).

As it was understood from the above Table 3, (72.4%) of the respondents have acquired educational level ranging from grades 1-12 that indicated that most of the household member respondents were considered to have the knowledge that could help them understand the concepts and importance of group efforts to overcome their socio-economic problems encountering them in life. In particular, those member respondents in the educational range between grades 9-12 which constituted, (17.3%) were expected to play greater roles in the improvement of their living conditions more than the rest, even though individuals, by nature, strive to live better life, by developing their societies in order to derive benefits by leading,

**Table 1. Sex of the respondents**

Sex of the respondents		Frequency	Percent	Valid percent	Cumulative percent
Valid	Male	277	94.2	94.2	94.2
	Female	17	5.8	5.8	100.0
	Total	294	100.0	100.0	

Source: Survey data, 2018

**Table 2. Age of the respondents**

Respondents age category		Frequency	Percent	Valid percent	Cumulative percent
Valid	20-30 years	19	6.5	6.5	6.5
	31-40 years	101	34.4	34.4	40.8
	41-50 years	90	30.6	30.6	71.4
	51-60 years	63	21.4	21.4	92.9
	More than 60 years	21	7.1	7.1	100.0
Total		294	100.0	100.0	

Source: Survey data, 2018

**Table 3. Educational level of the household member respondents**

Educational level		Frequency	Percent	Valid percent	Cumulative percent
Valid	Illiterate	81	27.6	27.6	27.6
	1-6 Grade	98	33.3	33.3	60.9
	7-8 Grade	64	21.8	21.8	82.7
	9-12 grade	51	17.3	17.3	100.0
Total		294	100.0	100.0	

Source: Survey data, 2018

**Table 4. Marital status of the respondents**

Marital status		Frequency	Percent	Valid percent	Cumulative percent
Valid	Married	274	93.2	93.2	93.2
	Divorced	18	6.1	6.1	99.3
	Widowed	2	.7	.7	100.0
	Total	294	100.0	100.0	

Source: Survey data, 2018

managing, introducing appropriate technologies into their societies and controlling the affairs of their societies effectively.

The marital status of the households, indicated that the majority of the respondents (93.2%) were married and assumed permanently living in the study areas doing their economic activities regularly it was predicted that they made location advantages of the institution for business transactions such as purchasing agricultural inputs, getting market information, selling products on their own preferences, and getting extension services along with appropriate technologies.

From the results it could be summarized that the majority of the sampled households 184 (62.6%) lived below poverty line and thus, they were economically un-sustainable; only 37.4% of the sampled households were economically sustainable. The mean per capita income differences between those who live below poverty and above poverty line were statistically significant at 0.000. The major determinants of the household economic sustainability were found to be large family size, inefficient use of family labor, less saving habit, less members' education and training.

#### 4. CONCLUSION

The outcome of the study showed that (62.6%) were economically unsustainable; at 95% confidence level. Large family size, inefficient use of family labor, less saving habit, less members' education and training were found to be determinants of household economic sustainability.

#### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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