

**Leadership and Performance Status of Agricultural Cooperative Unions: The Case of Arsi Zone, Oromia Region, Ethiopia**

Adugna Defera<sup>1</sup>, Kedir Amare<sup>2</sup>, Adem Kedir<sup>3</sup>

<sup>1</sup>Arsi University, Ethiopia. Email: [adgndef@gmail.com](mailto:adgndef@gmail.com)

<sup>2</sup>Arsi University, Ethiopia. Email: [amarekedir78@gmail.com](mailto:amarekedir78@gmail.com)

Corresponding author: Adem Kedir<sup>3</sup>. Email: [ademkg@gmail.com](mailto:ademkg@gmail.com)

**ABSTRACT**

The study was undertaken to analyze performance status and identify factors affecting leadership performance of farmers' cooperative unions in Arsi Zone, Oromia Regional State. Both primary and secondary data were used. The primary data collected from 33 Board of Directors, 99 leaders in General Assembly and 27 hired staffs/employees using interview schedule, Focus Group Discussion with members and Key Informant Interview. Both descriptive statistics and econometric model (Exploratory Factor Analysis of Structural Equation Modeling) were used in the analysis. The results revealed that the total averages of financial ratios of Inventory Turnover Ratio, Operating Ratio, Return on Sales and Current Ratio of sampled unions had the decreasing trends from 2014/15 to 2015/16. Moreover, Exploratory Factor Analysis model revealed that age and income were influenced leadership performance significantly and positively. Additionally, the result of principal component analysis showed 4 factors were extracted and statistically significant. The first, second, third and fourth factors were explained 22.39%, 16.74%, 12.82% and 12.19% of variance respectively. Holding large stocks in hand and bunching of some years without auditing cooperative unions were identified as problems. Thus, appropriate authority

(Oromia Regional and Arsi Zonal Cooperative Promotion Agencies) and unions' management must facilitate the timely audit of the unions.

**Key Words:** Cooperative, Leadership, performance, Union

## **1. INTRODUCTION**

### **1.1. Background of study**

In the world, countries have relatively policy attention directed towards collective action of farmers. Several developed countries and European Union (EU) support farmers cooperation under common agricultural policy (CAP) since 2001 (Jerzy *et al.*, 2018). In recent years, many developing countries have presented cooperatives as one development strategy that may empower communities to exit poverty (Maria, 2012). Even if the pre-structured cooperatives in developing countries proved to be the inefficient and unsustainable (Verhofstadt and Maertens, 2014), to change this background cooperative producers' organizations are argued to be efficient and benefited by declining transaction cost and improving bargaining power of costumers (Bola *et al.*, 2015).

Modern forms of cooperatives were first introduced in Ethiopia in 1960 (Bezabih, 2009) that has been shaped by farmer organizations (including quality of their leadership and their motivation) to promote cooperatives and power to influence public policy (Ortmann and King, 2007).As reported by Alema (2008) and Karthikeyan (2015), leadership styles, physical factors, demographic factors, wealth and marketing factors affects agricultural cooperative performance. Thus, leadership style is more significant in which leadership is interaction between two or more members of the groups, performance structuring and restructuring both parties and perception. To be successful, the cooperatives need to have dedicated and vibrant leaders (Joshua, 2001 and Karunakaran &Roba, 2018).In the broad meaning,

cooperative leadership is all who influence, instrument and inspire cooperative ideas, ideology, policy programs, physical growth, expansion, structure and working of individuals in the organizations at various levels.

Cooperative leadership enables to empower people and maximize their own potential within the workplace of their organization by using appropriate leadership style. Leadership Style becomes the key in the sense of plans to the formulation and implementation of strategy (Karthikeyan, 2015). Generally, people in charge of preparing and conducting strategic issues shall monitor the behavior of leadership who oversee operation in cooperatives represented by the board of directors to ensure that there is transparency in information and accountability (Bradley *et al.*, 2007).

According to Temesgen(2011) formation of cooperative societies lead to bargaining power, better benefits of businesses and assess information about input supply and output/products .However, forming a cooperative will not automatically solve business problems faced by individual households. This is because of cooperatives are subject to the same economic forces, legal restrictions and international relations that other business face (Demeke, 2009). According to Gumataw *et al.* (2006), internal factors (leadership styles, age, education) and External factors (Cooperative Proclamation, Government interference and Technology) affect organization of cooperative unions. The huge success of venture can nearly be traced directly back to the vision and will of the leadership. Unless leaders have enough knowledge on cooperatives' leadership style and able to manage properly, cooperatives values, team sprite and the overall objectives would be damaged (Demeke, 2009). Though, agricultural cooperatives play a meaningful role in uplifting the socio-economic conditions of their members and their local communities, only 6.02% and 11.90% of farmers are members of primary cooperative and cooperative unions respectively during

the last 8 years despite the region's vision to make all farmers members by 2024 (AZCPO, 2018).

Moreover, to the best knowledge of the researchers, there is little and/or no study was conducted on leadership and performance of farmers' cooperative unions in Arsi zone and thus this investigation is initiated to uncover the aforementioned issues.

## **1.2. Objective of the Study**

### **1.2.1. General objective**

The General objective of the study was to assess performance status of farmers' cooperative unions in the study area.

### **1.2.2. Specific objectives**

The study was conducted to address the following Specific objectives;

1. Measuring financial performance of farmers' cooperative unions by using ratio analysis and
2. Determining factors affecting performance of farmers' cooperative unions.

## **1.3 Research Hypothesis**

The following are the hypothesis of the study;

1. The financial performance of the farmers' cooperative unions in the study area is up to the standard.
2. The hypothesized explanatory variables in this study do not affect the leadership performance of farmers' cooperative unions

### 3. RESEARCH METHODOLOGY

#### 3.1. Sampling methods and procedures

To conduct this research, one-stage sampling technique was adopted. In Arsi Zone, there are five Farmers' cooperative unions (Hetosa, Dida'a, Upper Awash Irrigation, Galema and Arba Gugu) found in Arsi Zone. From these, 33 Board of Directors, 27 hired staff and 99 leaders in General Assembly were selected randomly from unions based on proportional to size (Table 3.1 below).

Table 3.1: Summary of sample distribution of leaders

Name of farmers' cooperative unions	Total leaders of cooperative union (%)					Sample size			
	Leaders of General Assembly	Board of Directors	Hired Staff	Total Leaders of Union (N)	(%)	Leaders of General Assembly	Board of Directors	Hired Staff	Total (n)
ArbaGugu	34	11	8	53	20.08	6	5	21	32
Dida'a	33	11	9	53	20.08	7	5	20	32
Hetosa	33	11	10	54	20.45	7	6	19	32
U/Awash Irrigation	32	11	5	48	18.18	7	5	17	29
Galema	33	11	12	56	21.21	6	6	22	34
<b>Total</b>	<b>165</b>	<b>55</b>	<b>44</b>	<b>264</b>	<b>100%</b>	<b>33</b>	<b>27</b>	<b>99</b>	<b>159</b>

Source: Own computation based on Arsi zone cooperative promotion office report, 2018

The General Assembly of unions consist one leader and two members from each member primary cooperative in respective union. For this study, only the leaders in General Assembly were selected. From hired staff, managers, deputy or vice of managers and head of departments were selected for interview.

Generally, 159 leaders of farmers’ cooperative unions were selected for interview using Yamane (1967) formula and taking level of confidence 95% as follows:

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

Where: **n** = is the sampled size,

**N** = is total size of leaders in farmers’ cooperative unions,

**e** = the level of precision in 5%.

$$n = \frac{N}{1 + N(e)^2} \qquad n = \frac{264}{1 + 264(e)^2}$$

$$n = 159.036 \text{ leaders of farmers’ cooperative unions}$$

Through this sampling technique, totally 159 leaders were selected for the study

**3 .2. Methods of data collection**

For this study, primary data was collected from end of November, 2018 to end of February 2019 using interview schedule. Focus Group Discussion (FGD) and Key Informant Interview (KII) using checklist were also adopted to collect essential and supportive information. The FGD was used for eliciting qualitative data with members of primary cooperatives. Sinbite, Ataba Robe, Oda Jila, Ula Kara and Chiba Mikael primary cooperatives were selected randomly for FGD from Arba Gugu, Dida’a, Hetosa, U/Awash Irrigation and Galema cooperative unions respectively. From each primary

cooperative, 8 persons (members) were selected randomly. Totally, the FGD utilized 40 members by dividing into five groups.

Moreover, five experts of Arsi Zone Cooperative promotion Agency were selected from departments of cooperative promotion and regulatory and control and following for KII.

The secondary data were collected from recent two years' records data and annual audit reports cooperative unions (2014/15 and 2015/16) as no recent audit reports of the unions for the years 2016/17 and 2017/18 years during the time of investigation. Thus, 2014/15 and 2015/16 audit reports of the societies were taken purposively to achieve the stipulated objectives of the study.

### **3.3. Methods of data analysis**

Both descriptive statistics and econometrics model were used to meet the objectives of the study. Financial ratio analysis was used to achieve first objective while Explanatory Factor Analysis (EFA) of structural Equation Modeling (SEM) was used for econometrics analysis using Amos 18 with SPSS version 20 to meet the second objective.

## **4. RESULTS AND DISCUSSION**

### **4.1. Demographic and socio- economic characteristics of cooperative Leaders**

#### **4.1.1. Age**

The age of the sampled respondents ranges from 21-64 years. The average age of sampled leaders was 43.45 years. This result was in line with (Demeke, 2009). Table 4.1 shows that, 63 respondents were above 45 years and represent 39.6%, 66 respondents were 36-45 years which represents 41.5%, 27 respondents were 25-35 years which was 17.0% and 3

respondents were below 25 years which represent 1.9% of sampled size of the study area.

#### 4.1.2. Sex and marital status

Results of the study show that out of 159 leaders of unions, 143 respondents (89.9 % of sample size) were male and 16 respondents represent 10.1% of the sample size were female. Even though female's participation in leadership of cooperative unions is expected to be encouraged, the result shows very low engagement. With respect to marital status 10(6.3%), 141(88.7%) and 8(5.0%) of the sampled leaders were single, married and divorced respectively.

**Table 4.1:** Distribution of sampled leaders by age and sex

Variables	Response	Frequency	
		Frequency	Percent (%)
Age	<25 years	3	1.9
	25-35 years	27	17.0
	36-45	66	41.5
	Above 45 years	63	39.6
Sex	Male	143	89.9
	Female	16	10.1
Marital status	Single	10	6.3
	Married	141	88.7
	divorced	8	5.0
<b>Total observation</b>		<b>159</b>	<b>100</b>

**Source:** Survey result, 2019



#### 4.1.3. Educational status and Family size

As it is observed from table 3.2, all were literate in the study area. About 35 respondents were grade 1-4, 65 respondents were grade 5-8, 30 respondents were 9-10, 6 respondents were grade 11-12, 2 respondents were diploma, 19 respondents were degree level and 2 managers were masters which represented 22.0%, 40.9%, 18.9%, 3.8%, 1.3%, 11.9% and 1.3% the sample size of the study area respectively.

**Table 4.2:** Educational background of the sampled leaders

<b>Educational status of Leaders</b>	<b>Frequency</b>	<b>P</b>
Grade 1-4	35	
Grade 5-8	65	
Grade 9-10	30	
Grade 11-12	6	
Diploma	2	
Bachelor Degree	19	
Master's degree	2	
<b>Total observation</b>	<b>159</b>	

**Source:** Survey result, 2019

#### 4.2. Cooperative unions' managements and Leaders participation

With regard to participation in decision making of unions, only 132 respondents have the right to participate and 27 are employees that participate without vote. On average 22%, 29.1%, 19.7% and sampled respondents had participated in election of directors, planning activities and

approving annual report respectively. From this result, participation in approval of annual audit report was very low.

### **4.3 Financial performance of cooperative unions and measures**

#### **4.3.1. Financial ratios of cooperative unions**

Efficiency ratios, income ratios and creditworthiness ratio were analyzed from audit reports of cooperative unions' to analyze their strengths and weakness. While there are many financial ratios to compare and measure financial conditions of cooperative unions under consideration, inventory turnover and operating ratios from efficiency ratio, return on sales and return on total asset from income ratio and current ratio from liquidity ratio were selected.

##### **4.3.1.1. Efficiency ratios**

To analyze and compare their efficiency ratios, the recent two years' audit reports (2014/15 and 2015/16) were selected. Based on their audit reports, efficiency ratio was compared and analyzed by calculating inventory turnover and operating ratio for each union. The average inventory turnover of cooperative unions in 2014/15 and 2015/16 was 5.65 and 0.81 respectively which has decreasing trend.

As shown on table 4.3, the largest turnover ratio was recorded by Galema cooperative union (4.92) which was followed by Hetosa cooperative union (3.48) and the lowest average of inventory turnover was recorded by Upper Awash Irrigation cooperative union (0.25) that had large stock on hand. ArbaGugu cooperative union had (2.45). The days of inventory on the hand at the end of 2014/15 and 2015/16 for Upper Awash and ArbaGugu cooperative unions were 1460 ( $365/0.25$ ) and 149 ( $365/2.45$ ) respectively. The largest inventory turnover ratio indicates that cooperative unions with small stock on hand and simple to sell their products and were able to cover its inventory investment rapidly and the management controlled their

inventory effectively. The possible justification for low inventory turnover was the fact that the cooperative union has large stock on hand and difficult to sell its products. This resulted in large amounts of fund to be tied up and potential risk for the organization's bankruptcy. The average inventory turnover ratio had decreasing trends from 2014/15 and 2015/16 for the same union. Except in Upper Awash Union, inventory turnover Ratio had increasing trend for others.

For operating ratio, the average operating ratio (in percent) in 2014/15 and 2015/16 had decreasing trend. As indicated in table 4.3, the average operating ratio for 2014/15 and 2015/16 was 56.05% and 36.56% respectively. The largest average operating ratio was recorded by Upper Awash irrigation union (162.5%) which was followed by Arba Gugu cooperative union (43.78%) showing operating inefficiently. According to Gittinger (1982), if an organization has the high operating ratio greater than 90%, it may have difficulty to make an adequate return and if it has low (less than 50%) ,the cost have likely been omitted or underestimated. Moreover, operational ratio 50% to 90% indicates that the organization is efficient. The lowest operating ratio was recorded by Hetosa (5.65%) followed by Dida'a (8.98%) and Galema cooperative unions (10.61%).

**Table 4.3:** Efficiency Ratios of the Cooperative Unions

Cooperative union	Inventory Ratios	Turnover		Operating ratio	
		2014/15	2015/16	2014/15	2015/16
Galema	9.846	1.245	0.090	0.122	
Dida'a	6.102	0.974	0.061	0.119	

Hetosa	6.955	0.752	0.058	0.055
U/Awash irrigation	0.490	1.050	2.059	1.194
Arba Gugu	4.900	0.032	0.535	0.341
Average	5.659	0.811	0.561	0.366

**Source:** Own computation based on Cooperative Unions' audit reports, 2019.

#### 4.3.1.2. Income ratios

As the return on asset, the cooperative unions required different asset for providing mechanization services and transportation of products. The highest return on asset was recorded by Upper Awash Irrigation union (0.73) and (0.95) in 2014/15 and 2015/16 respectively. It indicated high sale revenues or too expensive of cooperative unions. The lowest return on asset was recorded by Galema Cooperative union which was 0.015 and 0.02 in 2014/15 and 2015/16 respectively. The average profitability of cooperative unions in the study area was 0.39 and 0.33 in 2014/15 and 2015/16 respectively. This indicates that, the unions were profitable. The profitability greater and lower than borrower's interest rate shows, the profitability and non- profitability of organizations (Demeke, 2009) respectively.

The percentage of net income/revenues was computed as the terms of return on sale which represents the percent of birr as revenues that cooperative union retains as profit. As revealed in the table 3.4, the average returns on sale were 1.17 and 0.99 in 2014/15 and 2015/16 respectively. The highest average return on sales was recorded by Upper Awash irrigation union (2.83) in which the greater the sales that must be make an adequate return on investment. The lowest average return on sales was scored by Hetosa

cooperative union (0.15). According to Gittinger (1982), the lower return on sales hence the operating margin the greater shows the operating margin that must be made to make an adequate return on investment.

Table 4.4: Income Ratios of cooperative unions

Cooperative union	Return on Sales			Average	Return on Total Assets			Average	
	Year		Total		Year		Total		
	2014/5	2015/6			2014/5	2015/6			
Galema	0.268	0.274	0.542	0.271	0.015	0.020	0.035	0.018	
Dida'a	0.253	0.501	0.754	0.377	0.063	0.110	0.173	0.087	
Hetosa	0.214	0.092	0.307	0.153	0.632	0.098	0.730	0.365	
U/A/Irrigation	3.644	2.034	5.677	2.839	0.733	0.952	1.685	0.842	
ArbaGugu	1.462	2.042	3.504	1.752	0.509	0.456	0.965	0.482	
Average	5.841	4.944	10.78	5	5.392	1.952	1.636	3.588	1.794

**Source:** Own computation based on Cooperative Unions' audit reports, 2019.

#### 4.3.1.3. Credit Worthiness Ratio

The purpose of this ratio is to enable judgments about degree of financial risk inherent in organization before under taking the project. For analyzing this ratio current ratio was computed to analysis the unions' performance in their endeavor to satisfy their members. Current ratio was computed for organizational performance. If the ratio is less than 1.0, the liability exceed current asset which indicates that the cooperative unions can't readily pay to the creditors in short run. According to Kaleleoul (2016) reported that, the

benchmark for this ratio is 2:1. So in the study area, the average ratios of three cooperative unions (Galema, Dida'a, and ArbaGugu) were greater than benchmark which indicates, the unions can ready to pay the liability in short run. The lowest average ratio was scored by Upper Awash Irrigation union (0.56) which was below the benchmark and the highest average ratio recorded by Galema cooperative union. The average current ratio in the study area of cooperative unions was decreased from 2014/15 and 2015/16 and indicates the ability to satisfy their members was decreased (Demeke, 2009).

#### **4.4.2. Factors affecting leadership performance**

The second part of econometrics' result and discussion was deal with the interpretations of Amos 18 and SPSS 20 of exploratory factor analysis on leadership performance of cooperative unions.

The overall goodness of the fit was presented by Standardized Root Mean Square Error (SRMSE) which is the average difference of predicted and observed variance and covariance of the model (Shahin and Iraj, 2013). The smaller SRMSE shows the better model fit (Joko *et al.*, 2017). The result Standardized Root Mean Square Error was 0.6173 in the study area. This indicated that the model is adequately fitted. The Cronbach's Alpha which estimates internal consistency based on the average item correlation was 0.853. This indicated that, the greater the internal consistency of variables and reliability. The cronbach's alpha ranges between 0 to 1(Shahin and Iraj, 2013) and which was greater than 0.7 that shows good measure of the leadership performance (Bezawit, 2017 and Fasika, 2016).

John *et al.* (2011) quoted that, the goal of exploratory factor analysis (EFA) was to discover the covariance relationship among the sets of variables. The correlation matrices showing that, the relationship of all variables in the

study (table 4.5). The principal components analysis was employed to extract the communality. The communality of a variable is the variance accounted by all the extracted factors. The higher communality was extracted from member size (0.824) that indicates the more reliable it is indicator. The communality chart showed that, the proportion of variance of item which explained by factors (Appendix 6). The intersection point of lines from the higher eigen value and higher factor number indicated the number of statistically significant components. The mean level of communality for the eight variables in this study is 0.708 (table 3.5). The result is agreed with Maccallum *et al.* (1999), the higher mean level communality indicated more reliable and it is desirable to be at least 0.70. Each variable was standardized with the maximum variance for each as 1.0.

Likewise EFA analysis included the tests of correlation using Kaiser-Meyer-Olkin (KMO) and Bartlett's test. KMO measures of sampling adequacy result were 0.560 (Appendix 4). This result indicated that, the data are great and suitable for factor analysis. The strength of relationship between variables was measured by Bartlett's test of sphericity. It provides the significant chi. Square output (166.48). This result indicated that, the matrix is not identity matrix and it must be significant ( $p > 0.05$ ) for factor analysis to be suitable. Generally KMO of 0.560 and Bartlett's test of 0.000 showed that, factor analysis is appropriate.

**Table 4.5:** communality and total variance explained.

Variable	Communality				Initial eigen values	
	Initial	Extraction	Component	Total	% variance	Cumulative
Age	1.000	.641	1	2.004	25.054	25.054
Distance from office	1.000	.582	2	1.408	17.601	42.654
Monthly income	1.000	.661	3	1.169	14.619	57.273
Experience as leader	1.000	.649	4	1.085	13.558	70.831
Family size	1.000	.807	5	.811	10.135	80.966
Leadership style	1.000	.756	6	.671	8.385	89.351
Member size	1.000	.824	7	.531	6.643	95.994
No of mechanization technology	1.000	.746	8	.320	4.006	100.000
<b>Mean 0.708</b>			<b>Total</b>		<b>100</b>	

**Source:** Computed from own survey, 2019

An eigen value reflects the proportion of variance expressed by the components. As observed from appendix 5, the first four components are statistically significant which have eigen value greater than 1 retained for interpretation. Those variables explained 64.14% of the total variance. The first, second, third and fourth factors accounted for 22.39%, 16.74%, 12.82% and 12.19% of variance respectively.

All components were rotated using varimax to generate an orthogonally rotated matrix. It is accepted that loading should be 0.32 or greater to provide



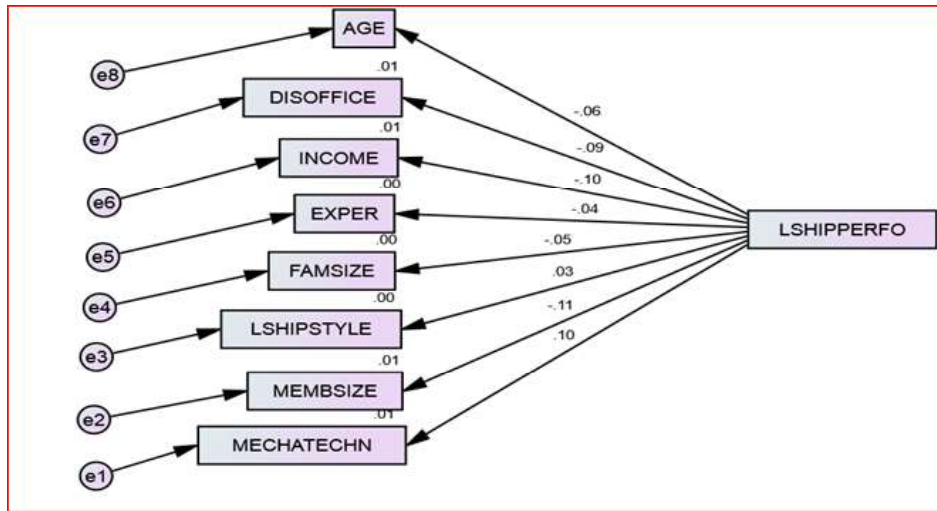
any interpretive value (John *et al.*, 2011). Loading is the Pearson correlation between variable and extracted components. Comrey and Lee's (1992) mentioned the guideline for loading as : >0.71, >0.63, >0.45 and >0.32 represents excellent, very good, good and poor correlation respectively. All components loading less than 0.32 were illuminated from rotated components matrix. Component one contains four variables which was 50% of total variables included in rotated components in the study. Two variables representing 25 % of the total variables in components 2 and 3; one variable presenting 12.5 % of the total variables in component four, loading at greater than 0.30. Seven variables load in the good to excellent ranges which represented 87.5% of total variables. One variable is loading poor which represented 12.5% of variables in the study (table 3.6).

**Table 4.6:** Rotated component matrix

Variables	Components		
	1	2	3
Age	0.615	-0.486	
Distance From Office			-0.707
Monthly income	0.794		
Experience			0.790
Family Size	0.877		
Leadership Style		0.845	
Member Size			
Mechanized Technology	0.363	0.538	0.354

**Source:** Computed from own survey, 2019

The result of exploratory factor analysis of SEFA is reported in figure 4.1. The researchers assumed that the selected factors are expected to explain for leadership effectiveness/ performance. Data deals with the interpretations of Amos 18 in relation to mean variation in each of independent variables.



**Figure 4.1:** Estimated explanatory factor Analysis of the model.

**Source:** Computed from own survey, 2019

## 5. CONCLUSION AND RECOMMENDATION

### 5.1. Conclusion

The result revealed that unions’ inventory turnover of 2014/15 was about 7 times of 2015/16 while the operating ratio of 2014/15 was about 1.5 time of 2015/16. A declining turnover ratio shows that the organizations holding larger stocks in hand. The average operating ratio was decreased from 56.05% to 36.56% during the years 2014/15 to 2015/16. indicating some costs have likely being omitted or under estimated in 2015/16 based on bench mark for operational ratio.

Operation ratio of the unions was between 50% and 90% and less than 50% in 2014/15 and 2015/16 respectively indicating that they were efficiently and inefficiently performed in 2014/15 to 2015/16 respectively. The average returns on sales in cooperative unions were 1.17 and 0.99 in 2014/15 and 2015/16 respectively. Average current ratio was decreased from 193.92 to 54.41 in 2014/15 to 2015/16 respectively. However, the average is above bench mark (2.00) for current ratio. But Hetosa and Upper Awash Irrigation

unions had lower performance which was below bench mark that implies the ability to satisfy their members.

The result of principal component analysis showed 4 factors were extracted and statistically significant. The first, second, third and fourth factors were explained 22.39%, 16.74%, 12.82% and 12.19% of variance respectively. Likewise age and income of the leaders were positively correlated with leadership performance significantly.

## **5.2. Recommendation**

Based on the result of the study, the following recommendations are suggested.

The managements of the unions should be market oriented and effectively manage their inventory by improving market linkage for products based on customers' preference.

The average current ratios for Upper Awash irrigation and Hetosa unions were below the benchmark. To improve their judgment of financial risk inherent of current ratio, the management discusses with members clearly and searches all the source of income.

Management of the unions and responsible authority have to help in auditing cooperative unions at end of every year so as to measure and know their financial performance used for decision making. Thus, appropriate authority (Oromia Regional and Arsi Zonal Cooperative Promotion Agencies) and unions' management must facilitate the timely audit of the unions.

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