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FACTORS AFFECTING PARTICIPATION OF SMALL HOLDER FARMERS IN PRIMARY COOPERATIVES USE: EVIDENCE FROM SMALL HOLDER FARMERS' OF TOKE-KUTAYE DISTRICT

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ABSTRACT: *The overall objective of the study is to analyze the role of primary cooperatives in input/output marketing in toke Kutaye district, west shoa zone, Ethiopia. In order to see the role of primary cooperatives in input and output marketing, it was preferred to give emphasis on evaluating their overall performances and members' participation as well as perceived problem and constraints which influences member's participation. Simple percentage analysis, descriptive and econometrics model were employed to identify determining factors of the role of primary cooperatives in performing their activities as well as participation of the members. Two Keble are randomly selected. A total of 120 member households of primary cooperatives were considered for this study and were included in the econometric model. Based on the results obtained training and awareness creation for households, improve cooperativesextension services and the Government should develop mechanisms to provide strong support on market oriented production.* This study recommends that in order to make agricultural development successful these factors and problems are taken into consideration by policy makers to participate farmers in primary cooperative use. Our results have important implications for the management and future of farmers, as well as for the assessment of their development impacts.

KEY WORDS: cooperative, primary cooperative

INTRODUCTION

The first modern cooperative, the Rochdale society, was established in England in 1844. It started with 28 members who purchased one share each of stock. The members consisted of craftsmen such as weavers or shoemakers. The members decided to join to work together, sell their products under one roof, and use a part of earnings to purchase supplies in quantity at economical price, another portion of the earnings would be reinvested in growth of the society, and the remainder would be returned to the individual member in the form of refunds (Chukwu, 2010).

Cooperatives in their various form promotes the fullest possible participation in the economic and social development of all people, including women, youth, older persons, persons with disabilities and indigenous peoples, are becoming a major factor of economic and social development and contribute to the eradication of poverty and hunger(Anon[2],2015).Co-operation as a way of life has been and continues to be a tradition in finding the solution to the socio-economic problems of the people in Ethiopia. Examples of such cooperation can be found everywhere in the working of mutual aid institutions such as Equb, Eddir, Wonfel, Senbete and many others (Lemma,2008).

Currently, cooperatives are recognized as an important instrument for socio-economic improvement of the community. This importance is recognized in their definition, which considers cooperatives to be: An association of persons who have voluntarily joined together to a common end through the formation of a democratically controlled organization, making equitable contribution to the capital required and accepting a fair share of the risks and benefits of the undertaking, in which the members actively participate (Lemma,2008).

In Ethiopia, farmers who are members of primary cooperatives tend to achieve higher yields, and staple crops that are marketed through cooperatives attain a price premium of around 7-8%. Indeed, the 2008 World Development Report reviewed the evidence and concluded that "Producer organizations are essential to achieve competitiveness for small-scale producers." (Wanyama, 2008). Primary cooperatives provide a wide variety of services in Ethiopia, including input supply management, grain marketing; and the supply of consumer goods to members at prices that compete with local traders. Some cooperatives were also involved in grain milling, seed multiplication and distribution, veterinary medicine distribution, and technical skills development. They have also found a clear niche in the production of high value export cereals and the packaging and distribution of fertilizer (BoARD, 2006).

The role of primary cooperative particularly in distributing inputs and in collecting farm products on behalf of the union. while cooperative unions work at woreda level, primary cooperative operates at kebele level (FCA,2015). In line with these realities, the research attempted to analyze the role of primary cooperatives in input and output marketing through evaluating their performances, analyzing members' participation and identifying the constraints of cooperatives.
In Sub-Saharan countries, like Ethiopia, where the small-scale farming dominate the overall national economy roles of cooperatives in input and output marketing is not in position to access the commodity market. There are many factors that hinder the smallholder farmers to take active participation in cooperatives such as, institutional problem, organizational/internal problem, External problem , infrastructural problem, lack of awareness as well as ability to trade in the given the size of their output(MOFED, 2005).

In addition to this absence of well equipped institutional establishment which can provide all marketing services to all market actors, the absence of private and public partnership in the commodity market, the presence of high transaction costs, lack of sufficient market coordination between buyers and sellers, lack of trust among market actors, lack of contract enforcement, and lack of grades and standards, implies that primary cooperative input and output market operate within narrow market channels (Gebre-Medhin*et al.,* 2010).Moreover, due to the weakness of markets, characterized by high transaction costs, high risk, and inadequate communications and transport infrastructure, people living in food deficit areas continue to face famine and food insecurity while producers in surplus regions endure unattractively low producer prices. This shows that the cooperatives in the country are not that mach participate in distributing of produce (Eleni et al., 2007).

Accordingly, primary cooperatives are involving in input/output marketing activities, credit provision and providing other services to the members and non members. In line with the above reality, the research/study will be attempted to come up with possible solutions and recommendations.

Objectives

The general objective of the study is to identify the role of primary cooperative in input and output market in the study area. The specific objectives of the study are to identify factors influencing participation of small holder farmers in primary cooperatives.

METHODOLOGY

Description of the study area

The study was conducted in Toke KutayeWoreda which is located 124 km from Addis Ababa as well as 11km west of Ambo zone capital. Livestock production is an integral part of production system in the study area. Production of cattle (milk, meat), goat (meat) and poultry is a common practice. More than ten percent of the rural population of Toke Kutaye Wodera is engaged in crop production while the rest depends on mixed farming (crop with livestock). Crop production is dependent on rainfall and the major crops produced in the area are Wheat, teff, fruits and barley. Livestock are also reared by most families. Oxen provide traction power for the cultivation of the agricultural lands. On the other hand, livestock are kept as a source of income through milk, butter, meat and egg production.

Type and Sources of Datacollection

In order to collect reliable data, both primary and secondary sources of data will be the major focus of the research. To achieve the purpose of this study, the primary data will be collected through questionnaire, and interview.

Sampling methods and Size Determination

A three stage sampling techniques was used to select representative households from the study area. At the first stage, Toke Kutaye District was selected purposively due to there is financial institution (ACSI) which gives loan for smallholders and there are so many financial institutions compete with this institution. Secondly, three out of 35 kebeles in the Woreda were selected randomly. In the third stage, sample size was determined using a simplified formula provided by Yamane (1967). Out of the total 1020 households, 99 households were selected using simple random sampling methods proportionally. In the third stage, sample size was determined using a simplified formula provided by Yamane (1967). Out of the total 1020 households, 120 households were selected using simple random sampling methods proportionally.

Method of Data Analysis

Descriptive Analysis

Quantitative data will be analyzed by using descriptive statistics such as mean, percentage, and frequency. Qualitative data will be obtained from interview presented by using frequency and

tables. Farmer members' participation behavior, especially in low income countries, is influenced by a complex set of socio-economic, demographic, technical and institutional factors. Modeling farmers' response to cooperatives' intervention in input/output marketing has become important both theoretically and empirically. The choice of a member to participate or not may depend upon several factors.

Econometric analysis

To identify the determinant factor that affects the participation of members in primary cooperativeswe will use linear regression model (MLRM) estimation. It is an essential method of econometric analysis to recognize and realize patterns of the influencing factors. The most important variables are Age, Education level, Sex, Family size, Access to credit, Access to agricultural input, Distance from extension service and Number of livestock.

The equation of regressions on this study is generally built around two sets of variables, namely dependent variable (participation of members) and independent variables.The econometric model specification of the variables is as follows.

$Yi = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3\ X3 + \beta 4X4 + \beta 5X5 + \beta 6X6 + \beta 7X7 + \beta 8X8$

Where, Y=members participation.

Members participation (Y) = f (Sex, educational status, age, family size, number livestock,Access to credit, Access to agricultural input).

Definition of Variables and null hypothesis In this particular study the main socio economic and demographic variable will be hypothesized to differentiate between active participants and non-participants of members' on input/output marketing of Cooperatives.

The dependent variable (Yi): refers to the tendency of the members to actively associate in different activities related to cooperatives.In order to measure this participation in primary cooperative most important indicators of participation will be used; such as Attending annual meeting, approving the by-law/amendment, annual plan and budget, audit report, determining share values, sharing responsibilities, evaluating and approving executed activities report to measure members' involvement, members' willingness to exercise their democratic rights; and buying and selling Input/output, using available loan based on the services rendered, and buying additional share capital to measure members' economic participation. This information will be collected from the sample households through interviewing method. Members who answer yes above half indicators of participation are grouped as active participant otherwise passive.

The independent variables: Members' decision to participate in primary cooperatives' affairs in a given period of time is hypothesized to be influenced by a combined effect of various factors.

Age: is defined, as number of completed years of the respondentor member. It is continuous variable. The assumption in the study is that as age progress farmers acquire experience and knowledge in participating and the intensity of members' participation in the cooperatives. But in this regard, this variable is will be hypothesized to negatively influence members' participation (Amyx, 2005).

Sex: represents to the characteristics of the members in terms of male and female. It is dummy variable. If male members score 0 for male and otherwise 1.It is expected that male-headed households have more experience and access in participating in the cooperatives (Gebru, 2006).

Family size of members: - Family size is number of persons in the family. It is a continuous variable. The larger the family members, the more the labor force available for production purpose, the less the probability to be weak in participating in input/output marketing of the society. On the contrary to this fact large family size may imply self-insufficiency because large households consume more than do the small households. The most probable participation could be more family size could mean more family labor to supply for the needs to improve the participation of the primary cooperative (Demise, 2011). Therefore, it is hypothesized positively to affect participation.

Education level of the members: This represents the level of formal schooling completed by the members. It is a discrete variable where "0" represents illiterates, "1" represents literates. Educated members are expected to have more exposure to the external environment and accumulated knowledge through learning. Moreover, educated members are familiar with their duties and rights they have in cooperatives and keep in touch to take right decision. (King and McGrath, 2002) in their study suggest that those with more education and training are more likely to be successful in the multipurpose cooperative sector. Therefore, educated members would be expected to have active participation experience.

Access to credit: This is a dummy variable, which is expressed in terms of member's accessibility to production credit to purchase available input through cooperatives. Several studies have shown that access to credit plays a significant role in enhancing the use of agricultural input. In the present study, it is hypothesized that access to input credit would have positive effect.

Access to agricultural input; refers to members' ability and willingness to purchase certain volume of agricultural input for the cropping season on loan or cash on hand basis. The explanatory variable is continuous. Access to agricultural input is expected to enhance members' participation in cooperatives affairs (Singh,2002).

Distance from extension service: refers to the distance between the extension office and members' house located. It is measured in terms of minutes. The distance to the extension workers' center has a direct impact on the member farmers' decision whether to be active or passive participant in cooperatives through the purchase of input and improves their productivity in order to have marketable surplus.

Number of livestock holding: Livestock are the farmers' important sources of income, means of transportation, and food and draught power for crop cultivation in the study area. This indicates that households who have large number of livestock become active participant in cooperative activities.

DISCUSION AND RESULTS

Table 1: **Socio-economic characteristics of cooperative members and Non-members**

Variables	Percentage	X^2-Value
Membership (yes)	43.3	4.5**
Sex(male)	71.67	1.95
Access to credit(yes)	53.3	0.95
Access to agricultural input(yes)	83.3	0.13

Note: ***, ** and *, are statistically significant at 1%, 5% and 10% significance level
Source: Own computation from survey result, 2018

Table 1 indicates the socio economic characteristics of the respondents by kebele. About 43.3% of sample farmers reported that they are a member of cooperative. About 62% and 33% of respondents were cooperative member in Imala Dawe and Nega file respectively. There is significant difference at 5% significance level between the residents of the kebele.

Regarding the distance taken to travel from home to the nearest Extension servise where they get different service, sample from Imala Dawe and Negafile kebele reported that they had to travel an average of 2.28 and 1.6 hours respectively. The analysis of independent t-test revealed that there was significant difference in distance to nearest Extension servise at 1% significance betweenImala Dawe and Negafile kebelelevel between participant and non participants.

Econometrics Model Analysis

The econometric analysis was planned to investigate factors affecting, participation of the respondent to the cooperative.. Data collected from sample respondents indicated that 43% of respondent in the was a member. Several variables are hypothesized to influence the membership. Logistic regression model was employed to identify the factors. For the parameter estimates to beefficient, unbiased and consistent assumptions of Classical Linear Regression (CLR)model should hold true. Hence, multicollinearity, endogeneity and heteroscedasticitydetection test were performed using appropriate test statistics. The Cameron & Trivedi'sdecomposition of IM-test (in Stata) was used to check for heteroscedasticity and VIF, for multi collinearity.

Table 2: logistic regression output of determinants of membership to cooperative

Variables	Coefficient	Standard errors	Z
Age	0.03	0.025	1.54
Sex	0.59	0.66	0.89
Family Size	-0.06**	0.15	-0.43
Education Level	0.09*	0.4	2.22
Credit access	-0.95	0.64	-1.48
Agricultural Input access	0.59	0.81	0.72
Distance to extension service	0.001*	0.41	0.26
Livestock holding	-0.55	0.14	-0.48
Cons -	-4.4	2.5	-1.75

Note: ***, ** and *, are statistically significant at 1%, 5% and 10% significance level
Source: Own computation from survey result, 2018

Family size: Family size affected negatively the participation of cooperative at 5% significance level. It is different from hypotheses. An increase in one family member indicated that decrease 6% of probability to participate. This means that large amount of Agricultural output is required for consumption when number of family member increases.

Education Level: as hypothesized the education level of the household affect the participation positively and significantly. As the education level of the respondent increase by one schooling year,the probability to participatein cooperative market input and output increase by 9%. The more members have ability to read and write the more they can have access to share others' experiences of cooperation and as a result, improves the probability of their participation.

Distance to extension services: distance to extension services affect the participation to cooperative negatively and significantly at 5% significance level. as the respondent resident distance increase by one km ,the probability to participate in cooperative input and output market increase by 0.01%.this is doe to access to information and other infrastructure

CONCLUSION AND RECOMMENDATION

The overall objective of the study is to analyze role of primary cooperative in input/output marketing in the study area. In order to see the role of primary cooperatives, it was preferred to give emphasis on evaluating their overall performances and members' participation as well as perceived problems in using the available services. Simple percentage analysis, descriptive and econometrics model were employed to identify determining factors of the role of primary cooperatives in performing their activities as well as participation of the members. Development of awareness by giving due attention on educating members. Members are owners, users and responsible to control cooperatives. The promotional departments at district or regional level should assess the situation to design training programs to improve the capacity of the Board and

employees. Raising awareness of members, up grading the capacity of Boards and employees are the most important efforts to improve the performance of primary cooperatives well functioning and performing cooperatives can secure their members' active participation to achieve their objectives.

REFERENCES

Agricultural Research Center, EARO Central Statistical Authority. (2003). HouseholdCrop production Survey Report. Addis Ababa, Ethiopia.

Anon[2] (2015), Cooperative As Builders of Sustainable Development; Applied to Industrial Artisanal and Service Provider Cooperatives; CICOPA, pp10.

BoARD , (2006). Regional annual report. Mekelle, Tigray. Unpublished

Chukwu, S.K., 2010.Economics of the Cooperative Business Enterprise. Marburg, Germany.

Daniel Belay, 2006. Performance of Primary Agricultural Cooperatives AndDeterminants' Of Members' Decision to Use as Marketing

DessalegnRahmeto, (1994). After Mengistu, a Mammoth Task. Ceres No 147. 19

DawitAlemu. (2004). The status and challenges of agricultural marketing in Ethiopia.

FassilTeffera, 1990. The Development of peasant service cooperatives in post Revolutionary Ethiopia (1974-1987)

FAC -Federal cooperative Agency, 2007c: 1

FCA (2015) Cooperative-Annual Magazine – July 2015,Federal Cooperative Agency, Addis Ababa

Gebru, D. G. (2006). The Benefits of Co-Operative Membership: A Comparative Study in Ethiopia, a Thesis in University College Cork, National University of Ireland, Cork.

Gebre- Medhin et al, challenges and prospects of commodity exchange in Ethiopia (2010).

Getahun Degu (2004) Assessment of factors affecting adoption of wheat technology an its impact: the case of Hulu woreda, Ethiopia,M.Sc. Thesis, Agricultural Economics,

Grice,paui(1975).''logic and conversation''. In cole,p.;morgan,J.syntax and semantics.3:speech acts. new york: Academic press.pp.41-58

Haileselasie G. N. (2003). The Benefits of Co-Operative Membership

KebebewDaka, (1978). Cooperative movement in Ethiopia. M.Sc. Thesis, Addis Ababa University.

Kotler. P. (2003). Marketing Management. Prince Hall, Delhi-India.

Krishaswami O.R and V. Kulandaiswamy. (1992). Theory of Cooperation: An In depth Analysis. Coimbatore: Shanma Publications.

Lemma.T (2008), Growth without Structures: The Cooperative Movement in Ethiopia, in P.LuxemburgAgricultural Council.

Sammuel G/selassie. (2006). Intensification of Smallholder Agriculture in Ethiopia: Options and Scenarios. A Paper prepared for the Future Agricultures Consortium Meeting at the Institute of Development Studies Addis Ababa, Ethiopia.

Sukhpal Singh. (2002). Rural Marketing. Focus on Agricultural Input. Institute of Rural Management, Anand, Gujarat.

Wanyama F.O.(2008), "The Qualitative and Quantitative Growth of the Cooperative Movement in Kenya", in Cooperating Out of Poverty – The renaissance of the cooperative movement in Kenya, edited by Develtere P., Pollet I., Wanyama .O., ILO and Washington: TheWorld Bank Institute