

FACTORS INFLUENCING MEMBERSHIP OF FARMERS' IN COOPERATIVE SOCIETIES IN ABIA STATE, NIGERIA

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Abstract

The study analyzed factors influencing membership of farmer's in cooperative societies in Abia State, Nigeria. Simple random sampling technique was used to select 80 co-operators. Data were collected with structured questionnaire and analyzed with descriptive statistics such as: frequency counts, mean scores and percentages and inferential statistics (probit regression analysis). The result of socio-economic characteristics of showed the farmers had mean ages of 40.67 years, household size of 4.1 persons, mean farm income of ₦201, 000.00 with a mean farming experience 6.1years. The result revealed that 57.2% and 41.2 of the farmers belonged to farmers' multipurpose and agricultural cooperative societies. The result of probit regression estimates showed that coefficients age, farming experience, income, household size and poverty level influenced cooperative membership in the study area. Policies aimed at reducing household sizes by appropriate family planning techniques in order to reduce poverty and encouraging farmers to join cooperative societies for ease access of inputs and credit for enhanced productivity were advocated.

Key words: factors, farmer's, membership, cooperative, societies

INTRODUCTION

Cooperative as a business organization is owned and operated by a group of individuals for their mutual benefits. A cooperative may be owned and controlled equally by the people who use its service or by the people who work with cooperative enterprise [8]. Though an age-long legal organization, Cooperatives are the only means to bring the poorest segment of society into an organizational fold as legally recognized entities, providing opportunity for employment and better income along with the needed support services [17]. Agriculture in the post independent years was the main stay of Nigeria economy but suffered serious neglect due to the oil boom in 1970's. Agricultural production which then contributed about 80% to Gross Domestic Product (GDP) declined to less than 3% in the 1990's and 2000's. In order to redirect the situation, many programmes were initiated which were not able to meet the objective for which they were designed. This scenario was further constrained by the nation's agricultural sector which is characterized by small farm

holdings [16]. He stated further that the peasant farmers produce over 90% of the food crop grown in Nigeria using traditional method coupled with obsolete farming implements. [15] opined that structural transformation of the present agricultural economy is inevitable for Nigeria to be food secured in future. This needed transformation could only be achieved through virile extension services because of its vital link between research stations and farmers.

Cooperative as defined by [10] is an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise. Agricultural cooperatives are important in the socioeconomic development of the rural economy. Basically, poverty entails low income, low or no access to production inputs, low productivity, illiteracy and lack of access to information and basic necessities of life. It describes a condition of low income that leads to low saving, resulting in low investment and, as a consequence of that, productivity remains low [2]. Unfortunately, the

performance of co-operatives in Nigeria and other African countries has been far from satisfactory [15]. He further stated that, those co-operatives which do not die off or go into coma soon after formation seem to be played down with poor leadership inefficiency, corruption, and membership apathy or disloyalty which has led poverty among members. Several categories of people such as rural inhabitants, poor people and uneducated people are not served by formal financial institutions in developing countries [3].

In an effort to raise awareness on the contribution of agricultural cooperatives to food security and poverty alleviation, there has been an increase in the promotion and registration of agricultural cooperatives. The extent to socio-economic characteristics of farmers influenced their membership in these agricultural cooperatives which has improved the standard of living is yet to be ascertained. In view of the foregoing therefore, this study was undertaken to determine the factors that influenced farmers' membership in cooperative societies in the study area.

The specific objectives were to:

- (i) describe the socio-economic characteristics of co-operators;
- (ii) identify different types of cooperative societies the respondents belong;
- (iii) determine socio-economic factors that influence membership of farmers in cooperative society in the study area.

MATERIALS AND METHODS

The study was conducted in Abia State of Nigeria, which was created on the 27th August, 1991; out of the old Imo State. It is one of the five states in the South-East geographical zone of Nigeria. Abia State comprises of 17 Local Government Areas (LGAs), grouped into three Agricultural zones, which include: Aba, Ohafia and Umuahia. The State is approximately within latitudes $4^{\circ} 41^1$ and $6^{\circ} 14^1$ N and longitudes $7^{\circ} 10^1$ and 8° E. The geographical location makes it a land-locked State. It occupies a land area of about 5,243.775 sq. Km² which is approximately 5.8% of the total land area of Nigeria with less than half of this land area

being economically utilized [1]. It shares common boundaries to the North with Ebonyi State, to the South and Southwest with Rivers State and to the East and Southeast with Cross River and Akwa Ibom States. Abia State is located within the forest belt of Nigeria. Purposive and multistage random sampling techniques were adopted in the study. The lists of cooperators were obtained from the Abia State Ministry of cooperatives and Abia State planning Commission, Umuahia. This formed the sampling frame covering the clients/members (cooperators) from the selected cooperatives. From the list 10 cooperative societies were randomly selected across the state. Furthermore, 8 cooperators were randomly selected from the selected cooperative societies to give a total of 80 cooperators. Also 80 non-cooperators were randomly selected from the areas where the cooperators were selected. Descriptive statistics such as frequency counts, percentages and means were used to analyze objective i, ii, while the hypothesis was tested with probit regression analysis.

Measurement of Variables

Cooperative tenets were used to capture the active membership of co-operators in this study as adapted by [5]. The major areas for the measurement were:

- (i) Frequency in attendance to monthly general meetings and Annual General Meetings (AGMs);
- (ii) Range of personal savings by each member;
- (iii) Patronage in credit delivery;
- (iv) Loan repayment.

In this case, if a co-operator scores all the stated tenets, 1 was allotted i.e. $4/4 = 1$ which makes the co-operator an active member and otherwise = 0.

Model Specification

The probit regression likelihood estimates, was used in analyzing the socio economic factors influencing membership of cooperative membership among cooperators in the study area.

The probit model is implicitly stated thus:

$$Y1^* = Bx1 + E$$

$$Y1^* = 0 \text{ if } Y1^* = 0$$

$$Y1 = 1 \text{ if } Y1^* = 0$$

$Y_1 = 1$ if $Y_1^* = 0$

Where

Y_1^* = an underlying latent variable that indexes cooperative membership.

Y_1 = Dummy variable indexing cooperative membership (active membership =1, non active membership =0).

B^1 = A vector of estimated parameter

E = Error term

X_1 = Gender (male = 1, female = 0)

X_2 = Age (continuous)

X_3 = Household size (continuous)

X_4 = Marital status (married =1, otherwise =0)

X_5 = Education (continuous)

X_6 = Farming experience (continuous)

X_7 = Extension contact (yes = 1, otherwise, 0)

X_8 = Farm size (continuous)

X_9 = Income (continuous)

X_{10} = Poverty level (continuous)

e_i = Error Term.

RESULTS AND DISCUSSIONS

Selected Socio-economic Characteristics of Farmers

The socio-economic characteristics of respondents are shown in Table 1. The result showed that farmers had mean ages of 40.67 years with mean household sizes of 4.1 persons and 4.3 persons. This result is in tandem with the research findings of [6], that greater number of young people dominates membership of cooperatives in Nigeria. The result however, corroborates with [18], that majority of the young farmers had 4-6 persons in their households and a mean farming experience 6.1years. [12] also found that farming experience has shown to enhance the participation and adoption of improved farming techniques by farmers thereby increasing agricultural output. The mean on - farm and off - income for cooperators were ₦201, 000 and ₦ 130,863.8 respectively. The result suggests that the respondents also incomes form off farm activities. This result justifies that members of cooperatives were not full time farmers as they engaged in other income generating activities to meet family needs.

Table 1. Distribution of Respondents according to Socio-economic Characteristics (n = 80)

Variables	Frequency	Percentage
Age (years)		
20-30	25	31.25
31-40	28	35.0
41-50	9	11.25
51-60	8	10
61-70	7	8.73
Mean	40.67	
Household size (numbers)		
1-3	7	8.75
4-6	40	50.0
7-9	26	32.5
10 – 13	7	8.75
Mean	4.1	
Farming Experience (years)		
1-10	19	23.75
11 – 20	42	52.50
21-30	19	17.00
Mean	6.1	
On - farm income (₦)		
51,000-100,000	25	31.2
1001,000-150,000	9	11.2
151,000-200,000	28	35.0
201,000-250,000	12	15.0
Mean	201,000	
Off Farm Income (₦)		
50,000-100,000	64	80.0
101,000 – 150,000	16	20.0
Mean	130,868.8	

Source: Field Survey, 2015

IUSD = 175 Nigeria Naira (NGN) @ time of this Research

Types of Cooperative Societies in the Study Area

Distribution of respondents according to types of cooperative societies is shown in Table 2. The table showed that a good proportion of the cooperative farmers (57.5%) belonged to farmers' multipurpose cooperative societies. The table also indicated a moderate proportion (41.2%) of the cooperative farmers belong to agricultural cooperative societies while only few (1.2%) of them were members of credit, thrift and loan cooperative society. Through the formation of farmers cooperatives, production output can be raised at minimal cost since the group would be able to take advantages of scale economics, overcome barrier to assets and manage available resources better, have access to larger piece of land either by pooling or leasing, have enhanced access to information delivery on agricultural production, especially information on market situation, have access to enriching educational and training

programmes as well as attract financial resources from banks among others [19]. Cooperatives are identified as autonomous association of persons united voluntarily to meet member's common economic, social and cultural needs and aspirations through a joint - owned democratically controlled enterprise [9].

Table 2. Distribution of Respondents According to Types of Cooperative Societies

Types Cooperatives	Frequency	Percentage
Agricultural cooperative society	33	41.2
Credit, thrift and loan cooperative society	1	1.2
Farmers multipurpose cooperative society	46	57.5

Source: Field Survey, 2015

Probit Regression of Factors Influencing Cooperative Membership

Results in Table 3 show the Probit estimates of the determinants of membership of cooperatives in the study area. The Chi square value of 48.70 was highly significant at 1% level indicating a probit regression of best fit. The coefficient for age was positively signed and significant at 5% level of probability. This indicates that any increase in age will lead to a corresponding increase in the probability of membership of cooperatives. This is expected probably because; the older may seem to be more credible in group formations than the younger who tend to be more aggressive. [7] affirmed that age of cooperators has implication on productivity of members. This result disagrees with [11] as he had negative relationship between age and membership and participation of cooperative members in Edo State, Nigeria. The coefficient for household size was negatively signed and significant at 10% level of probability. This implies that any increase in household size will lead to a corresponding decrease in the membership of cooperatives. This may be because of overwhelming domestic duties hindering the participation of members in cooperatives. This result is in contrast with the findings [13] as they found a positive relationship between household sizes of cooperative gari marketers in Abia State.

The coefficient for farming experience was positively signed and significant at 5% level of probability. This implies that any increase in farming experience will lead to a corresponding increase in the membership of cooperatives. This is expected because with experience, the farmers are aware of the numerous benefits emanating from being members. This result is in tandem with the findings of [14] where farming experience of cooperators were determinants of participation and cooperative membership in Cross River State, Nigeria. The coefficient for income was positively signed and highly significant at 1% level of probability. This implies that any increase in income will lead to a corresponding increase in membership of cooperative societies. This result concurs with the findings of [7] where income of co-operator influenced their membership in cooperative society in Ekiti, State, Nigeria. The coefficient for poverty level was also positively signed and significant at 5% level of probability. This implies that any increase in poverty level of the farmers will lead to a corresponding increase in the membership of cooperatives. This is expected, because farmers who have low income pool their resources together in cooperatives to be able to access inputs and credit [4]. [14] in their study affirmed that poverty levels of FADAMA cooperative farmers influenced their participation and membership in the programme.

Table 3. Probit Estimates of the Determinants of Membership of Cooperatives by Farmers in the study area

Variables	Coefficient	Std. Error	t-value
Constant	-3.475	1.442	-2.41**
Gender	0.081	0.298	0.27
Age	0.053	0.025	2.62**
Household size	-0.129	0.076	-1.70*
Marital status	0.108	0.293	0.37
Education	0.104	0.151	0.68
Farming experience	0.083	0.048	2.72**
Extension services	0.040	0.178	0.22
Income	0.088	0.023	3.93***
Poverty level	0.235	0.080	2.93**
Chi ²	48.70**		
Log likelihood	-58.169		

Source: Results from STATA 4A

*, ** and *** is significant at 10%, 5% and 1% level.

CONCLUSIONS

Results from the study indicate that a good proportion of cooperative farmers belonged to farmers' multipurpose and agricultural cooperative societies. The result showed that coefficients age, farming experience, income, household size and poverty influenced cooperative membership in the study area. The study therefore recommends: enactment of policies aimed at reducing household sizes by appropriate family planning techniques to reduce poverty and encouraging both old and young farmers to join cooperative societies for ease access of inputs and credit for enhanced productivity.

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