



ROLE OF RURAL COOPERATIVES ON AGRICULTURAL DEVELOPMENT IN ZARIA LOCAL GOVERNMENT AREA OF KADUNA STATE, NIGERIA

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ABSTRACT

This study assessed the role of rural cooperatives on agricultural development in Zaria Local Government Area of Kaduna State. Multistage followed by purposive sampling procedures and the proportionate selection of cooperators at 25% were used from the sample frame of 442 Co-operators to give a sample size of 111 respondents. The data for the study was collected by the use of structured questionnaire and a five points Likert type scale. The data was analyzed using both descriptive (frequency, percentage and mean) and inferential statistics (Chi-square). The findings from the study revealed four different types of co-operative societies in the area. Most (63%) of the cooperators were at their productive stage of life with the mean of 24 years and majority (97.2%) of the co-operators had attended formal school. It was also found that majority (92.8%) of the co-operators were active members of co-operative societies and had positive perceptions towards supports and services provided by the cooperatives. The findings from Chi-square analysis further revealed that age, marital status, educational level and household size were significantly associated with cooperative participation of members. Late distribution of inputs, and poor leadership were the major constraints faced by the cooperative membership. The study, therefore, recommends timely and adequate distribution of farm inputs to co-operators.

Keywords: Rural Cooperatives; Agricultural Development; Zaria

INTRODUCTION

Co-operative organizations/ societies emerged as self-help entities to combat economic and social inadequacies. Co-operatives organizations serve as an effective community development vehicle by their nature, they build economic self-reliance and civil society. People of like minds come together in co-operative societies to pool their resources together so as to meet individual needs that could not be resolved by individual limited

financial capacity (Birchall, 2004). Henry *et al.* (2005) defined co-operative society as an association of persons who have voluntarily joined together to have a common end through the formation of a democratically controlled enterprise, making equitable contribution to the capital required and accepting a fair share of the risk and benefit of the undertakings in which the member participates. According to Antai and Anam (2015), co-operative societies are voluntary associations of people who work together to promote their economic interest. It works on the principle of self-help as well as mutual help. Therefore, the main objective is to provide support to the members. People come together to pull their resources, utilize them in the best manner and derive some common benefits. International Cooperative Alliance (ICA), (1995) viewed Co-operative organization as 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 enterprises.

According to the CBN (1986), agriculture is an important source of livelihood for the majority of rural populace. It is estimated that about 2.5 billion of the developed worlds and 3 billion populations in rural inhabitants involved in agriculture with 1.5 billion of these in small holder households. It should also be noted that all households have links with agriculture through their consumption of food with poorer people spending a higher proportion of their income on food. The sector is primarily important given its employment generation potential and its contribution to gross domestic product (GDP) and export revenue earnings. As it is today, the problems faced by farmers are enormous and this could be due to the fact that the peasant farmers need not only to provide food for themselves but also for the urban populace and raw materials for industries. This re-necessitates the need for increased productivity by increased yield as against output through agricultural development. Cooperatives are one of the vital and most effective tools used in developing a particular group and/ or larger societies. The development in the livelihood and sustainability of its members has been proven without reasonable doubt in areas where it was already adopted.

In most countries, cooperative was borne out of extreme weight of poverty, exploitation and the wide gap between the rich and the poor people (Oludimu *et al.*, 2001). The story of cooperative in Nigeria started in the 1930s. The major interest of the colonial masters in introducing cooperatives at this time was agriculture. Today, agricultural cooperative contributes 90% of all cooperatives in the country. These cooperatives were established for mutual help particularly on farmland and harvesting, processing and marketing of the farm products (Ijere, 2005).

Although, co-operatives are viewed as important vehicles for community development, the relationship between cooperatives and communities is a neglected research issue. This study seeks to define a framework for analyzing the role of rural co-operatives as a tool for agricultural development. In Nigeria, there is an increasing emphasis on the role that rural co-operatives can play in the development of the agricultural sector. This is reflected in the government's policy by establishing new agricultural co-operatives, rehabilitation of the existing ones and the conversion of some of the government' scheme to agricultural cooperatives owned by farmers. This increasing interest in agricultural co-operatives in Nigeria in particular and the third world countries critically depicts the need for research that accurately examines the performance of different forms of rural co-operatives under different conditions so that an inductive grounded theory for rural co-operatives' role on agricultural development can be developed.

In the study area, the co-operatives were established as pilot projects to take care of farmers' needs in supply, production, processing and marketing of agricultural products. The

cooperatives have gradually grown to a position of dominance covering every aspect of agricultural production in the area.

In line with above discussion, the study was undertaken to assess the role of rural cooperatives on agricultural development. The specific objectives were to: describe the socioeconomic characteristics of rural co-operatives in the study area, determine the different types of rural co-operatives and the level of cooperators' participation, and determine the kinds of support/services provided by the cooperatives societies. The study will also determine the perceived role of cooperatives in agricultural development and the constraints to cooperatives membership in the study area.

METHODOLOGY

Description of the Study Area

This study was conducted in Zaria Local Government Area of Kaduna State. Zaria lies within latitudes 11°09'N to 11°13'N and longitudes 7°39'E to 7°68'E. It has a total land area of 300 square kilometers with a population of 1,001,982. It has a tropical wet and dry climate with warm weather year-round. A wet season lasting from May to October and dry season from November to May. Rainfall in the area starts as early as April from 00mm and it reaches 180 mm in May to the peak of 816mm in August. It then decreases to 150mm in October and back to 00mm from November to December. The major tribes found are Hausa/Fulani with a significant number of Yoruba, Igbo and other ethnic groups. It is a primarily agriculture-based economy with staple foods such as guinea corn, millet and sweet potato. Also, cash crops like cotton, groundnut and tobacco are cultivated in the area. Zaria is a home of numerous artisans from traditional craft like leather work, dyeing, cap making, print shops, furniture makers and textile industries. Also, Zaria is a home to many higher institutions: Ahmadu Bello University, Federal College of Education and College of Aviation Technology among others (www.kadunastate.gov.ng).

Sampling Procedure and Sample Size

The study was carried out in Zaria Local Government in Kaduna State. Multistage sampling procedure was employed in the selection of the cooperators. The first stage involved purposive selection of four wards (Runji, Amaru, Limancin Kona and Kaura) out of 15 wards. The wards were purposively selected based on the predominance of cooperative societies in the area. In the second stage, 25% of the cooperators were proportionately selected from each ward. In the third stage, 111 cooperators were selected from a sample frame of 442 cooperators to form the sample size of the study (Table 1).

Table 1: Sample size and location of cooperators

S/N.	Wards	Sample Frame	Sample Size (25%)
1.	Amaru	83	21
2.	Limancin Kona	64	16
3.	Runji	167	42
4.	Kaura	128	32
	Total	442	111

Data Collection

Both primary and secondary sources of data were used for the study. Primary data was collected using structured questionnaire which was administered by the researchers. The data collected using questionnaire include: the cooperators' socioeconomic characteristics, Co-operatives supports received, and constraints to Co-operatives membership. The secondary information was obtained from journals, textbooks, magazines, past projects and other relevant literature related to the study.

Data on perceived roles of cooperatives in agricultural development were collected on a 5-point Likert type scale of "strongly agree"= 5, "agree"=4, "undecided"=3, "disagree"=2 and "strongly disagree"=1. Mean score equal or greater than 3.00 were regarded as positive perception while less than 3.00 were regarded as negative perception.

Data Analysis

Descriptive (Frequency, Percentage and Mean) and inferential statistics were used to analyze the data obtained. Chi-square was used to test the association between cooperators' Socio-economic characteristics and co-operators' participation. The objectives were analyzed using descriptive statistics.

Measurement of Study Variables

The two variables in the study were the dependent and the independent variables. The dependent variables are the rural Co-operatives while independent variables are the cooperators' socioeconomic characteristics.

Rural Cooperative

Types of Rural Cooperative: This is measured using dummy variables as: multipurpose cooperative = 1, farmers' cooperative = 2, women cooperative = 3 and fishermen cooperative = 4.

Years of Cooperative membership: This was measured by the number of years spent in the cooperative as a member using: < 5 years, 5 – 10 years, 11-15 years, 16-20 years, 21-25 years, 26-30 years and > 30 years.

Types of Cooperative roles: This was measured using: seed, fertilizer, chemicals; irrigation machine, training, mechanical tools, monetary support, Improve access to government services and loan.

Quantity of support received: Quantity Received was measured as: 0bag, <1bag, 1- 5bag and >5bag. Monetary Support was determined as #0, #20,000 - #40,000 and >#40,000.

Cooperators' participation: This was measured as: Very active, Active and Inactive.

Cooperators' Socioeconomic Characteristics

Age: This is the number of years an individual spent from childhood to adulthood. It was measured in the following categories: < 25 years, 25-30 years, 31-35 years, 36-40 years and > 40 years.

Gender: Gender conceptualized as sex which will either be male or female. It was measured as dummy variable with 1 = male and 2 = female.

Household size: This refers to the number of individual residing in the same dwelling and shared meals and accommodation. It was measured in the following ways: <2 persons, 2 – 4 persons, 5 – 7 persons, 8 – 10 persons and > 10 persons.

Educational status: This was measured on the basis of years spent in acquiring formal education through attendance of schools and colleges. The variable is coded as primary education= 1, secondary education = 2 and tertiary education = 3.

Occupation: This refers to the farmers' sources of income or livelihood. It will be measured as a dummy variable with, farming as primary occupation = 2, farming as secondary occupation = 1.

Farming experience: This is the number of years spent by the farmer in crop production. It was measured in the following categories: < 5 years, 5 – 10 years, 11-15 years, 16-20 years, 21-25 years, 26-30 years and > 30 years.

Farm size: This refers to the actual area of farmland used for crop production. It was measured in the following categories: < 1 ha, 1-2 ha, 3-4 ha, 5-6 ha and > 6 ha.

Operationalization of the Study Variables

Chi-square model is specified as follows:

$$X^2 = \sum \frac{(O-E)^2}{E}$$

Where:

X^2 = Chi-square;

\sum = Summation of;

O = Observed value of variable; and

E = Expected value of variable.

When X^2 calculated is greater than X^2 tabulated, null hypothesis (H_0) is rejected ($p < 0.05$).

RESULTS AND DISCUSSION

Cooperators' Socioeconomic Characteristics

Results in Table 2 show the distribution of co-operators according to their socioeconomic characteristics. The result depicts that 37% of the co-operators were between the ages range of 16 –25 years, with a mean age of 24 years. This further shows that most of the co-operators were in their productive age. Kune and Mberengwa (2012) asserted that 30 – 50 years of age indicates the youthfulness of farmers and hence their potential to venture into co-operative activities.

As indicated in Table 2, more than half (55%) of the co-operators were married. This shows that marital status has no effect on the co-operative participation and its used to sustain the urgent needs of the family.

Findings in Table 2 further revealed that majority (78%) of the cooperators had a household size of 5 – 10 and the mean household size was 7 people. The finding is in line with Ogunbameru *et al.* (2008) who found a significant relationship between household size and farm labour.

Table 2: Distribution of co-operators based on their socio-economic characteristics (n=111)

Variable	Frequency	Percentage	Mean
Age (years)			
16-20	12	11	
21-25	29	26	
26-30	42	38	
>30	28	25	24.06
Marital status			
Single	50	45	
Married	61	55	
Household size			
0-5	58	52	
6-10	29	26	
11-15	9	8	
16-20	10	9	
>21	5	5	6.87
Educational level			
Qur'anic Education	17	15	
Adult Education	10	9	
Primary Education	14	13	
Secondary Education	30	27	
Tertiary Education	40	36	
Primary Occupation			
Farming	45	40.5	
Fishing	3	2.7	
Trading	13	11.7	
Civil Servant	40	36.0	
Tailoring	10	9.0	
Secondary Occupation			
None			
Farming	2	1.8	
Fishing	52	46.8	
Civil Servant	24	21.6	
Tailoring	5	4.5	
Butcher	23	20.7	
Mechanic	5	4.5	
Farm Size (ha)			
0-0.5	30	27.0	
1-5	77	69.4	
>5	4	3.6	2.14
Farming Experience (years)			
1-10	60	54.1	
11-20	23	20.7	
21-30	17	15.3	
>30	11	9.9	13

Table 2 indicated that 36% of the co-operators had tertiary education while 27% had secondary education and 13% of them primary education. This is not a surprise because Kaduna state people and Zaria in particular were known for their dedication and commitment to academic pursuits. The level of education in Zaria made them to consider co-operatives as a way of life. Ogunbameru *et al.* (2008) stated that the level of education attained is one of the important socio-economic factors in the overall capital accumulation and investment.

Primary occupation of the co-operators as indicated in Table 2 shows that the co-operators were farmers and 40.5% and 36% of them were civil servants. The secondary occupation shows that about half (46.8%) of the co-operators were farmers while 21.6% of them were civil servants and 20.7% were butchers. This finding is in agreement with Abimbola and Oluwakemi (2013) who reported that agriculture is the main source of income in Nigeria especially to the rural people.

Table 2 further expressed that more than half (69.36%) of the co-operators cultivate 1- 5 hectares of farmland, 27.02% cultivates 0-0.5ha while few (3.6%) cultivates >6ha with the mean farm size of 2.14ha. This indicates that most of the co-operators in the study area were small scale farmers. This was in line with Iliya (1999) who reported that majority of the farmers in Nigeria were small scale farmers who cultivate less than five hectares of land.

Results in Table 2 revealed that more than half (54.1%) of the co-operators had farming experience of 1-10 years, 20.7% had farming experience of 11-20 years and 15.3% had farming experience of 21-30 with the mean of 13 years. According to Lawal (2002), experience acquired so far in farming by the farmers have been of tremendous contribution to the sustainability of their farming occupation in view of the prevailing agro-ecological conditions.

Types of Cooperatives and Level of Cooperators' Participation.

Table 3 revealed three types of cooperatives and expressed that most (46.4%) of the Cooperators belongs to Multipurpose Cooperatives, 32.1% of them belongs to Farmers' Cooperative, 20.4% of the cooperators belongs to Women Cooperatives and 1% belongs to Fishermen cooperatives. This implies that multipurpose cooperatives have more members compare to the other cooperatives. This is because the multipurpose cooperative provides many functions. They handle the provision of services, broker produce sales and provide financial (savings and loan) services (Youseff, 2006).

Table 3: Types of cooperatives and level of co-operators' participation (n=111)

Variable	Frequency	Percentage
Types of Cooperatives		
Multipurpose	91	46.4
Farmers	63	32.1
Women	40	20.4
Fishermen	2	1.0
Level of Cooperators Participation		
Very Active	87	78.4
Active	16	14.4
Inactive	8	7.2

*Multiple responses

Table 3 further revealed that majority (78.4%) of the cooperators were very active participants, active participants (14.4%) and inactive members (7.2%). According to Henry *et al.* (2005), cooperative society is an association of persons who have voluntarily joined together to have a common end through the formation of democratically controlled enterprise, making equitable contribution to the capital required and accepting a fair of the risk and benefit of the undertaking in which the members participate.

Kinds of Support/ Services Provided by the Cooperatives

Table 4 shows that 30.57% of the co-operators received monetary support from cooperatives, 23.88% received chemicals, 15.92% received seeds, 13.69% received fertilizers, 3.1% received irrigation machine and 0.31% received mechanical tools while 12.1% did not received any supports.

Table 4 further shows that 57.7% of the Co-operators received less than one bag of fertilizer, 28.82% received 1-5 bags and 12.61% received more than 6 bags. The mean bag of fertilizer provided to the Co-operators was found to be 2 bags. The table also depicts that 53.2% received less than one bag of seed, 41.44% received between 1-5 bags and 3.6% received more than 6 bags. The mean bag of fertilizer provided to Co-operators was 1 bag.

Table 4: Distribution of cooperators based on types of support, quantity received and monetary support (n=111)

Variable	Frequency	Percentage	Mean
Types of Support			
No Support	38	12.1	
Seed	50	15.92	
Fertilizer	43	13.69	
Irrigation Machine	10	3.18	
Chemicals	75	23.88	
Monetary Support	96	30.57	
Mechanical Tools	1	0.31	
Quantity Fertilizer Received (Bags)			
0	64	57.7	
<1	1	0.9	
1-5	32	28.8	
>5	14	12.6	2.289
Seeds (Bags)			
0	59	53.2	
<1	2	1.8	
1-5	46	41.4	
>5	4	3.6	1.06
Monetary Support (N)			
0	63	56.8	
20,000 – 40,000	31	27.9	
>41,000	17	15.3	

*Multiple responses

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Table 4 further expressed that more than half (56.80%) of the Co-operators did not receive any monetary supports while 27.93% received between #20,000-#40,000 and 15.31% received more than #41,000. The mean monetary loan received by the Co-operators was #21,126. Flannery (1994) described cooperative organizations as a medium through which services like provision of farm inputs, farm implements, farm mechanization, agricultural loans, agricultural extension, members' education, marketing of members' farm produce, and other economic activities and services are rendered to members.

Perceived Roles of Cooperatives in Agricultural Development

Table 5 revealed the perceived role of cooperative in agricultural development. The result indicates that most of the variables with weighted mean less than 3.00 such as: inadequate fertilizer (2.98), adequate monetary loan (2.89) and on-timely monetary support (2.72), the cooperators had a negative perception on the role of cooperative in agricultural development. The variables with weighted mean of 3.00 and above such as: higher yielding seed (3.74), beneficial training (3.68), increase yield 93.48), timely distribution of inputs (3.19), acquiring an asset (3.54) and improve access to government support (3.50), the cooperators had positive perception. In Nigeria, the first agricultural cooperatives were established as pilot projects in the early 1970s and 1980s to take care of farmers' needs in supply, production, processing and marketing. Since then, they have gradually grown to a position of dominance, covering every aspect of agricultural production in the country (Muhammed, 2014).

Table 5: Distribution of perceived roles of cooperatives in agricultural development

Item	SD	D	U	A	SA	Total	WM	Rank
Seeds provided were high yielding	10	8	17	42	34	320	3.74	1 st
Training was beneficial	9	13	22	27	40	270	3.68	2 nd
Fertilizer provided was adequate	25	18	23	20	25	232	2.98	7 th
Services provided have significantly increase my yield	13	13	29	20	36	287	3.48	5 th
Monetary support was given in adequate amount	22	25	24	13	17	193	2.89	8 th
Inputs were not given at the right time	18	24	20	17	32	183	3.19	6 th
Services have helped me to acquire asset	9	12	35	20	35	262	3.54	3 rd
Improve access to government services	13	11	31	19	37	350	3.50	4 th
Monetary loan was given on time	24	33	20	18	16	285	2.72	9 th

SD = Strongly Disagree, D = Disagree, U = Undecided, A= Agree, SA = Strongly Agree, WM = Weighted Mean

Constraints faced by Cooperators in Cooperatives Membership

Table 5 shows that lack of commitment among members had 18.02% followed by poor leadership having 13.50%. Other constraints were lack of training 8.1%, Lack of Government support 4.51%, corruption among members 3.60%, lack of western education 0.90%, theft of Co-operatives properties 4.51% and inadequate members 5.41% respectively. The table further expressed that the Co-operatives members were educated. In line with International Fund for Agricultural Development (IFAD) (2009), the vicious circle of low productivity and income, attributed to lack of training, lack of government support, corruption and poor leadership hindered improvement and expansion of production.

Table 5: Constraints to cooperatives membership (n=111)

Variable	Frequency	Percentage
No Constraint	46	41.44
Poor Leadership	15	13.50
Lack of Training	9	8.11
Lack of Commitment among Members	20	18.02
Lack of Government Support	5	4.51
Corruption among Members	4	3.60
Lack of western Education	1	0.90
Theft of Co-operatives Properties	5	4.51
Inadequate Members	6	5.41

Chi-square Test of Association between some selected Socioeconomic Characteristics of Cooperators and Cooperators' Participation

Table 6 indicates a test of association between some selected socio-economic characteristics of Co-operators and Co-operative participation. The result indicates a significant association between Age, Marital status, Family size and educational attainment of the Co-operators. This implies that the Co-operators in the study area depend on age, marital status, household size and education to participate in Co-operatives. This agrees with Osterbeg and Nilson (2009) who reported that the level of education attainment play a significant role in the participation of members in Co-operative's activities as well as influencing the benefit provided by the Co-operatives.

Table 6: Chi-square test of association between some selected socio-economic characteristics of cooperators and co-operators' participation (n=111)

Variable	DF	X ² tab	X ² cal	Decision
Age and Participation	6	0.303	7.203	Rejected
Marital Status and Participation	2	0.241	2.845	Rejected
Educational level and Participation	6	0.547	4.973	Rejected
Household size and Participation	44	0.282	48.922	Rejected

CONCLUSION

The findings from the study indicated that the cooperators were at their productive age, married with the mean household of 7 persons. The cooperators were educated and mostly civil servants. The findings also found four types of cooperatives in the study area with multipurpose having more participants. The Cooperatives supported the members with seed, fertilizer and cash to motivate them to farm. The Cooperators had positive perceptions on seeds, training, fertilizer and monetary role provided by the cooperatives. The test of association between some socio-economic characteristics and co-operatives participation indicated a significant association. This implies that the cooperative participants depend on age, marital status, household size and education. However, the constraints to the Co-operatives membership include poor leadership, corruption among members, lack of commitment among members, theft of Co-operatives properties, inadequate members and lack of Government support.

Inputs should be adequate and distributed to cooperators on time. Government should provide financial assistance and incentives to cooperatives for effective service delivery.

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