Research Paper

Co-Operative Savings among Rural Farmers in Ankpa Local Government Area Of Kogi State

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Abstract
The study examined Co-operative Savings among Rural Farmers in Ankpa Local Government Area of Kogi State.Low savings capacity of rural farmers has caused a serious setback in the agricultural sector in Nigeria, this has hindered farmers from having large turn-over, hence low productivity. Specific objectives were: (i) to describe the socio-economic characteristics of farmers (ii) to determine the effects of socio-economic characteristics of farmers on savings and (iii) to compare the volumes of savings of co-operative and non-cooperative farmers. Percentages, ordinary least square regression and Z,-test respectively were used to analyse data collected. Results showed that 85% of the farmers were males, most(24.2%) of the farmers were in the range of 21-30 years.68.3% were married. 34.2% had no formal education. 45.8% had family size of 1-4 persons.Educational level, family size and annual income are significant to savings. The R-square which is the measure of the goodness of fit is 77.6%. Z-test result showed that there is significant difference between the volume of savings of co-operative and non-cooperative farmers. There is the need to intensify awareness campaign on birth control targeted at rural farmers in the study area to control their household sizes. Household size negatively affects savings, therefore formation of more farmers' co-operative societies is needed in the study area because co-operative farmers save more than non-cooperative farmers.
Key words: Savings, Rural, Co-operatives, Farmers.

I.   INTRODUCTION

Nigeria's agricultural sectoris the largest sector of the economy generating employment for about 70% of the population and contributing about 40% to the Gross Domestic Product (GDP) with crop production accounting for 80%, livestock 13%, forestry 3% and fishery 4% (Ajah, J. C., 2015). Agriculture account for over 70% of the non-oil export and provides over 80% of the food need ofNigeria (Aniodoh, A. N., 2018). In rural areas of Nigeria, agriculture is practiced at subsistence level, characterized by numerous farmers operating small scattered and fragmented plots of land using traditional methods like land rotation, bush burning and crude implement like cutlasses and hoes(Aniodoh, A. N., 2018).Most farmers in rural settings have limited resource which limits their productivity, investment, savings and income. Hence, farmers have resorted to a number of options to enhance their farm productions and improve their well-being, one of these options include pooling their resources and working together as a member of cooperative society (Ijere, 2007). AccordingIhimodu (2008), Co-operative is a voluntary organization of people with common goals who come together to do business for the good of all the members. Although co-operative has been in existence, the co-operative as a form of business organization began during the era of industrial revolution (Adetunji, 2002).In most societies, people need money and assets and continually strive to maximize them one way or the other. A means to retain money or to accumulate wealth is through savings (Gersovitz, 2008). Domestic savings are common around the world, they constitute an important mechanism for basic survival of people since it provides security for the family. Savings also provide an important source of capital for a country's future investment which is essential for its economic growth and development (Ajah, J. C. 2015). Domestic savings can be considered as whatever people can put away after meeting their basic living expenses, abstinence from consumption or deferring consumption is one way of saving. Savings may be kept in cash, in kind or in the form of holding stock of savings by acquiring and accumulating assets. Such assets can always take the form of livestock, grains in store

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or jewellery.Savings is of greater importance in Nigeria because it has a direct bearing on the level of economic activities of the nation (Ajah, J. C., 2015). Attah (2001) observed that savings provide for capital accumulation which in turn can generate future consumption, aggregate savings and the growth of an economy are crucially linked, and thus households are usually the largest component of domestic savings in developing countries especially in lower income predominant agricultural countries. Rural farmers save in order to have money to use in times of need mainly for their farm business.People save for different reasons, some people save in order to better their conditions in the future by investing the savings in higher earning assets, others save to be able to deal with unforeseen problems in the future (Bamire, 2005). Others may save so as to meet social obligations such as weddings, funerals, dowry, and/or recurrent cultural festivities and to enhance their social standing in the community, people may also save to start business venture. It is widely acknowledged that personal savings constitute the major single source of private investment in the informal sector (Oshuntogun, 2001).Ijere (2007), pointed out two important indigenous savings institutions which are the 'Esusu' society found in every nook and cranny of the country and daily savings clubs. Other forms are the 'Adashe' (Hausa) found in the Northern part of the country, 'Bam' found in the middle belt of Nigeria especially among Tiv speaking ethnic group. These savings associations play important role in savings and investment life of small scale farmers.Savings level in the rural area of Nigeria is very low and grossly insufficient to provide the essential capital base for a rapid rate of economic transformation. The efforts at formulating policies to boost savings among the rural farmers have suffered lack of knowledge and pertinent data on savings habit of rural farmers and are not readily available. The current opinion about the level of savings in Nigeria is that the rate of savings is grossly inefficient to provide the essential capital base for rapid rate of economic transformation (Oshuntogun, 2001). Kamla-Raj (2005), attributed the slow process of economic development in Nigeria to the dearth of investible funds. Nigerian farmers are faced with numerous problems that hinder them from attaining their full potential in food production. They have to contend with high input prices, high transportation costs, pests and diseases attack, infertile soil, inadequate fund, unstable policies and general poverty. Determined to help themselves, the farmers have resorted to forming farmers' cooperative societies. One of the economic obligations of members of cooperative societies is savings. Savings are given as loans to needy members who are expected to pay back within a specified period of time (Adegboye, 2004). The problem of savings in Nigeria does not only involve ensuring that a higher and increasing marginal rate of savings in a financial form which will be readily available for investment (Oshuntogun, 2001). Also, according to Bamire (2005), low savings capacity of rural farmers has caused a serious setback in the agricultural sector of the economy. This has hindered farmers from having high returns, hence low productivity. The broad objective of the study is to analyse Co-operative Savings among Rural Farmers in Ankpa Local Government Area of Kogi State, Nigeria. The specific objectives were to:

(i)   describe the socio-economic characteristics of farmers in the study area
(ii)   compare the volumes of savings of co-operative and non-cooperative farmers in the study area
(iii)   determine the effects of the socio-economic characteristics of the farmers on their savings

II.   Materials and Method

The study was carried out in Ankpa Local Government Area which is located between latitude 7^0 $15^"$ North and 7^0 $37^"$ North of the Equator and longitudes 7^0 $30^"$ East and 7^0 and $37^"$ East of the Meridian. The Local Government Area shares boundary with Benue State to the East, Enugu State to the South and Omala Local Government to the North.There are many villages and 18 districts but the three major districts are: Ankpa, Enjema and Ojoku. It has an estimated population of three hundred and nine thousand, nine hundred and thirty (309, 930) people and a land mass of two hundred and sixty-two (262) square kilometre. It is mainly inhabited by the Igala-speaking ethnic group although other tribes such as Igbo, Hausa, Yorubas among others are present. The major occupation of the people is agriculture. The system of farming is traditionally accomplished using primitive tools such as cutlasses and hoes. About 90% of the working population is engaged in crop production. The soil is fertile which supports a variety of crops ranging from annual to perennial. Crops grown are Tomato, Okra, Yam, Maize, Cassava, Cowpea, citrus, oil palm, mango, and cashew and so on. Their major livestock aregoats and poultry which are reared extensively. Farming is supplemented by other activities which include trading, blacksmithing, basket weaving, tailoring among others. The trading activities are carried out by both men and women. These supplementary activities are carried out mostly during the dry season. Multi-stage sampling technique was used for this study. The first stage involved the random selection ofthe three major districts in Ankpa Local Government Area. The second stage involved random selection of two (2) communities from Ankpa district, two (2) communities from Ojoku district and three (3) communities from Enjema district based on the prevalence of farmers in these areas. The third stage involved the use of proportional sampling technique to select 10% of the respondents from the sample frame, giving a total number of one hundred and twenty (120) respondents as shown in Table 1. Primary data used for this study were collected by the researcher using astructured questionnaire.

Table 1: Sample distribution of the respondents in the study area

S/N District	Communities	Sample Frame	Sample Size
1. Ankpa	Ikanekpo	80	8
	Ogodo	40	4
2. Enjema	Inye	800	80
	Ofugo	100	10
	Agbeneba	90	9
3. Ojoku	Ochunobi	30	3
	Ojoku	60	6
4.	Total	1,200	120

Souce: Kogi State Agricultural Development Project, 2022

Data Analysis Techniques

Simple descriptive statistics (percentages) were used to analyse the socio-economic characteristics of the farmers. Ordinary least square regression was used to analyse the effects of socio-economic characteristics of farmers on savings while Z-test was used to test the mean difference between the volume of savings of co-operative and non-cooperative farmers.

Ordinary Least Square Regression:

$Ysav = logb_0 + b_1logx_1 + b_2logx_2 + b_3logx_3 + b_4logx_4 + b_5logx_5 + b_6logx_6 + e$

Where:

Ysav = Total savings (₦)

B_0 = Constant

b_1-b_6 = Regression coefficients

X_1 = Sex (Male = 1, Female = 0)

X_2 = Age (years)

X_3 = Educational level (No formal Education = 1, Primary Education = 2, Secondary Education = 3 and Tertiary Education = 4)

X_4 = Family size (Number of Persons)

X_5 = Annual income (₦)

X_6 = Marital status (Single = 1, Married = 2, widow = 3)

e = Error term

Z-test:

$$Z = \frac{(\bar{X} - \mu)}{\sqrt{\frac{S^2}{N}}}$$

Where:

$\bar{X}$ = Sample mean

μ = Population mean

S^2 = Sample variance

N = Sample size

III. RESULTS AND DISCUSSION

Socio-economic Characteristics of farmers in the study area

Table 2is the distribution of socio-economic characteristics of the respondents in the study area. The results in table 2 show that majority(85%) of the respondents were males while 15% were females. Male farmers have more access to productive resources than their female counterparts. This is consistent with (Baaki, 2005) who found that male farmers have easy access to productive assets and are more energetic in carrying out productive ventures than females. Most (24.2%) of the respondents were within the age of 21-30 years. This category of the farmers are the working population, they are very strong and actively carry out farm work. 23.3% fell within the range of 31-40 years. They are also strong and undertake farming activities. Baaki (2005) have shown that co-operative farmers in this age range are very active and resourceful in their productive ventures and this can positively enhance their total savings.19.2% is in the range of 51-60 years.41-50 and 61-70 have a percentage of 14.2 and 5% were within the range of 15-20 years. Most (34.2%) of the respondents had no formal education, implying that agriculture is the major occupation of the rural dwellers.23.3% hadprimary education, 25.0%had secondary education and 17.5% had tertiary education. Majority (68.3%) of the respondents were married. Since agriculture is their major occupation, their wives and children assist them in their farm work. 25.8% were singles, While 5.8% were widows.Table 2also showed that most(45.8%) of the respondents had a family size of 1-4 persons, 43.3% had family size of 5-8 persons, 10.0% had family size of 9-

12 persons and 0.8% had family size of 13 persons and above. The bigger the size of household, the greater the amount of money expended for catering for their needs and the less the amount of money saved. Rural households in developing countries spend between 70-80% of their income on food.Households which spend larger amount of their income on food are expected to save little of their income. The expected effect of food on savings is negative (Bamire, 2005).Also from Table 2, majority (69.6%) of the respondents earned between one hundred and one thousand naira to two hundred thousand naira (₦ 101,000-200.000), 18.1% had between twenty-one thousand, to one hundred thousand naira (₦21, 000-100,000), 8.2% had between two hundred and one to three hundred thousand naira (₦ 201,000-300,000), 3.3% had between three hundred and one, to four hundred thousand naira (₦ 301,000-400,000). While 0.8% had four hundred and one thousand and above. This shows that the income obtained from their farm annually is generally very low.

Table 2: Socio-economic Characteristics of the Respondents

	Frequency	Percentage
SEX		
Male	102	85.00
Female	18	15.00
Total	**120**	**100.0**
AGE OF THE RESPONDENTS		
10-20	6	5.00
21-30	29	24.20
31-40	28	23.30
41-50	17	14.2
51-60	23	19.2
61-70	17	14.2
Total	**120**	**100.0**
EDUCATIONAL LEVEL		
No formal education	41	34.20
Primary education	28	23.30
Secondary education	30	25.00
Tertiary education	21	17.5
Total	**120**	**100.0**
MARITAL STATUS		
Single	31	25.8
Married	82	68.3
Widow	7	5.8
Total	**120**	**100.0**
HOUSEHOLD SIZE		
1-4	55	45.80
5-8	52	43.30
9-12	12	10.0
16-20	1	0.8
13 and above	120	100.0
Total		
ANNUAL INCOME		
20-100	22	18.1
101-200	83	69.6
201-300	104	8.2
301-400	4	3.3
401 and Above	1	0.8
Total	120	100.0

Source: field survey, 2022

Comparison of the Volumes of Savings of Co-operative and Non-cooperative Farmers

H_0: There is no difference between the volumes of savings of co-operative and non-cooperative farmers

The decision rule:

According to results in Table 3, the volume of savings of co-operative savers was ₦56, 610 annuallywhile the savings of non-co-operative savers was ₦55, 491 annually. This implies that co-operative farmers in the study

area saved more than non-cooperative farmers. This is consistent with Adeyemo (2004) who found that "members of co-operative societies saved more than individuals who were non-members of cooperatives". Table 3 also shows that the z-critical of 0.42 being less than z-calculated of 1.65 means the null hypothesis ofno significant difference between the volume of co-operative farmers and that of non-cooperative farmers is rejected. Implying thatsignificant difference exists between the volume of savings of co-operative savers and non-cooperative farmers.

Table 3: Comparison between the Volume of savings of Co-operative and non-cooperative farmers

	Mean	Known variance	observation
Volume of savings of co-operative	56610.16949	978150789	60
Volume of savings of non-cooperative	55491.52542	856310929.3	60
Z-critical (one-tailed)	0.420499778		
Z-calculated (one-tailed)	1.644853627		

Source: Field survey, 2022

Effects of Socio-economic Characteristics of Farmers on Savings

The R-squared (R^2) in the regression is 0.776. This means 77.6% of the variations in the co-operative farmers' savings was explained by the independent variables (Sex, Age, Education, Marital Status, Family Size And Annual income) included in the model.Table 3 shows that both male and female farmers save, likewise both married, singles or widows save money from the sales of their farm produce after consumption. Also, both literate and illiterate farmers save, but literate farmers tend to save morebecause literate farmers can manage their farms better than the illiterate ones.Also, literate farmers have easy access to farming inputs like fertilizers, herbicides, pesticides and so on, thereby increasing their productivity. Family size has negative effect on savings. This is consistent with a priori expectation that larger of households spend more thereby saving less. The a priori expectation on annual income was that annual income and savings are directly related to each other, but this result showed a negative relationship between them. That is, annual income has a negative effect on total savings. This is consistent with Anyawale (2000) who concluded that savings behaviour of farmers in developing countries is less dependent on the absolute level of aggregate income.

Table 4: Regression estimates for theEffects of the Socio-economic Characteristics of Farmers on Savings

Independent variables	coefficient	t-ratio	Sig	
Constant	11602.245	0.739	0.462	-
Sex	0.074	0.707	0.481	
Age	0.098	0.738	0.462	
Marital status	0.058	0.428	0.670	
Household size	-0.315	-2.806*	0.006	
Educational level	0.259	2.660	0.010	
Annual Income	-0.203	-2.256*	0.027	
R-squared (R^2)	0.776			
Adjusted (R^2)	0.132			
F-ratio	23.010			

Source: Field survey, 2022

IV.   Conclusion and Recommendations

This study concluded that farmers who were members of cooperatives saved more than those who were not members of any cooperative society.Sex, Age, and Marital status had no significant effects on savings while educational level, family size and annual income are significant to savings.It is recommended that:There is need to intensify awareness campaign on birth control targeted at rural farmers especially in the study area to control their household sizes. Because it is discovered that household size negatively affects savings, the formation of more farmers' co-operative societies should be encouraged in the study area because co-operative farmers save more than non-cooperative farmers.

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