



Savings Level and Investment Behaviour of Cooperative Farmers (Analysis and Prospects) in Jos East Local Government Area, Plateau State

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Authors' contributions

This work was carried out in collaboration between both authors. Author CCI designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Author ACC managed the analyses of the study and the literature searches. Both authors read and approved the final manuscript.

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ABSTRACT

The study was carried out in Jos East Local government area Plateau state on savings level and investment behavior of cooperative farmers (Assessment and Prospects). A total of 99 respondents were purposively selected and cross-sectional data was collected using structured questionnaires, the data was analyzed using simple descriptive statistics and 4 point Likert scale. Findings showed that 35.4% of the respondents were between the ages brackets of 31-40 years, 58.6% were male. Also, 43.4% of the respondents saved between 51,000 – 100,000 Naira annually and 40% of the respondents engaged in saving of food stuff which they sell when prices rises to get better price. The findings shows that the savings levels of cooperative farmers are low; also better investment should be harnessed to improve the income of the farmers. Cooperative societies are meant to provide marketing information, easy access to finance and other support to their members, but from our findings this is yet to be achieved.

Keywords: Savings; investment behavior; farmers; cooperative society.

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1. INTRODUCTION

Capital formation can be a driving force for economic growth, development and reduction of poverty. The livelihood activity of rural farmers in Nigeria is majorly Agriculture. Farmers have been faced with low income and low savings due to decline in Agricultural output which is caused by poor Agricultural practices, climate change, use of crude method in production, lack of technological innovation. Savings can be in form of money and in any other form other than money such as livestock, land, gold, foodstuff and other valuables. According to [1] from the classical times, saving has been considered as one of the factors that brings about growth and development, Savings can improve a country's economy as higher savings lead to capital accumulation and hence economic growth. The ability of farming household to engage in production in a farming season is highly dependent upon the proportion of income they save from previous farming activities even though farmers still borrow from friends, family, religious organization, social groups etc.

One of the major problems of agricultural development in Nigeria is that of developing appropriate organization and institution to mobilize and induce members of the rural sector to a greater productive effort [2]. Agricultural co-operatives are agricultural-producer-owned group whose primary purpose is increase member producers' production and incomes by helping better link with finance, agricultural inputs, information, and output markets. The purpose of agricultural cooperatives is to help farmers increase their yields and incomes by pooling their resources to support collective service provisions and economic empowerment but where biasness and lack of management exist; cooperative societies may not be a tool to achieve the governments transformation agenda in the rural area of Nigeria. According to [3] some of the problems affecting cooperative societies are poor management, lack of capital accumulation, inadequate training, and lack of communication and participation among members. Agriculture is perceived to be a very lucrative venture in developed countries like the USA, Canada, New Zealand. However, in Nigeria the potential of the Agricultural sector is far from being harnessed and perceived to be an unproductive venture, it is an occupation that is practiced by most rural dwellers that live on less than \$2 a day. [4] also reiterated that majority of the rural populace in Nigeria either depend

entirely on farming and farming activities for survival and generation of income.

Agriculture in Nigeria suffers greatly from low capitalization; it is dominated by millions of small-scale farmer who practice subsistence farming and produce primarily for consumption, while the surplus farm produce is sold to generate income in other to meet with household expenses or purchases other goods that they do not directly produce. Farmers in Nigeria are characterized by the vicious cycle of poverty; low productivity, low income, low savings, low investment and then low income. Certain assumption according to IS-LM curve (Hicks and Hansen framework) posit that savings is an increasing function of income, investment depends on the rate of savings. This goes to say that for farmers to break the vicious cycle of poverty, income must be increased with respect to investment as this can stimulate increased savings. Savings is of great benefit to the rural household as income in form of interest can be earned from the savings, it helps farmers to make better investment and also increases the equity of the farmer which is an advantage if the farmer is to borrow from the commercial bank. Savings is normally considered in economics as disposable income less personal consumption expenditure it could also be regarded as income that is not consumed immediately by the purchase of goods and service. Savings are very important for creating, developing and sustaining rural businesses while Investment refers to foregoing consumption now to pursue a higher level of income in the future. However there are certain views that small scale farmers invested their savings in either agricultural or non-agricultural sectors. Investment in the agricultural sector or farm activity includes the purchase of farm inputs and farmland while non- agricultural sector are mainly on education, trade expansion, building houses, and purchase of other durable assets. The ability of a farmer to invest depends on their main source of investment capital which are their savings and fixed capital which is used as collateral for credit. According to [5] capital formation has a direct relationship to savings, the higher the capital formation the higher the savings. In countries where hunger and poverty are on the increase, an average farmer has little or no savings and sometimes borrows to meet with family obligations such as feeding and paying of school fees. [6] studied the dynamic relationship between savings and investment in India for the period from 1950-51 to 2008-09 and found the presence of long run equilibrium

relationship between saving and investment in India, Farmers who cannot save cannot invest and any economic activity that does not generate positive savings cannot grow. Farmers' capacity to invest depends greatly on their ability to save. In the light of the foregoing this paper describes the savings level and investment behavior of cooperative farmers in Jos East Local Government, Plateau State by providing answers to the following objectives: (i) describe the socio economic characteristics of farmers in the study area. (ii) examine the savings level of cooperative farmers in the study area. (iii) determine the influence of cooperative membership on the investment pattern of farmers in the study area. (iv) identify problems associated with members of cooperative.

2. METHODOLOGY

Jos East Local Government of Plateau State has an area of 1,020km² and a population of 85602, Its headquarters is in the town of Angware at 9° 55'N 9° 06'E [7]. It has 5 districts namely Fobur, Shere, Fursum, Maigemu, and Federe. Its dominant tribe is Afizre also known as Jarawa. The major occupation of the people is farming, Farming occurs almost throughout the year in Jos East. Major crops cultivated are vegetables, maize, millet, groundnut, Fonio millet.

2.1 Sampling Size and Technique

Two stage sampling was used:

2.1.1 Stage 1

3 districts was selected out of the 5 districts, which were Maigemu, Fobur and Shere districts the reason for selecting these districts was because farming activities is predominantly carried out in these districts.

2.1.2 Stage 2

3 villages were randomly selected from each district, 39 farmers were sampled in Fobur, 32 in Shere and 28 in Maigemu, making a total of 99 farmers. The reason for difference in sample size of the district is due to the population of the cooperative members in the district.

The sample frame of the farmers was formulated with the help of head of cooperatives who acted as key informants for the purpose of the research.

2.2 Method of Data Collection

Primary data was collected using structured questionnaires. Questionnaire was administrated to the target group.

2.3 Data Analytical Tools

Descriptive statistics was used to achieve objective 1, 2 and 3 while objective 4 was achieved using 4 point Likert scale that is strongly agree (4), agree (3), disagree (2), strongly disagree (1).

$$(4+3+2+1=\frac{10}{4}) \text{ cut off } 2.5$$

Using 0.05 or 5% as probability level upper limit $2.5+0.05=2.55$ and lower limit $2.5-0.05=2.45$ therefore we have 3 weighted mean.

Less than 2.45 - Strongly disagree

2.45 to 2.49 - Disagree

2.5 to 2.54- Agree

Greater than 2.55- Strongly agree

3. RESULTS AND DISCUSSION

3.1 Socio-economic Characteristics of Farmers

From Table 1, it is shown that 35.4% of the respondents falls between the age bracket 31-40 years, also most of the farmers were male with 58.6% which indicates that a lot of men are members of cooperative which can be attributed to the fact that they need more money to run their homes and farms as heads of families or because they are more financially buoyant and perceive the need to save. 49.5% of respondents have household between 1-5 and 51.5% has tertiary education which implies that their ability and desire to save and belong to a group is due to their educational background which agrees with the findings of [8] that most cooperative farmers are literate. 42.4% of respondents have farming experience of 6 – 10 years, further, 68.7% of the respondents are married, this implies that cultural factor of the study area may be that which encourages people to marry early. It also agrees with the findings [9,10], which states that married classes were more involved in farming because of the need to supplement, the family's means of livelihood.

Table 1. Socio-economic characteristics of farmers

	Variables	Frequency	Percentage
Age	< 20	1	1.0
	21-30	3	3.0
	31-40	35	35.4
	41-50	20	20.2
	51-60	14	14.1
	> 60	26	26.3
Gender	Male	58	58.6
	Female	41	41.4
Marital status	Single	15	15.2
	Married	68	68.7
	Separated	5	5.1
	Divorced	1	1.1
	Widowed	10	10.1
Household size	1-5	49	49.5
	6-10	29	29.3
	11-15	18	18.2
	Above 15	3	3.0
Educational level	Primary	19	19.2
	Secondary	28	28.3
	Qur'anic School	1	1.0
	Tertiary	51	51.5
Years of farming	1-5	18	18.2
	6-10	42	42.4
	Above 10	39	39.4
	Total	99	100.0

3.2 Savings Level of Farmers

Table 2 shows the annual savings of respondents in the study area. It shows that 43.4% of the respondents saved between 50,000 – 100,000 Nigerian Naira yearly, which is low; the reason for the low saving rate may be because a lot of money is being spent on domestic needs. In a study conducted by [8] the Average annual savings of cooperative farmers in southwestern Nigeria was N31,572 with Ondo state having the largest (N40,788) while Oyo state recorded the least (N22,980.). This implies that the average annual savings of farmers in the southwest is also low.

3.3 Where do You Save Your Money?

The various ways farmers saved their money is shown in Table 3 and from the findings 18.2% of the farmers save their money at home and the cooperative, 34.3% save their money in their homes, while 29.3% save their money with the cooperative. It reveals that farmers still prefer to save their money at home even when they belong to a cooperative society. It disagree with the findings of [11] that farmers make use of informal financial sectors to mobilize savings and develop their rural communities.

Table 2. Annual Savings level of cooperative farmers

Savings in naira	Frequency	Percentage
10, 000 – 49, 000	11	11.1
50, 000 – 100, 000	43	43.4
101, 000 –149, 000	8	8.1
150, 000– 200, 000	32	32.3
Above 200, 000	1	1.0
Total	99	100.0

3.4 Does the Co-operative Bring New Opportunities for You to Invest in?

About 67.7% of the respondents believed that the co-operative did not bring new investment opportunities to them as shown in Table 4. This could be responsible for the low participation of farmers to belong to cooperatives in the study area; they may have perceived that there are no benefits attached to belonging to cooperative. It is safe to say that cooperative board members or heads lack the necessary training required for managing a cooperative society and farmers are

Table 3. Savings avenues of respondents

Institutions	Frequency	Percentage
Commercial Bank	2	2.0
Cooperative society	29	29.3
At home	34	34.3
Cooperative society and commercial bank	0	0
Cooperative-society and microfinance bank	5	5.1
Cooperative society and home	18	18.2
Micro finance bank	11	11.1
Total	99	100.0

not aware of the benefits of cooperative society or nepotism and lack of transparency has prevented farmers from saving their resources with the cooperative.

3.5 What do you spend Your Savings on?

Findings on how farmers spent their savings is illustrated in Table 5 below, 33.3% and 34.4% of the respondents spends their savings on school fees and buying fertilizer respectively this shows that the money saved is majorly used in buying fertilizers and not necessarily to expand their farming business which can improve their standard of living in the long run. It agrees with the findings of [12] which revealed that small scale farmers invested their savings in the purchase of fertilizer, other chemicals. It also reveals that the issue of the government providing fertilizer has not been fully solved or probably these fertilizers do not get to these farmers before the planting season.

Table 4. New investment opportunities as perceived by respondents

	Frequency	Percentage
No	67	67.7
Yes	32	32.3
Total	99	100.0

Table 5. Distribution of respondents on their savings expenditure

	Frequency	Percentage
School fees	43	30.5
Buying of seed and fertilizer	34	24.1
Buying of improved seeds	32	22.7
Leasing of land	12	8.5
Household expenditure	10	7.1
Farm size expansion	10	7.1
Total	141*	100.0

*multiple response

3.6 What Other Business do You Invest in?

From the diagram below 40% of the farmers engage in saving of food stuffs for sale at a later time in order to get better prices for their goods while 5.0% of the farmers invested on value addition, this reveals that a large proportion of the respondents do not engage on value addition of commodities, which could enable them expand their profit by offering better quality of commodity for sale. Also the issue of saving foodstuffs for sale later at better price should be discourage as this can cause scarcity in supply of food products. The government should ensure that price control policies such as the minimum price control should be followed to ensure farmers are not exploited and they get better price for their product. An increase in farmers income could result to increase in savings and better investment.

3.7 Constraints Faced by Respondents

Table 6 depicts the various problems faced by members of the co-operative, majority of the respondents strongly agreed that they were faced with problems such as inaccessibility of loans, biasness, high interest rate, and loan repayment problem.

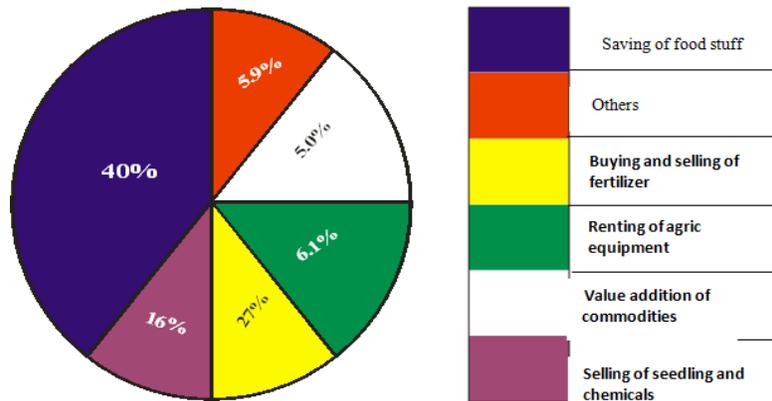


Fig. 1. Investment made by farmers

Table 6. Likert scale presentation of constraints faced by farmers

	Strongly agreed	Agree	Strongly disagree	Total	Number of respondents	Mean	
Inaccessibility of loans	42 (4)	26 (3)	13(2)	18 (1)	290	99	2.9 Strongly agree
Biasness	54 (4)	14(3)	18 (2)	13 (1)	307	99	3.1 Strongly agree
High interest rate	37 (4)	29 (3)	20 (2)	13 (1)	288	99	2.9 Strongly agree
Cumber someness of loan accessibility	19 (4)	23 (3)	40 (2)	17 (1)	242	99	2.44 Strongly disagree
Loan repayment problem	51 (4)	17 (3)	23 (2)	8 (1)	309	99	3.1 Strongly agree
Inaccessibility of credit	33 (4)	32 (3)	10 (2)	24 (1)	239		2.41 Strongly disagree
Ignorance	17 (4)	22 (3)	40 (2)	20 (1)	234	99	2.3 Strongly disagree

*Multiple responses recorded

4. CONCLUSION

The study concluded that farmers in Jos East local Government have the desire to save despite the low income generation. Also majority of the farmers engaged in saving of food stuff for sale at a time when there is scarcity, this show that better investment opportunities are not known to the farmers and heads of cooperatives. Major problems faced by farmers were inaccessibility of loans, biasness, high interest rate, and loan repayment problem.

5. RECOMMENDATION

Constraints identified that could have limited farmers participation in cooperative societies is

Biasness, inaccessibility of loan, this imply that the cooperative societies are not fair and transparent in their dealing, hence proper regulation is needed.

Cooperative societies can source for contract farming arrangements which can help farmers earn better income but with proper terms of contract so farmers are not exploited.

Farmers can also increase their income if they can source for better investment opportunities.

Savings can be increased if income increases, income can be increased if farmers can add value to their products before selling

them, offering better quality of products for sale.

Technical support such as income diversification trainings and financial support can help farmers increase their income, stake holders should educate the cooperative members on how to run a cooperative society, and how to ensure that the goal of the cooperative society members are achieved.

The government of plateau state can establish partnership with NGO which can help them deliver intervention programmes.

More business opportunities should be harnessed by the co-operative so that the farmers will take advantage of these opportunities, which can improve their income.

There should be policies to ensure that bylaws and legal framework of the cooperative societies are flaunted especially by cooperative societies management team.

Free education can be provided for the rural dwellers the issue of farmers using their merger savings on school fees will be stopped.

CONSENT

As per international standard or university standard, participant's written consent has been collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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