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By Dr. Odoemenem, I.U., Ezihe, J.A.C. & Akerele, S.O.
University of Agriculture, Makurdi, Benue State, Nigeria

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Saving and Investment Pattern of Small-Scale Farmers of Benue State, Nigeria

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Abstract - This study was based on the saving and investment pattern of Small Scale Farmers in Makurdi Local government Area of Benue State, Nigeria. 120 farmers were randomly sampled using multi-stage sampling techniques and data were collected using structured questionnaire for interview schedule. A multiple linear regression model was used to analyze the determinants of saving and investment of the farmers with coefficient of determination (R2) of 77% and F-value of 66.387 ($p \leq 0.00$) for overall significance. Two variables were statistically significant, and these are sex (10%) and income (1%) of the farmer.The result showed that 19.17% of the respondents were of the age between 39 and 48 and 79.2% of them were males. Analysis also revealed that 79.19% of these farmers operated 4.9 hectares or less as farmland. About 64.2% of the respondents have the saving volume of N 100,000 or less and 51.80% of them save to carter for the family. Majority (64%) invested in non-farm activities. The study found that there is the propensity to save and invest in Benue State in spite of low income. However, age, level of education, nature of work, and number of dependents did not have significant effect on savings. The factors that drove household investments are occupation, expenditure, assets and saving. Any decision or policy pertaining to finance and development by government, the private sector or financial institutions guard towards improving saving and investment in Benue State must incorporate these factors.

Keywords : small-scale, farmers, saving, investment capital, labour, propensity.

I. Introduction

Agriculture in Nigeria is practiced at subsistent level and is characterized by numerous farmers operating several scattered small and fragmented plots of land using traditional methods such as land rotation, bush burning and crude implements.

According to Olawepo, (2010), the majority of the rural populace in Nigeria either depends entirely on farming and farming activities for survival and generation of income, or depends on other non farming activities to supplement their main sources of income. Over 90% of the country's local food production comes from small-scale farms. About 60% of the population earn their living from these small farms which are usually of the size of about 0.10-5.99 hectares (Olawepo, 2010).It could then be seen that most farmers have limited resources, a factor that limits their production, investment, savings and income. Savings is normally considered in economics as disposable income minus personal consumption expenditure. It could also be regarded as income that is not consumed immediately by buying goods and services. Income in this concept includes earnings from all sources during a year. While consumption is the total amount of goods and services consumed by the rural household during a year and this includes expenditure on food, clothing, housing, heat and lighting, travel, education, health care, social ceremonies, recreation and charity. According to Azhar (1995), savings may be made in kind such as jewelry, land, livestock or dowry. It may still be in the form of currency notes deposited in banks or more often hoarded. Whereas, investment could be considered as an act of laying out money now in return for a future financial reward or the sacrifice of something now for the prospect of later benefits (Ajayi, 1998). The reward in this context may be received in the form of an income flow or by the receipt of a single capital sum or a combination of both. It could further be pointed out that, two elements are fundamental to our understanding of investment. First is the anticipated return which is easier to perceive and measure. Second is the risk which is a difficult concept to perceive and possess serious conceptual and analytical problems in terms of measurement.

In line with the above concepts, savings and investment in the rural economy appear to be in monetized and non-monetized forms. This could be attributed to the subsistent nature of the economy. This further implies that for any meaningful investment to be obtained, a sound saving mobilization has to be pursued.

One of the basic problems confronting the development of agricultural sector in Nigeria could be attributed to inadequate savings and investment by the small scale farmers. Despite this problem, policy makers have not really drawn up adequate and comprehensive rural savings scheme that will ginger the farmers to invest their capital productively (Ogwanighie, 1997).

Several significant questions remain in the minds of many people as to what really the problem is. Such questions include among others as; do rural farmers in Nigeria and Benue State in particular, have a

Author α σ : Department of Agricultural Economics, University of Agriculture. Makurdi, Benue State, Nigeria.
E-mail : iodoemenem@yahoo.com
Author ρ : University of Agriculture, Makurdi, Benue State, Nigeria.

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significant capacity to save? If so, in what form(s) do they save and why? What factors influence saving and investment behaviour in rural households? What financial avenues are available for households to save? These questions and many others continue to baffle policymakers and financial intermediaries in most developing countries particularly Nigeria and Benue State.

Over the years, many farmers in Nigeria have increasingly not been able to finance their farming activities. They have as such resulted to forming cooperative movements. These cooperative societies are associations of farmers who voluntarily come together to achieve a common goal through democratically controlled business organizations. The most important economic obligation of the members of the cooperative society is savings. Farmers are expected to save a specified amount of money either daily, weekly, monthly or quarterly as it is convenient for the group and the individuals. This type of saving, is important for agricultural production, because it allows farmers or members access to credit at the onset of the farming season which could boost farm production and income of the farmers. Odoemenem, (1992. Odoemenem, et al. (2005) observed that farmers make use of informal financial sectors to mobilize savings to develop their rural communities. They further observed that rural farmers in Benue State make use of informal financial institutions because they give them access to loans that they cannot get from formal financial institutions due to lack of collateral. Though this sector has its own besetting problems such as inadequate capital base for effective operation, poor record keeping, crude accounting system, gross mismanagement; farmers still prefer it to banks. Osuntogun et al. (1981), Odoemenem, (1991) were of the view that small scale farmers invested their savings in two major areas. These are the agricultural and non-agricultural sectors. Investment in the agricultural sector or farm activity includes the purchase of fertilizer and chemicals, hired labour and buying more land for farming. While investment on non-agricultural sector are mainly centered on education, trade expansion, building houses, dowry obligation, and purchase of durable assets.

The broad objective of this study was to assess the saving and investment pattern of rural farmers taking Benue State, Nigeria as a test case. The specific objectives were to: examine the socio-economic characteristics of the respondents; examine the factors that determine the level of savings and investment by small scale farmers; determine the level of savings made by the small scale farmers and the level of investment in farm and non-farm activities in the study area; determine the factors that militate against savings and investment in the rural areas and suggest policy recommendations based on the findings of the study.

II. Material and Methods

a) The Study Area

This study was conducted in Benue State, Nigeria. Benue State is situated

Between longitude 7044'E and 9055'E and latitude 6¬022'N and 807'N. It has an estimated population of about 4.22millions and a total land area of about 33706km (NPC, 2006). It lies between the Northern and Southern states of Nigeria. It shares boundary with Nassarawa, Kogi, Enugu and Taraba states. The state Benue is situated in the guinea savannah vegetation zone.. A very important feature in the area is the River Benue. The River enters Nigeria from Cameron Republic, flowing South-West and meets the River Niger at Lokoja in Kogi state. It has an extensive flood plain for a distance of 187km. Makurdi, the State capital is surrounded by Guma, Gwer East, Gwer West and Tarka local government area.

The Makurdi of today started with the name Lobi, a name derived from one of the tributaries of the River Benue, however, only a few refer toMakurdi as Lobi and such do in bid to attest to their knowledge of the background of Makurdi. However, a name Lobi was immortalized by naming some government owned structures such as Lobi quarters, state own football team-Lobi stars, the brand product of Olam foods limited, Lobi rice, and state own Bank as Lobi Bank.

Makurdi was named after a rich man called Alhaji Adud, who was called "Mai-kudi" which means rich man, with time, not only him was referred to as Makurdi but his environment as well till date (Ingyoroko, 2005).

The climate is characterized by uniformly high temperature and seasonal distribution of rainfall. The rainfall begins with a steady increase from March to July, followed by a lighter and more persistent rain through August and intense rain during September, decreasing in October and November.

The major source of livelihood of the people of Makurdi local government area is agriculture. This is due to the fact that the state is endowed with rich fertile land and that facilitate the production of crops.

b) Data Collection

It is impracticable and uneconomical to obtain information from the entire small-scale farmers in Benue State, so a sample of the population was used for the study. In this case, multi-stage sampling techniques were used. Twenty (20) household of six (6) districts were randomly selected for this study. A total of 120 small-scale farmers were randomly sampled altogather. Data can be collected from defined population by recording the appropriate information about every member of the population (Nwobi, 2008).

The data for this study were collected from both primary and secondary sources. Primary data were collected expressly from the respondent, using a

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structured interview schedule with the 120 small-scale farmers in the study area, while the secondary data were collected from literatures such as textbooks, Journals, research reports etc.

c) Data Analysis

Simple descriptive statistics like mean, percentages and frequency distribution were used to assess the farmers' household size, disposable income, farm and non-farm investments, proportion of cropped area and volume of saving as well as the investments of the rural farmers. Multiple regression analysis was used to identify the determinant of savings made by small-scale famers and f-test was used to test the overall significance of the determinant.

The regression model specification was

$$Y= B_0 +B_1X_1+B_2X_2+ B_3X_3 + B_4X_4 + B_5X_5 + B_6X_6 + e$$

Where,

Y= total annual savings of the small scale farmer

X_1 = Sex (1 for male, 0 for female)

X_2=Age of the famer

X_3= Education level of the farmer (years in school)

X_4 = Occupation of the farmer/nature of the occupation (full time 1, part-time 0)

X_5 = Income of the farmer

X_6= Number of dependant

e = Error term.

III. Results and Discussion

Table 1 : Distribution of respondents according to Crops Grown and income realized

Crop	No of respondents	Percentage (%)	Income (₦)	Percentage Incomee (₦)
Beneseed	23	5.80	990700	6.80
Cassava	60	15.15	136000	0.93
Ground nut	22	5.56	644000	4.42
Guinea corn	46	11.62	561000	3.85
Maize	79	19.95	1190800	8.16
Rice	74	18.69	6127750	42.01
Yam	41	10.35	4217000	28.91
Others	51	12.88	717950	4.92
Total	**396**	**100**	**14585200**	**100**

$1=(N) 160 Source : Field survey 2011

Table 1 revealed that 19.95% of the farmers grew maize with percentage income of 8.16; 18.69% grew rice with percentage income of 42.01; 15.15% produced cassava with 0.93 while 11.62%, 10.35%, 5.80, 5.56% and 12.88% grow guinea corn, yam, beneseed, ground nut and others with percentage income of 3.85, 28.91, 6.80, 4.42 and 4.92 respectively. This shows that the farmers practiced mixed cropping and majority of them grew maize.

Table 2 : Distribution of respondents according to Livestock produced and income realized

Livestock	No of respondents	Percentage (%)	Total Income ₦	Percentage Income (%)
Pig	13	11.40	998,000	33.71
Sheep	6	5.26	243,000	8.21
Poultry	55	48.25	714,100	24.13
Goat	40	35.09	1,005,000	33.95
Total	**114**	**100**	**2,960,000**	**100**

$1=(N160) Source : Field survey 2011

The analysis revealed that majority of the respondents reard poultry which accounted for 48.25% , followed by goat, pig and sheep for 35.09%, 11.40% and 5.26% respectively, as shown in Table 2. The table also indicated that respondents got more money in goat rearing (33.95%) followed by Pig (33.71%) while poultry and sheep had percentage income of 24.13 and 8.21 respectively.

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Table 3 : Distribution according to non-farm activities and income realized

Activity	No of respondents	Percentage of respondents (%)	Income (₦)	Percentage of Income (%)
Driving	9	12.16	1,470,000	12.24
Security	10	13.51	1,781,000	14.82
Trading	14	18.92	1,763,000	14.67
Teaching	5	6.77	1,172,000	9.76
Building	11	14.86	2,160,640	17.98
Fishing	11	14.86	1,428,000	11.89
Others	14	18.92	2,239,000	18.64
Total	**74**	**100**	**12,013,640**	**100**

$1=(N160) Source : Field survey 2011

Table 3 revealed that majority of the respondents involved in trading with a percentage of 18.92, while few of them involved in teaching (6.77%). Meanwhile 18.92% of the respondents were involved in activities such as weaving, digging well as well as tailoring. The table also revealed that 17.98% of the total income is gotten from building, while 12.24%, 14.82%, 14.67%, 9.76%, 11.89% of the total income were derived from driving, security, trading, teaching and fishing respectively. The remaining 18.64% was generated from other activities such as rendering labour services, baby care services, school run services, burnt brick making and cement making services.

Small-scale farmers' savings and investments are largely influenced by several variables like the perception of saving of those who save, their ability,willingness, objectives or motivations for saving and the opportunity to

Table 4 : Purpose of savings

Purpose	No of respondent	Percentage (%)
Care for family	72	51.80
Build house	20	14.40
Buy goods in future	30	21.60
Others	17	12.20
Total	**139**	**100**

Source : field survey, 2011

Table 4 shows various reasons why the small scale farmers in Benue State practice savings. Out of 120 respondents 72 of the farmers which accounted for 51.80% saved to carter for their family in form of paying for predictable expenses (such as school fees/levies, health related matter, among others). 30 of them (21.60%) saved in order to buy some assets or goods (that is, future consumption and target savings) such as grinding mill, motorbike, 20 of them (14.40%) saved to build residential houses, while the rest 17 respondents (12.20%) were of the opinion of savings to cope with unexpected emergencies such as funerals, accidents, sicknesses, natural disasters, and accumulate enough funds for investment.

Table 5 : Disposable Income and Volume of Savings

Disposable Income			Volume of Savings		
Category (₦) x 10^3	No of Respondent	Percentage (%)	Category (₦) x 10^3	No of Respondent	Percentage (%)
≤ 100	44	36.60	No savings	13	10.8
101-200	27	22.50	≤ 100	77	64.20
201-300	11	9.20	101-200	12	10.00
301-400	6	5.00	201-300	8	6.70
401-500	5	4.20	301-400	1	0.80
≤ 500	26	21.70	≥ 401	9	7.50

Source : field survey, 2011.

Table 5 above shows the disposable income and volume of savings made by the farmers in the study area. Out of a total sample of (120), 44 farmers (36.60%) have a disposable income level of N 100, 000 or less and 26 respondents (21.70) are of the income level of N 500,000 and above. According to the result presented in Table 5 above, more than three-fourth (89.2%) of the total respondents practiced saving while 64.2% of the

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respondents had saving volume between N1000 and N 100,000 while the remaining 25.00% had saving volume between N 101,000 and above. The rest 10.8% did not save at all, due to lack or insufficient income.

Table 6 : Distribution of respondents according to Savings Avenue

Avenue	Frequency	Percentage (%)	Average savings (₦)
Bank	48	29	4,634,771
Home	25	15	2,413,943
Club/society	79	47	7,628,061
People	10	6	965,577.4
Others	6	4	579,346.4
Total	**168**	**100**	**16,221,700**

$1=(N160) Source : Field Survey 2011

Table 6 above shows various avenues in which farmers in the study area made their savings. From the result it was discovered that majority of the farmers made their savings in the club/society which accounted for 47% of the entire farmers that made savings with an annual savings of about N 7,628,061. This is in line with the view of Odoemenem, et al. (2005) that farmers make use of informal financial sectors to mobilize savings and develop their rural communities because it gives them access to loans that they cannot get from formal financial institutions due to lack of collateral.

Table 7 : Summary of regression analysis on Determinant of Savings of Small Scale Farmer

Determinant Functional form	Linear		Semi-log		Double log	
	Coefficient	Significant	Coefficient	Significant	Coefficient	Significant
Constant	-4392.91	0.936	-1001351	0.002	-13.827	0.023
Sex	54439.58	0.071**	60080.21	0.233	0.312	0.749
Age	-257.724	0.758	-25793.2	0.681	0.377	0.758
Dependent	-3107.19	0.21	-12415.1	0.686	-1.172	0.053
Education Level	-3683.81	0.133	-66462.9	0.179	-1.364	0.157
Nature of Work	-30876.6	0.305	-23198.4	0.626	-0.279	0.763
Income	0.573	0.000*	113415.7	0	2.257	0
R^2	0.77		0.36		0.36	
F-statistic	66.39		9.06		9.24	

**Significant at 1%, **Significant at 10%. Source : Field survey 2011*

The study examined the influence of different factors on financial saving of the respondents and identified certain variables such as sex, age of the farmer, number of dependents, income level of farmer, educational status of the farmer and nature of the farmer's work.

The estimated determinants of savings of small scale farmers in Benue State were summarized and presented in Table 7. Based on statistical and econometric considerations, the linear functional form was chosen as the lead function. The coefficient of determination (R2) is 0.769, implying that the explanatory variables which accounted for about 77% of the change in saving is attributed to the combined variations in the explanatory variables. The overall significance of a model is measured by using F-test. It has a value of 66.387 which is significant at (0.000). Two variables were statistically significant, and these are sex (10%) and income (1%) of the farmer.

From the result, it then means that a male farmer saves N 54,439.59 than females.

Income as one of the major determinant of saving has a direct influence on the savings of the small scale farmers. From Table 7, it can be seen that a N 1 increase in the income of a farmer will lead to about N 0.57 savings. This confirms the prior expectation that savings is a function of income and this agrees with the view of (Panickar, 1992) that the ability to save depends on the level of income, other things being the same. Given the income, saving of a household is governed by

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consumption expenditure, which in turn is influenced by the size of the family, age composition, availability of desired goods and services in their standard of living.

IV. Conclusion

There is the propensity to save and invest in Benue State, Nigeria, in spite of low income. There are factors that have positive influence on saving and investment behaviour of households surveyed such as level of income and sex. The number of dependents, age composition, nature of work and education level of the small scale farmers in the study area did not have a significant effect on saving. The factors that drove household investment are occupation, expenditure, assets and saving. Given the significance of the income factor in terms of both saving and investment incentives such as improved technology, appropriate farm support services, medium and long term loans should be provided by the government and other actors to farmers in order to boost their income level. Only then can the savings being accumulated in the rural economy be transformed into productive investment that will enhance or uplift their present standard of living.

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