



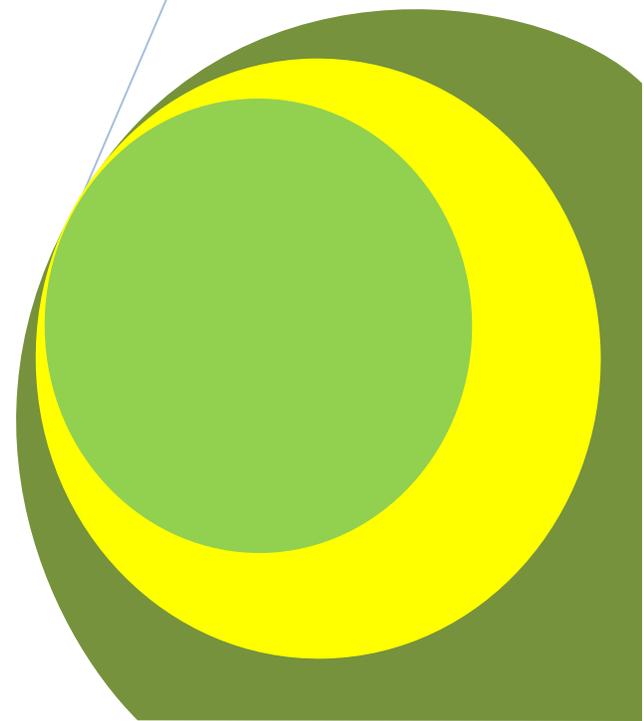
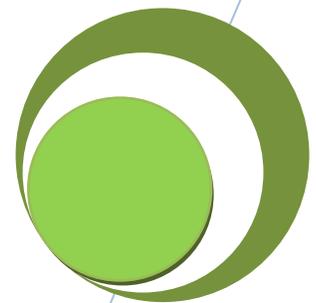
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Socio-Economic Determinants of Savings in Cooperatives by Farmers of Selected Agricultural Group Lending Schemes in Anambra State, Nigeria

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Research Article

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Abstract

The study examined how the socio-economic factors of farmer-members of cooperative in agricultural group lending scheme influence their abilities to make financial savings with their cooperatives. The study was conducted in Anambra State, Nigeria. Data were collected from a total of 296 farmer-members of cooperative societies randomly selected from National Programme for Food Security (NPFS) and Rural Finance Institution Building Programme (RUFIN) agricultural group lending schemes purposively selected for the study. Ten selected farmers, socio-economic factors were regressed on deposit mobilized with the cooperatives by the farmers. Frequency distribution, percentages and means were descriptive statistics used in analyzing data. The lead function from regression analysis showed that 43.08 percent of the total variation in deposit mobilization was explained by the 10 socio-economic variables included in the model. The significant variables affecting deposit mobilization in cooperatives by farmers in the group leading scheme were value of Assets, off farm income, age of household head, level of farm diversification and total value of farmer's loan. More so, the study found that the financial savings mobilized by farmer-members within their cooperatives were meagre averaging ₦1595 and made usually for purpose of securing loans.

Keywords: Socio-economic factors, Savings, Farmers, Cooperatives, Group lending.

INTRODUCTION

Savings has variously been noted as important component to developing a strong rural financial system (Gonzalez-Vega 2003). Its mobilization by peasant farmers in agriculture has been difficult because of peculiarities of the sector and the conditions of small scale farmers. Agriculture is characteristically risky and the transaction cost of providing financial services to these farmers by formal financial institutions has remained high. This has led to the exclusion of small scale farmers by formal financial institutions. Savings is important for accumulation of capital required to generate future income, enable future consumption and to provide mechanism for managing risks. Yet, inability to build appropriate levels of institutional capital from members by cooperatives remains a major problem hampering their development in Nigeria, (Berko 2001; Ijere 1992). The fear of misappropriating depositors' funds and the non-inclusiveness of larger community members are some problems that had further limited the penetration of these organizations in savings mobilization.

Nonetheless, experience shows that some savings are locked up in informal mechanisms that have had limited divisibility, liquidity and ability to be channeled into productive forms. This condition of holding several savings portfolios in illiquid assets is often an expression of limited opportunities of appropriate product and institutional mechanisms that meet the expectations of farmer cooperators. Robinson (1994), had posited that appropriate deposit facilities and institutional structures are all that is required to ensure significant savings among the poor. More so, current theoretical arguments by scholars of rural finance tend to counter long held perceptions of low savings capacity and demand for deposit facilities by the poor (Zeller 1994; Fiebig, Hanning and Wisniwski 1999). It is now generally acknowledged that households and in fact, the poor will deposit their surplus capital in financial institutions that provide demand-oriented deposit facilities (Robinson 2001; Wright 2003). This invariably recognizes the roles of appropriate institutional settings in achieving high level of savings outreach and impact. Nonetheless, in light of this new thinking, several development and donor agencies have recognized the importance of savings mobilization by

revising their financial market development strategy to also promote this financial service (World Council of Credit Union 1990, International Fund for Agricultural Development IFAD 1988, 2008). Again, group lending has gained prominence, as institutional paradigm promoted by these development agencies, federal government of Nigeria and Anambra State in financing agriculture. In Anambra State, the group lending approach has been utilized in Fadama III, state supervised Agricultural lending programme, Rural Finance Institution building programme (RUFIN), National Programme on Food Security (NPFS) and various other poverty lending programmes.

Besides, research studies on group lending with joint liability have largely centered on the roles of group incentive, actions and composition in controlling delinquency (Sharma and Zeller 2000, Chowdury 2005, Ahlin and Townsend 2007). Also, most studies on determinants of savings had focused on price factors. How savings are mobilized in group lending scheme and the impacts of savers socio-economic characteristics on savings mobilization are gaps to be filled by research.

This scenario therefore raises the research question as to whether the farmer-cooperatives used in group lending programmes hold any potential in terms of serving as appropriate institutional mechanism for promoting financial savings mobilization. Also, to what extent are the socio-economic characteristics of the farmer-patrons affecting their abilities to mobilize savings with these cooperatives? The study therefore aims to find out the savings behaviour of farmer-patron-clients of group lending scheme and also understand how the savers socio-economic characteristics influence their abilities to make financial savings with their farmer cooperatives. It is hoped that the findings of this study will aid policy direction and programme formulation in rural finance.

METHODOLOGY

Study Area

The study was carried out in Anambra State located in South East, Nigeria. The State was created 27th August 1991 and is one of the 36 states in Nigeria. Its capital is Awka with 21 local government areas composing the state. The coordinates are 6°20'N 7°00'E. Anambra State has a total land area of 4884km² with total population of 4,055,048 (2006 census) and 837/km² population density. The state is divided into three geopolitical zones which are Anambra-South, Anambra Central and Anambra North. Agriculture is the major occupation of the people of the state, with economic activities centering largely on food production, processing, marketing and distributive trade. In 2007, the state's GDP was of \$1,585 (anambra.ng.org).

Sampling Procedure

A combination of purposive and multistage random sampling technique was used to select respondents for the study across the three geopolitical zones of the State. A preliminary investigation in Anambra State showed that National Programme for Food Security (NPFS) and the Rural Finance Institution Building Programme (RUFIN) were two top most agricultural group lending scheme currently utilizing the cooperative groups in their administration. The study therefore purposively selected NPFS and RUFIN programmes. These two programmes are currently being implemented in the state with an agricultural group credit scheme component funded to the tune of USD 30m and USD 27.2m by the Islamic Development Bank and International Fund for Agricultural Development (IFAD) respectively. In all, 27 cooperatives and 296 farmers were selected for the study.

Method of Data Collection

Structured questionnaire was the instrument used to collect cross sectional data from these respondents. The data collected included demographic and household variables – age of household head, gender, household size, farming experience, educational level, credit constraint status, dependency ratio, value of assets, off farm income, total value of loans etc.

Analytical Tools

Descriptive statistics including frequency distribution, percentages and averages were applied in analyzing the socio-economic and demographic profiles while multiple regression analysis was run to evaluate the effect of selected household factors of savers on amount of savings with the cooperative societies. Amount deposited with the cooperative was the dependent variable used as proxy for savings mobilization. The multiple regressions was fitted to

test how the dependent variable can be explained by socio-economic characteristics of the saving farmer. The model postulated was implicitly specified as:

$$SAM = f (HOS, FME, VOA, OFI, CCS, DPR, AGE, FMD, TVL, HYS, e)$$

Where:

SAM	=	Amount of deposit with the Cooperative in 2011
HOS	=	Household size (number)
FME	=	Farming Experience (years)
VOA	=	Value of Assets (naira)
OFI	=	Off Farm Income/Month (naira)
CCS	=	Credit Constrained Status (Credit Constrained =1, Otherwise =0)
DPR	=	Dependency Ratio (Proportion)
AGE	=	Age of Household Head (years)
FMD	=	Farm Diversification (engaged in more than one enterprise = 1, otherwise = 0)
TVL	=	Total value of loan accessed (naira)
HYS	=	Household Head years of Schooling (years)
e	=	Error Term

The linear, semi-log, double log and exponential functional forms were tried using ordinary least square technique (OLS). This was because with the normality assumption for e , the OLS estimators are normally distributed and they are said to be best unbiased estimators BUE (Gujarati 1995). The estimation of the econometric model was carried out using e-view 7 statistical package.

RESULTS AND DISCUSSION

Socio-economic Characteristics of Farmer-savers in Group Lending Scheme

From Table 1, the distribution of respondents according to gender showed that there were more males (65.88 percent) than females (34.12 percent). This is supported by Adeyemo and Bamire (2005), who found that members of cooperatives are predominantly men. The mean household size of the cooperators from this study was 5.27 persons. This size compares to the average household size of 5.0 persons in Nigeria (Nigerian Demographic Health Survey 2003). It shows that the household size of this survey is representative of what is obtainable in Nigeria.

Table 1: Distribution of Socio-demographic profile of farmer-members of Cooperative Societies in the Group-Lending Programmes (NPFS and RUFIN) (N = 296)

Variables	Frequency	Percentage
Gender		
Male	195	65.88
Female	101	34.12
Household size		
<5	117	39.52
5-9	165	55.74
10-14	14	4.73
Mean household size	5.27	
Farming experience (years)		
2-16	91	30.74
17-31	124	41.89
32-46	72	24.32
47-61	9	3.04
Mean years of farming	24.37	
Age of household head		
20-35	49	16.55
36-45	58	19.59
46-55	71	23.99
> 55	118	39.86
Mean age of household	50.23	
Head of household level of Education (year)		
No formal school	76	25.68
Primary school	97	32.77
Secondary school	86	29.05
Tertiary school	37	12.50
Mean years of education	7.53	

Source: Field survey 2011

The households in this study have had experience in farming ranging between 2 – 61 years. The mean year of farming for them was 24.37 years. However, majority of the farm households (66.27 percent) have experience of between 17 – 46 years. It means from this result that farm households saving in group lending scheme were very experienced in techniques and practices of Agriculture. The mean age of the households head was 50.23 years.

This compares with findings of Oke, Adeyemo and Agbonlabor (2007) of 50.52 years. Again, 60.13 percent of the farm households who saved in their cooperatives within the group lending scheme were headed by persons of age between 20 and 55 years. The mean years of education of the farmer savers were 7.53 years. The percentage of the illiterate farmer-savers was 26.68 percent. This figure is less than the national average of 36 percent (Nigerian Demographic Health Survey 2008). Those with tertiary education stood at 12.50 percent. This result points to the fact that average savers in this study at least acquired primary school education and therefore are literate.

Farmers' Socio-economic Characteristics that Influence Savings with Cooperative Societies

Based on the R^2 , F-statistic, AIC and the theoretical expectation of the variables from Table 2, the double log function was chosen as lead equation. This table shows the regression estimates for the household factors affecting savings by farmer cooperators in group lending scheme in Anambra State. Table 2 showed that 43.01 percent of the total variation in farmers saving within the cooperative was explained by the 10 independent variables included in the model. The F-statistic (12.56) confirms the suitability of the overall regression equation.

Table 2 Result of Multiple Regression of Socio-economic Factors on Level of Financial Deposit Farmers Mobilize with their FMCS

Variables	Functional Forms			
	Linear	Semi-Log	Double Log	Exponential
Constant	2405.262 (2.934012)**	-2221.934 (-0.601502)NS	2.996152 (2.621961)**	6.731343 (19.61586)**
HOS	34.73651 (0.572931)NS	180.4230 (0.368040)NS	0.199537 (1.322080)NS	0.035072 (1.383417)NS
FME	19.09070 (1.381775)NS	615.3110 (1.735718)*	0.091853 (0.839819)NS	0.001182 (0.204340)NS
VOA	0.000190 (1.679566)*	559.1272 (2.87840)**	0.246235 (4.094842)**	9.22E-08 (1.953303)*
OFI	-0.001052 (-0.662690)NS	-230.6146 (-1.288379)NS	-0.148674 (-2.704714)**	1.06E-07 (0.159406)NS
CCS	-630.4969 (-1.853834)*	-642.2152 (-1.274227)NS	0.058325 (0.376635)NS	-0.056546 (-0.397590)NS
DPR	-52.45619 (-0.635461)NS	37.29150 (0.127692)NS	-0.037319 (-0.412487)NS	-0.040479 (-1.174031)NS
AGE	-22.94671 (-1.788684)*	-1161.332 (-2.035031)**	-0.571989 (-3.265586)**	-0.007602 (-1.419109)NS
FMD	-87.77563 (-0.305114)NS	-177.2368 (-0.422387)NS	--0.219996 (-1.705772)*	0.0093077 (-0.770969)NS
TVL	0.002314 (2.440051)**	294.7998 (1.922630)*	0.345075 (7.316455)**	2.31E-06 (5.808342)**
HYS	-3.142563 (-0.107886)NS	-663.2131 (-1.186009)NS	0.024091 (0.140198)NS	0.012221 (1.000245)NS
R-squared	0.061356	0.126988	0.430809	0.180831
Adjusted R-squared	0.028188	0.074712	0.396521	0.151679
F-statistic	1.849872	2.429183	12.56421	6.203047
Prob (F-statistic)	0.052158	0.009985	0.00000	0.00000
Akaike information criterion	18.43726	18.71662	2.538702	2.874944
Durbin-Watson Stat	1.557711	2.704246	1.478546	0.828081

Source: Econometric analysis output from E-views 7 software on Field Data 2011

** Significant at 5% level; * significant at 10%, NS- Not significant.

Figures in parenthesis indicate t-statistic

The result shows that value of asset, off-farm income, age of the household head and total value of loan were significant at 5 percent. The coefficient for value of asset is positive. A result that suggests the more the farmer acquires, own or uses assets that are productive, the more his savings with the Cooperative increases. It can be explained that those assets farmers own generate earnings for their households. This result concurs with studies of Sameroyina (2005); Shrooneten and Stephan (2003). Off-farm income had a negative coefficient. Off farm income of respondents did not improve the farmers' ability to make deposit with their society. When off farm income increases, they ploughed these additional earnings into more diversified businesses than make deposits with their cooperatives. They may rather have chosen other alternative sources to deposit these additional earnings.

Age of the household head had a negative coefficient of (-0.572), implying that aging by one year will result in a decline in farmer's savings with cooperative by about 0.572 Naira. Farmers decreasing their savings as they old uphold the life cycle hypothesis of savings. It is expected that savings by the adult especially above 30 years would reduce with age as they grow towards and beyond retirement age. The earlier finding that savers of the study area were of the mean age of 50 years prompted their lowered interest in savings mobilization with the cooperative.

The total value of loan accessed was found to have a positive coefficient. This means a direct relationship with farmers' ability to save with cooperatives through group lending scheme. It can be concluded that total value of loan has a net effect on savings, such that, an increased access to loan will cause a rise in savings by the farmer with its cooperative. This may have been so because the group lending programmes required farmers to make a down payment deposit into the cooperative (Apex) as compulsory savings. Therefore, this actually may not

necessarily reflect the farmers' capacity to make voluntary savings. However, the study conducted by Rogg (2000), confirms the result from this model.

Household heads years of schooling, credit constraints status, farming experience and household size were variables whose coefficients were positive but non significant. While dependency ratio was negative as well non-significant. One striking result is from Household size, whose coefficient was positive and not as theoretically expected although non significant, it appeared that increasing household sizes had increasing effect on saving, which when taken closely with the sign for dependency ratio, makes one believe that these saving households were of big sizes but mostly non dependents.

Savings Pattern of Farmer-Cooperators in the group lending scheme

From Table 3, the mean savings mobilized by farmers in group lending scheme with cooperative societies in 2011 was ₦1595.46. This amount did not include the deposits maintained compulsorily as condition for borrowing from the scheme.

Table 3: Distribution of deposits maintained with cooperative by farmers of the Group Lending Programmes

Annual Savings with Cooperative in 2011 (₦)	Frequency	Percentage
1 – 1000	167	56.42
1001 – 2000	54	18.24
2001 – 3000	25	8.44
3001 – 4000	21	7.09
4001 – 5000	25	8.44
> 5000	5	1.69
Total	296	100.00
Mean savings	1595.46	

Source: Field Survey, 2011

Over half of the savers (56 percent) saved between ₦1 and ₦1000. This low savings percentage could be attributed to socio-economic factors inherent in the households rather than features of the group credit programme. More so, 18.24 percent of farmers saved between ₦1001 - ₦2000, 8.44 percent saved ₦2001 - ₦3000, while 7.09 percent saved between ₦3001 - ₦4000 and 8.44 percent saving between ₦4001 - ₦5000. Surprisingly, those savers who deposited over ₦5000 with the cooperative in 2011 were only 1.69 percent. This low savings confirm the state of peasant farmers in Nigeria i.e. the notion of vicious cycle of poverty (low income, low savings, and low investment). It can be argued that these amounts savers made with the societies did not confirm them as effective institutional mechanism for delivering this financial product.

CONCLUSION

This survey showed that agricultural group lending programme in Anambra State has not fostered financial savings mobilization among farmers within their cooperative societies. The farmers did not find the savings service provided by their cooperative attractive because these member-based institutions pay low interest. Members had only saved with the cooperative merely to obtain credit. This conclusion is very instructive for any remedial measures that would make cooperative institutions provide demand-driven and competitive savings service in rural financial market. However, increasing the asset holding of farmer-cooperators, reducing off farm income, diversification, encouraging young farmer-entrants and making more loans available to ease credit constraint status of the farmer are socio-economic influences critical to increasing financial deposit mobilization. The study therefore provided evidence for the consideration of farmers' socio-economic factors in peer selection if effective rural savings services are to be achieved within the cooperative sector.

REFERENCES

- Adeyemo, R. and Bamire, A.S. (2005). Savings and Investment Patterns of Cooperative Farmers in South-Western Nigeria *Journal of Social Sciences*, 11(3): 183-192.
- Ahlin, C. and Townsend, C. (2007). Using Repayment Data to Test across Models of Joint Liability Lending *Economic Journal* 117, F11-F51.
- Berko, S.Y. (2001). Agricultural Producer Cooperatives and Agricultural Development in Nigeria. *Nigerian Journal of Cooperative Economics and Management* 1(1), 54-89.
- Chowdury, P.R. (2005). Group Lending: Sequential Financing, Lender Monitoring and Joint Liability. *Journal of Development Economics* 77, (2), 415 – 439.
- Fiebig, M., Hanning, A. and Wisniwski, S. (1999). Savings in the Context of Micro Finance – State of Knowledge. Eschborn: Consultative Group to Assist the Poorest.
- Gonzalez-Vega (2003). Deepening Rural Financial Markets: Macroeconomic Policy and Political Dimensions. *Lead Theme Paper at Paving the Way Forward for Rural Finance: An International Conference on Best Practices, Washington D.C. June 2-4.*
- Gujarati, D.N. (1995). Basic Econometrics. Economic Series (3rd edition) New York: McGraw-Hill Book Company.
- Ijere, M.O. (1992). *Prospects of Nigerian Cooperatives*. Enugu: ACENA Publishers. International Fund for Agricultural Development IFAD (1988). Credit for the Rural Poor: A review of IFAD's experience, 1978 – 1987 Rome: IFAD.
- Nigerian Demographic and Health Survey (2003). National Planning Commission (NPC) Abuja.
- Nigerian Demographic and Health Survey (2008). National Planning Commission (NPC) Abuja.
- Oke, O.T.O., Adeyemo, R. and Agbonlahor, M.U. (2007). An Empirical Analysis of Microcredit Repayment in South Western Nigeria *Humanity and Social Sciences Journal* 2(1) 63-74.
- Robinson, M.S. (2001). Savings and New Microfinance. The Microfinance Revolution. Washington D.C.: World Bank.
- Robinson, M.S. (1994). Savings Mobilization and Microenterprise Finance: The Indonesian Experience. In Motero and E. Rhyne (eds). *The New World of Microenterprise Finance* Most Hartford: Kumarian.
- Rogg, C.S. (2000). The Impact of Access to Credit on Savings Behaviour of Micro-entrepreneurs: Evidence from three Latin American countries. *A Paper Based on a Thesis Submitted to University of Oxford in June 1999.*
- Sameroyina, Y. (2005). Consumption and Savings Behaviour in Russia. The Economics of Savings In J.H. Gapinskin (ed) London: Kluwer Academic Publishers.
- Schroonten, M.S. and Stephen, S. (2003). Private Savings in Eastern European EU-Accession countries: Evidence from a Dynamic Panel Data Model: German Institute for Economic Research, Berlin.
- Sharma, M. and Zeller, M. (2000). Factors Affecting Repayment Rates in Group-based Lending: Findings from Bangladesh and Madagascar. International Food Policy Research Institute Policy Brief No 9 Washington D.C: FPRI.
- World Bank (2008). *Making Finance Work for Africa* Washington D.C: World Bank.
- World Council of Credit Union WOCCU (1990). News from the World Council of Credit Union. Madisen, Wisconsin USA.
- Wright, G. (2003). Designing Savings: Equity Building Society's Jilenge Savings Account the Micro Finance Bulletin No 9 pp 29-32.
- Zeller, M. (1994). Determinants of Credit Rationing: A Study of Informal Lenders and Formal Groups in Madagascar *World Development* 22 (12): 1895-1907.