

APPLIED

TROPICAL AGRICULTURE

AN INTERNATIONAL JOURNAL



VOLUME 28, NO. 1

JUNE, 2023

ASSESSMENT OF SMALL HOLDER FARMERS SAVINGS IN IKA SOUTH LOCAL GOVERNMENT AREA OF DELTA STATE, NIGERIA

¹Belonwu, N. E., Moseri, H., Umeri, C., and ²Nwabeze, G. O.

¹Dept. of Agricultural Science, University of Delta, Agbor, Delta State.

²Research outreach department, National Institute for freshwater fisheries research, New Bussa, Niger State

Corresponding author E-mail: eunice.belonwu@unidel.edu.ng, ego4life03@yahoo.com

Abstract

Savings by small holder's farmers play significant role in both agricultural production, home management and rural livelihood. It's on this the study assess the factors that determine savings among smallholder farmers in Ika south local government area of Delta State, Nigeria, specifically it investigated the socioeconomic characteristics of smallholder farmers; identify the major reasons they save; and determine factors influencing savings. Multi –stage sampling method was used in the selection of one hundred and thirty-two (132) respondents. Descriptive and inferential statistical tools were used to analyze data collected. Results revealed that respondents were of age (49 years), mostly male (84.6%), married (66.7%), educated (82.5%) with household size of six persons, experienced in farming (15 years) with many (65.15%) earning income of ₦20,000-50,000 and involved in small scale production, Majority (54.5%) save cash and patronized formal saving institutions, The result revealed majority (69.6%) were constrained by inadequate farm income and that significant relationship existed between age ,sex, marital status, education, household size, farming experience, farm size, household income and their method of saving. Based on the findings, it was concluded that they have been involved in savings with formal financial institutions. However, their saving has been affected negatively. It therefore important, they are encouraged to go into large scale production that improves productivity, attract more income and have enough to save.

Key words: Savings; Smallholder Farmers; Determinant, Financial institutions

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 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 earns 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 Osondu et al .(2015) Saving is the most important factors of economic growth. It constitutes the basis for investment, capital formation, growth and development of the country. Smallholder farmers are farmers owning small-scaled plots of land where they grow subsistence crops and one or two cash crops while relying almost exclusively on family labour. These farmers impact significantly towards improving agriculture in sub-Sahara Africa and they play an essential role in Nigeria where more than 80 percent of all farming activities in the country provide up to 98 percent of the food supply for most crops. However,

small plot sizes, limited access to markets, inputs and finance make smallholder production unprofitable. The resulting effect is usually seen in small scale farmers producing low-yield, low quality crops not been enough for domestic consumption. The saving of small-scale farming sector plays significant roles to the Nigeria economy, reason been that its income generated and the employment potential instructive in them which sets limits of the sector to the growth of the other areas of the economy. Over the years many small-scale farmers in Nigeria have increasingly become unable to finance their farming activities. These farmers according to Babatunde et al. (2007) are characterized by their engulfment in endless loop in poverty due to low productivity, low income, low savings, and low investment. It was further observed that this endless loop in poverty in low area has been identified as one of the major factors impeding rapid economic development. Past effort at overcoming these problems were traced to absence of substantial savings and easy access to ((credit facilities by farmers; due to inadequate and inappropriate choice of a saving plan. Odemenem et al. (2013) found (that in adequate savings by the small-scale farmers is among other factors facing the development of agricultural sector in Nigeria. Despite these problems, policy makers have not really drawn up adequate and comprehensive rural saving scheme Ogowanighie, (1997).

Savings of rural household in Nigeria has been researched on severally but upon these researches, there seems to exist dearth of empirical knowledge of the study in Delta State. Again, judging from the local view on the savings and behaviour that small scale rural farmers do not save because they have low productivity as they confined to local methods of farming which seems unjustifiable in Delta state. It is against this backdrop that the study assessed small holder farmer's savings in Ika South Local Government Area of Delta State, Nigeria. Specifically, it describes socioeconomic characteristics of smallholder farmers in the research area; find out the major reasons why

smallholder farmers save and identify constraints to saving in the research area.

The hypothesis tested:

H₀₁: Socio-economic characteristics of smallholder farmers are not significant determinants of their decision to save.

Methodology

Ika south local government Area is one of the 25 local government areas of Delta State with headquarters in the town of Agbor. It has an area of 436 km² and a population of 162,594 at the 2006 census (National Population Commission, 2006). It comprised of 22 villages. It is in Delta North Agricultural Extension Zones. A narrow Local Government Area located in the northern part of Delta state. It shares borders with Ika North East and Aniocha South Local Government Areas. The predominant occupation of the people is farming, rearing of animals and trading.



Fig 1: Map Indicating Ika South

Sampling procedure and sampling size

A multi-stage random sampling method was used in the selection of the respondents (Table 1). The first stage was the purposive selection of one agricultural zone from the three zones in the state which is Delta north agricultural zone and the criterion for the selection is the high rate of smallholder's farmers in the area and proximity. The second stage was the purposive selection of one block (LGAs) out of the nine blocks (LGAs) in Delta North. Ika South block (LGAs) was selected. The third stage was the random selection of eleven cells (communities) from the 22 cells in the area, thirdly was the random sampling of 12 farmers from the eleven cells,

giving a total sample of one hundred and thirty-two (132) as indicated in Table 1.

Table 1: Sample Distribution

Cells	Sampled
Abayo	12
Agbor-nta	12
Ewuru	12
Oki	12
Alihagwu	12
Omumu	12
Idumuoza	12
Ekuku-Agbor	12
Oza-nogogo	12
Alisimie	12
Total 11 villages	132

Method of Data Analysis

Descriptive statistics such as frequencies, means, tables and percentages were used to analyze the socioeconomic of small holder farmers, Method of saving, Savings institution patronized Perceived reasons why small holder farmers save, and constraints that militate against savings. While chi square was used to determine their relationship between farmer’s socio-economic characteristics and their method of saving.

Analytical Techniques

Data was gathered from primary source, using questionnaire and interview schedule.

Descriptive statistical tools such as frequency, percentage, mean and ranking while chi-square was used to test the hypothesis.

Model Specification

Chi-square was used to test the relationship between two or more samples under investigation. The model is Mathematically expressed as: $\chi^2 = \sum \frac{(O_i - E_i)^2}{E_i}$

Where:

X^2 – chi-square calculated

O – observed frequency

E – Expected frequency.

To obtain E: row total X column total/N

For the degree of freedom (df). (R-1)(C-1)

Where r – row, c – column.

The Chi-square test of independence, which was performed using the STATA software, tests the hypothesis that there is no relationship between smallholder farmer’s socio-economic characteristics and their method of saving. The decision to reject or fail to reject this hypothesis is based on the significance of the corresponding P-value (Gujarati, 2004). During the analysis, this test was adopted to test whether the decision to save or not was significantly associated with socio-economic characteristics of smallholder farmers.

Operationalization of Variables

The multiple regression model of the determinants of farmers’ income and savings is explicitly stated as follows;

$$Y = b_0 + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 + b_9x_9 + b_{10}x_{10} + e_i \dots (I)$$

Where;

- (a) Social economic characteristics of respondents

The following characteristics of the respondents were measured as follows:

X^1 = Age of the respondents (measured in years)

X^2 =sex (male or female)

X^3 = marital status (dummy variable: married = 1; single= 0)

X^4 =Household size (no. of persons living together under same roof)

X^5 = Education level (number of years spent in school)

X^6 = Farm size (hectare)

X^7 = Farming experience (years)

- (ix) Mode of savings: they were asked to indicate their mode of savings (formal institutions, Informal institutions or (Isusu) monthly savings (#).

- (b) Reasons for farmers savings: this was obtained by farmers indications on their reasons for savings Effect of farmers savings was determined through a multiple regression

Result and Discussion

Socio-economic characteristics of respondents

Table 2 shows the age distribution of the respondents and the result indicated that some proportion (31.8%) of the farmers was in the age bracket of 46-55 years with a mean age of 49 years. This implies that they were in their productive age. Similar result has been reported by Belonwu (2016) who noted that these able persons can save and also cater for their household welfare if the necessary assistance is given or provided. Majority (84.1%) were male while (15.9%) were female. This suggests that the women were help mates to their spouse as such do not claim full ownership of their farm enterprise; it therefore implies harmonious life's among the farm families. Majority (66.7%) were married, (17.5%) were single, (9.8%) were widowed while (6.1 %) were divorced. Majority been married suggests sense of responsibility among the farmers. The education status of the respondents revealed that a high proportion (42.2%) had secondary education, (28.8%) had primary education, (17.4%) had no formal education, (5.3%) had NCE/OND while (6.1%) had HND/B.Sc./BA. This suggests that (82.5%) of the farmers had formal education by implication they can read and write. Belonwu (2016) reported that a high educational attainment do promote economic diversification, which will improve farmers household welfare. The household size revealed that a high number of them (43.9%) had an average size of 4 persons and less, (30.3%) had a household size of 5-8 persons, (16.7%) had a household size of 9-12 persons while (9.0%) had a household size above 12 persons. The mean household size was 6 persons. This proposes a fairly large household size, suggesting that family labour can be utilized for their farm operations. Result shows that (39.4%) of them had over 20 years' experience, with a mean of 15 years, Belonwu (2016) confirms the finding, suggesting that such an experience among farmers places them in better opportunity of making farm decision with regards to saving. High proportion of them (65.15%) earned an income of ₦20000-₦50000, (27.3%) earned ₦51,000 and above while (7.6%)

earned an income less than ₦20000. The result suggests that they earned varied income, probably because of their farm size, crop grown and farming pattern. High number of (42.4%) cultivated farm size of 3-4 hectares, (25.8%) cultivates 1-2 hectares with (15.9 %) cultivating less than 1 hectare and 4 hectares respectively with a mean farm size of 2 hectares. This result suggests that they cultivated small farm holdings and by implication, their cultivation is on a small scale production. This is similar to Onumadu (2009) that most farmers in the rural area generally have small holdings. **Method of saving**

Table 3 shows that a high proportion (54.5%) of them save cash, (26.5%) save in cooperative societies, (15.9%) save in Isusu while (3.0%) save non momentary. This shows that their engagement in savings but the savings differ from farmers. The implication of this result is that if better saving agencies are made available, there is possibility for them to save more.

Table 3: Method of saving

Method	%
Cash	54.5
Non-monetary	3.0
Cooperatives societies	26.5
Isusu	15.9
Total	100.0

saving method

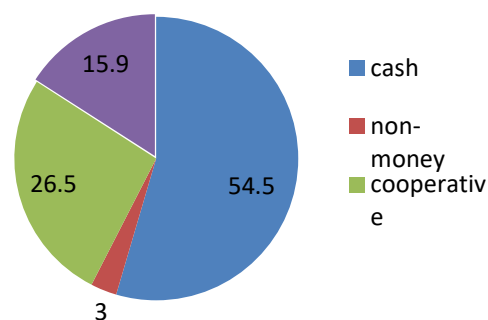


Fig: II Showing Saving Percentages

Savings institution patronized

Table 4 shows that majority (63.6%) of the respondent’s patronized formal savings institution while 36.4% patronized informal saving institution. This could be as a result of their educational level, aggressive marketing among the formal saving system in the area, assured safety of their savings, and accrued interest to savings among others and if other

better informal financial institution is provided, the respondents can better appreciate saving in such institution. This is not in agreement with Odoemenem, *et al.*, (2013) that reported that farmers make use of informal financial sectors to make savings and improve rural livelihood, which gives them access to loans they couldn’t obtain from formal institution due to lack of collateral.

Table 2: Socio-economic characteristics (N=132)

Characteristics	Categories	%	Mean
Age	26-35	11.5	49
	36-45	25.8	
	46-55	31.8	
	56-65	19.7	
	>65	11.5	
Gender	Male	84.1	
	Female	15.9	
Marital status	Single	17.5	
	Married	66.7	
	Divorced	6.1	
	Widowed	9.8	
Education status	No formal education	17.4	
	Primary education	28.8	
	Secondary education	42.4	
	NCE/OND	5.3	
	HND/BSc/BA	6.1	
Household size	≤4	43.9	6
	5-8	30.3	
	9-12	16.7	
	>12	9.0	
Farming experience (years)	0-5	28.1	15.5
	6-10	22.6	
	11-15	9.1	
	16-20	0.8	
	Above 20	39.4	
Income (₦)	<20,000	7.6	
	20,000-50,000	65.1	
	51,000 and above	27.3	
Farm size (ha)	<1	15.9	2.02
	1-2	25.8	
	3-4	42.4	
	5-6	15.9	

Source: Field Survey Data, 2021

Saving characteristics

Table 4: Saving institution patronized by respondents

Saving institution	%
Formal	63.6
Informal	36.4
Total	100.0

Perceived reasons why small holder farmers save

Table 5, shows that (92.25%) of the farmers save in order to increase their production, (87.1%) save to have a sense of belonging while (84.1%) save for their children education. Other reasons are for capital formation (58.8%), acquire more land (47.0%) and marry more wives so as to add to family labour (27.7%). This reason suggests that the respondents save for several reasons. However, the major reason among the respondents is to increase their production.

Table 5: Perceived reasons why small holder farmers save

Variable	%*yes
Increase production	92.2
Sense of independence	87.1
Children’s education	84.1
Capital formation	58.3
Acquire more land	47.0
Marry more wives so as to add to family labour	27.7

*Multiple responses

Constraints to saving

The constraints face by respondent to saving are inadequate farm income (69.6%). Not been able to withhold enough cash for business retards

farmers involvement into agricultural activities Belonwu, (2016), lack of collateral (64.3%) bureaucracy involved in opening bank account (61.3%) and high consumption rate out of available income (54.3%). Other constraints include inadequate access to credit (51.5%), fear of bank failure (50.0%), inadequate income resulting from absence of productive resources and low return (49.2%), delay of time involved in putting and withdrawing and saving from the institution (47.75) and delay and congestion in bank (46.9%). This least constrain was lack of access to financial services (24.2%) Hitt, et al (2002), were of the opinion that lack of access to financial services has been one of the constraints limiting smallholder’s savings. This is capable of pushing the respondents out of production if not addressed.

Relationship between farmer’s socio-economic characteristics and their method of saving

The (X^2) on table7, shows that eight variables were hypothesized to explain relationship between smallholder farmer’s socio-economic characteristics and their method of saving, it indicated that significant relationship existed between age (X^2 14.242, $p \leq 0.05$), sex (X^2 61,364, $p \leq 0.05$), marital status (X^2 , $p \leq 0.05$), education (X^2 , $p \leq 0.05$), household size (X^2 77.091, $p \leq 0.05$) farming experience (X^2 215.879, $p \leq 0.05$), farm size (X^2 24.788, $p \leq 0.05$), household income (X^2 61.409, $p \leq 0.05$) and their method of saving. This result suggests that farmer’s method of saving have been influenced by these socio-economic characteristics.

Table 6: Constraints to savings

Constraints	%	Rank
Inadequate income	69.6	1
Lack of Collateral	64.3	2
Bureaucracy involved in opening bank Account	61.3	3
High consumption rate out of available income	54.5	4
Inadequate access to credit	51.5	5
Fear of bank failure	50.0	6
Inadequate income due to lack of access	49.2	7
Delay in saving and withdrawing in bank	47.7	8
Congestion in bank	46.9	9
Low interest paid on saving banks	30.3	10
Educational level	26.5	11
Delay in disbursement	26.0	12
Lack of access to financial services	24.2	13

Table 7: Relationship between farmer’s socio-economic characteristics and their method of saving

Variable	X ²	Df	p-value
Age	14.242	3	0.003*
Sex	61.364	1	0.000*
Marital status	125.758	3	0.000*
Education	65.803	4	0.000*
Household size	77.091	4	0.000*
Farming experience	215.879	4	0.000*
Farm size	24.788	3	0.000*
Household income	61.409	2	0.000*

* Significant at 5% level (p ≤ 0.05)

Conclusion and Recommendations

The study concluded that farmers have been involved in savings with formal financial institutions. However, their saving has been affected negatively, which were capable of forcing them out of production if not addressed. It is therefore recommended that farmers should be encouraged by extension agents and other agencies to go into large scale production, this will improve productivity, increase income and give room for more saving and that they should save more in cooperative societies as these societies have been found to be a better option of raising production fund easier when compared to other formal financial institutions. Formal institutions be made closer and accessible to the farmers, which will encourage them to patronize these saving institutions.

References

Babatunde, R.O., Fakayode, S.B., Olorunsanya, E.O. & Gentry, R.A. (2007). Socio-Economics and Saving Patterns of Cooperative Farmers in South-Western Nigeria. *The Social Sciences*. 2(3): 287-292.

Belonwu, N. E. (2016). *Relative Contributions of Farm and Non- Farm Activities of Rural Women to Household Quality Of Life in Edo and Delta States, Nigeria*. PhD Thesis in Department of Agric. Economics and extension, faculty of Agriculture Ambrose Alli University Ekpoma, Edo State.

Hitt, L.M. & Frei, F.X. (2002). Do better customers utilize electronic distribution channels? The case of PC banking. *Management Science*, 48(6): 732-748.

Odoemenem, I.U., Ezihe, J.A.C. & Akerele, S.O. (2013). Saving and Investment Pattern of Small-Scale Farmers of Benue State, Nigeria. *Global Journal of Human Social Science Sociology and Culture*, 13(1): 7-12.

Odoemenem, I.U. Ezike, K.N.N., & Alimba, J.O. (2005). Assessment of Agricultural

- Credit Availability to Small-scale Farmers in Benue State. *Journal of Agricultural Science and Technology*, Vol. 15(1&2) pp. 79-87.
- Ogwanighie, A. M. (1997). Savings and Investments Pattern of small scale farmers in some selected villages in Ogbadibo Local. Government Area, Benue State, Nigeria.
- Olawepo, R. A. (2010). Determining Rural Farmers' Income: A Rural Nigeria Experience. *Journal of African studies Development* Vol. 2(4) pp 99-108.
- Onumadu, F.N. (2009). Analysis of factors affecting Cocoyam Production in Umuahia North L.G.A of Abia State, Nigeria. *Journal of Agriculture and Social Research (JASR)*. 9(1): 149-155.
- Osondu¹, C. K. Obike², K. C. &Ogbonna S. I. (2015). Income and Investment Patterns and Its Determinants among Small Holder Arable Crop Farmers in Umuahia Capital Territory, Abia State Nigeria. *European Journal of Business and Innovation Research* 3 (1,) 51-70.

