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DETERMINANTS OF SAVING CAPACITY OF RURAL WOMEN FARMERS IN EBONYI STATE, NIGERIA

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ABSTRACT: *Rural women farmers play significant role in both agricultural production and home management. Despite these roles, their saving capacity seems to have been empirically documented in Ebonyi State Nigeria. A multistage random sampling technique involving three stages was employed in the section of 180 respondents. Results showed that at 1% level of significant; household size, farm cash income, farm output and distance to nearest market were the major determinants of saving capacity. The women mainly save in non-cash way which involved saving through investment in livestock production and storage of farm produce. However, minority of the women that practice cash saving, safe keep their money in the house and lending of money to fellow needy farmers. Fear of bank failure, inadequate income due to lack of access to productive resources and low returns, high consumption rate out of available income, and bureaucracy involved in opening bank account were identified as the major constraints to rural women farmers saving capacity. The study based on the finding recommended the creation of enabling socio-economic environment that will increase the rural women farm income through market creation for farm output and subsidy in the price of farm input. Again, the rural financial intermediaries should encourage farmers to save by raising the interest paid on saving; this will discourage farmers from saving in kind or hoarding cash in the house which usually lead to loss of wealth in case of thefts, burglaries. Finally, Government and banks should create channels through which farmers especially rural women farmers can be educated on saving modalities; this will not only encourage investment and consequently their saving capacity.*

KEYWORDS: *Determinants, Saving Capacity, Income, Rural Women, Farmers*

INTRODUCTION

Given the scarcity of economic resources and insatiability of human wants, there can never be a better future or development of any kind without capital accumulation in the present. Savings therefore becomes a necessary factor for development and investment at rural and national levels. Nweze (1990) argued that if there were no investment opportunities, it would never occur to the farmers to save for future. He further posited that farmers and different groups of people save primarily in anticipation for future production. Savings is a part of income not spent on current consumption and a process of setting aside fund for future use as part of current income. Ijere (1986) reported that saving is simply the surplus earning after all expenditure. It is that part of income which households do not spend on goods and services for current consumption. This means that individual households or farmers keep or save extra

fund from previous periods to take care of future production. Saving is a means of self-help as people put money aside in order to have something to fall back in the times when things become difficult or scarce (Udry, 1994). The socio-economic and political position of rural women farmers as helpers to their husbands has really affected their pattern and level of saving.

Birdsall *et al*. (1990) reported that rural woman spend most of their income immediately on household needs and often have to make up deficiencies of what their husbands provided for them. Women also use their income to meet a variety of household and personal expenses and thus will be left with little or nothing to save. Widows for instance inherit the responsibility of training the children and attending to other family problems and therefore pay little or no attention to future saving. The consumption-saving decision is more crucial in developing countries where the marginal propensity to consume is always greater than the propensity to save (Ekwen, 1985). This situation is worsened by the low number or absence of formal financial or credit institutions especially in the rural areas. In some parts, there are limited numbers of banks and most farmers have little or no access to them. This can be attributed to some factors like farmers' level of education, disparity between the propensity to consume and save, level of income, distance of farmer's residence to the banks, banking bureaucracies and bank liquidation among other factors. It was on this note that Eboh (1995) argued that efforts made to mobilize rural saving in Nigeria through formal institutions have not met a reasonable success.

In developing countries like Nigeria and Ebonyi State in particular, there seems to exist cases of low investment and production due to low rate of domestic saving, which hitherto, can lead to low rate of savings. Therefore, there is a need for saving mobilization by rural farmers so as to enable them cope with the dangerous explosive situation of starving and population growth. Also, several researches have argued that due to gender inequality in favour of the male folks who have influence over their female counterparts, the females are not allowed to save. This was because in most African countries, men have absolute authority over their wives' decisions on the pattern and level of saving accruable and how it will be used. Again, despite the involvement of rural women in saving, the saving volume seems not to have been known. In order address the problem, a focused research on the saving capacity of rural women addressed the following objectives was carried out: description of the socioeconomic characteristics of the rural women farmers; determining the farm and non-farm factors that influences the saving capacities of the women farmers, and determining the constraints to saving and investment capacities of the farmers.

METHODOLOGY

The study was carried out in Ebonyi State Nigeria, which lies approximately between latitudes $7°3^{1}$N to $8°30^{1}$N and longitudes $5°4^{1}$E to $6°45^{1}$E, and located in the southeast Nigeria. The State is divided into three (3) agricultural zones, namely; Ebonyi North, Central and South, and consists of thirteen Local Government Areas (L.G.As). A multistage random sampling technique was adopted for this study. The first stage involved a random sampling of six (6) out of the thirteen (13) L.G.As in the State. The second stage involved a random selection

of three (3) communities from each of the L.G.As sampled. This gave a total of 18 communities. Finally, from each of the selected communities, ten (10) female farmers were randomly selected proportionately from a sample frame of 817,482 to give a total of one hundred and eighty (180) female farmers. This served as the sample size for the study. The sample frame of 817,482, which was the number of rural female farmers in Ebonyi State was obtained from the Ebonyi State statistical year book of 2010 (Ebonyi State Planning Commission, 2010). The primary data were collected by the use of well-structured questionnaire administered to the respondents. Data generated were analyzed using descriptive statistics such as frequency distribution tables, percentages and mean for the objective one. Then the correlation and multiple regression analyses were used to analyses objective two while the F-statistic was used to test the hypothesis stated.

Model Specification

The effect of farm and non-farm factors on saving capacity of the rural women farmers was explicitly expressed in functional forms as:

Linear form

$Y(Sc) = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_{8+} et$

The semi-log form is:

$Y(Sc) = \beta_0 + \beta_1 \log X_1 + \beta_2 \log X_2 + \beta_3 \log X_3 + \beta_4 \log X_4 + \beta_5 \log X_5 + \beta_6 \log X_6 + \beta_7 \log X_7 + \beta_8 \log X_{8+} et$

The double-log form is

$\text{Log}Y(Sc) = \beta_0 + \beta_1 \log X_1 + \beta_2 \log X_2 + \beta_3 \log X_3 + \beta_4 \log X_4 + \beta_5 \log X_5 + \beta_6 \log X_6 + \beta_7 \log X_7 + \beta_8 \log X_{8+} et$

$\text{Log}Y(Sc) = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_{8+} et$

Where:

Y(Sc) = Saving capacity of respondents measured in Naira (₦)

β_0 = Constant

$\beta_0 - \beta_8$ = Coefficients

X_1 = Family size of respondents.

X_2 = Level of education (Years)

X_3 = Farming experience (Years)

X_4 = Farm cash income (Naira)

X_5 = Non-Farm cash Income (Naira)

X_6 = Total farm output (Naira)

X_7 = Distance of nearest saving institution (km)

X_8 = Distance of nearest local market (km)

et = Error term.

This was log-transformed and estimated as an ordinary least squares multiple regression. All the assumptions of the ordinary least squares method were made. The significance of each variable was tested using t-test while the overall explanatory powers of the regression equation was tested using the F-ratio. It was also expected that some of the included independent variables would correlate. However, the existence and severity of this

problem was tested using the Pearson correlation analysis and t-test at different significant levels. To know whether multicollinearity is causing problem in the regression model, the standard errors of the coefficients were examined thus: if several coefficients has high standard errors and dropping one or more variables from the equation lowers the standard errors of the remaining variables, multicollinearity will usually be the source of the problem (Pindyck and Rubinfeld, 1991). Also, the severity of multicollinearity was examined by observing the covariance between estimated parameters. A high degree of collinearly will lie be associated with a relatively high covariance between estimated parameters (Pindgck and Rubinfeld, 1991).

RESULTS AND DISCUSSION

Inline with objectives of the study, this section presents and discussed the findings of the study under the following headings:

Socio-economic characteristics of the rural women

The following socioeconomic characteristics of the rural women farmers were examined; marital status, age, educational status, primary occupation, farming experience, family size, distance to nearest the nearest market, distance to the nearest saving institution, availability of farm service centres, and farming enterprise engaged (Table 1).

Table 1: Percentage Distribution of the Socioeconomic Characteristics of the Rural Women Farmers

Personal characteristics	Category	Frequency (N=180)	Percentage
Age (years)	< 25	5	2.78
	26 – 30	18	10.00
	31 – 35	40	22.22
	36 – 40	60	33.33
	46 – 50	37	20.21
	> 50	20	11.11
Marital status	Married	135	75.00
	Widowed	23	12.78
	Separated	19	10.56
	Divorced	3	1.67
Educational level (years in school)	No formal education	7	3.89
	Primary education	129	71.67
	Secondary education	41	22.78
	Tertiary education	3	1.67
Primary occupation	Farming alone	115	63.89
	Trading and farming	35	13.89
	Civil service and farming	30	16.67
Farming experience	10 – 20	73	40.56
	21 – 30	50	27.78

	31 – 40	36	20.00
	41 – 50	16	8.89
	51 – 60	5	2.78
Household size	1 – 4	39	21.67
	5 – 8	81	45.00
	9 – 12	43	23.89
	> 12	17	9.44
Distant to the nearest market (km)	1 – 5	94	52.22
	6 – 10	58	32.22
	> 10	28	15.56
Distance to the nearest saving institution (km)	0 – 5	43	23.89
	6 – 10	45	25.00
	11 – 15	92	51.11

From the analysis in Table 1, it was observed that larger majority of the women are within the economic active age of 31-40 years. This age category represented the active production stage of farmers. Hence the result corroborated Akubuilo (2002) who reported that the age the rural women in Enugu agricultural zone of Enugu State spread across the various age categories with significant proportion of them above 35 years of age. The result equally showed that 75% of the women are married while about 13% were widowed as 2% of them were divorced. The high proportion of the women being married is highly correlated with their mean age. Again, in Ebonyi State Nigeria, great importance is attached to marriage as married women form a good source of finance and social security. The finding equally revealed that majority (71.67%) of the women only completed primary school education as only 23% completed secondary school education. This does not give a good account of the women as excellent adopters of agricultural innovations. The finding justified the earlier finding of Ezike (1999) who inferred that rural women farmers hardly spend more than 9 years in formal education; which indicated that completion of primary education and non-completion of secondary school education. It was equally observed that farming is not the only occupation of the rural women as some are into agricultural and non agricultural diversification. Based on this, the result showed that 63.89% of the farmers had agriculture as their primary occupation, while 13.89% and 16.67% are into trading and farming, and civil service and farming respectively. This finding corroborated the finding of Alimba (1995); Olayide (1980) who reported that farming is the main occupation of rural people but combines farming with crafts and arts in varying degrees.

Experience in production has been identified as one of the key qualitative output. The analysis showed that about 41% of the women have between 10 – 20 years experience in farming while, about 21% had between 21 – 30 years experience. This agrees with Ezike (1999) that farmers in the rural south eastern Nigeria had been in farming for an average of 19 years.

Forty-five percent (45%) of the rural women farmers had relatively large family size of between 5 – 8 persons per household. This implied that an increase in consumption expenditure which does not favour an increased saving capacity of the rural women famers, especially when in most cases, they complement the contribution of their husband in the upkeep of the family. Thus, the

justification of women as the backbone of food production and provision for family consumption in developing countries (FAO, 2001).

Furthermore, it was noted that the rural women farmers covered a mean distance of 6.16km to reach to the nearest market to sell their farm produce. A critical analysis on the distance showed that the women in African context spent relative small distance to get to the market. Hence, the close distance will have positive impact in reduction of transportation cost which invariably encourages saving.

The nearness of financial institutions not only encourages saving and deposits, but reduces the cost and risks associated with cash movement. According to Dadize, Winston, and Afriyie (2003), distance to banks predicts saving behaviour of rural consumers. Based on the foregoing, the study showed that the women farmers of Ebonyi State, Nigeria covered a distance of 10km and above to reach to the nearest financial institution. This showed a relatively large distance as most of the rural women lack mobility means to reach to the financial institutions which are mainly located in the urban areas. This in fact, does not encourage saving as most of them do lack information on saving, and face risks of theft during cash movement.

Effect of saving factors on the saving capacity of rural women farmers

In order to determine the effect of saving factors on the saving capacity of rural farming women in the area, three functional forms of multiple regression analysis - linear, semi-log and double-log - were estimated and the best fit was chosen based on *a priori* expectations and econometric criteria. Based on the regression outputs, the linear functional form was chosen as it conformed to the *a priori expectations*; a better line of fit (R^2) and more number of significant variables.

Table 2: Multiple regression result of the effect of saving factors on the saving capacity of rural women farmers

Variable	Coefficient	t-statistics	Sig. T
Constant (c)	762.272	2.892	0.004*
Family size (x_1)	-0.024	0.335	0.001*
Level of Education (x_2)	0.057	0.829	0.409
Farming Experience (x_3)	-0.027	-0.368	0.713
Farm Cash Income (x_4)	0.308	3.865	0.000*
Non-Farm Cash Income (x_5)	0.005	0.738	0.461
Farm Output (x_6)	0.221	2.830	0.005*
Distance of Nearest saving Institution	0.104	1.420	0.157
Distance of Nearest market (x_8)	0.191	2.714	0.007*

R = 0.55 1 * Significant at P< 001
R^2 = 0.604
R^2 = 0.570
SE = 66775.459
DW = 1.471
F-ratio = 9.054

Sig. T = 0.000

From the regression results, the R^2 value was found to be 0.604 which explained that about 60% of the total variation on the saving capacity of the rural women farmers was explained the included saving factors. The individual analysis of the saving factors showed that household size, the farm cash income, farm output and distance to nearest market were significant at 1% level. Family size was found to be negatively signed and significant at 1% level. Thus, the *a priori* was met as increasing family size reduces the saving capacity of rural women farmers. It should be noted that Ebonyi State, Nigeria places high premium on the number of children a family has as they contribute significantly to the labour need of the family. The coefficient of farm cash income (x_4) was positively signed and statistically significant at 1%. This conformed to the *a priori* expectation. Thus, an increase in the farm cash income of rural women farmers will lead to a significant increase in their saving capacity. This is expected since farm produce serves as a major source of farm income to rural households. The finding corroborated Reddy *et al.* (2005) who posited that income viability of farm families had positive influence on their saving potentials. Again, the coefficient of farm output (x_6) was positive and significant at 1% level. This showed that increase in farm output of rural women farmer will lead to a significant increase in their saving capacity. This conformed to the *a priori* expectation since increased yield may translate to increased income to farmers, hence impacting positively on the saving capacity. The coefficient of distance of the nearest market (x_8) was positively signed as expected and statistically significant at 1%. Thus, the nearer a market is to the rural women famers, the higher will be their capacity to saved. This agrees with the *a priori* expectation since closeness of the market enables the farmers to sell off both their final and intermediates product with minimal wastage or loss. Equally, nearness of the market reduces the cost of transporting goods thereby increasing the revenue accruing to the farmers. Therefore, the above analysis shows that the rural women's saving capacity is greatly influenced by any means that encourages the increase in their income generation.

Saving patterns of the rural women

The study identified that there are principally two major ways through which rural women farmers save their financials (Table 3). These are in cash or kind forms. The cash methods of saving include saving through the banks, financial self-help associations, money lending, and house saving. The non-cash methods of saving include; the purchase of land, storage of agricultural produce, livestock investment, rentals, and building of houses. Individual analysis showed that non-cash method was the major way of saving by the rural women farmers in the area. This was testified by the 90% and 60% of the women that save through non-cash and cash methods respectively. However, identified major non-cash methods of saving were investment in livestock production (88%) and storage of farm produce (78.4). The cash major cash methods of saving among the rural women farmers are; house saving (79.6%) and money lending (45.4%).

Table 3: Percentage distribution of the rural women according to pattern of saving

Saving pattern	Place of saving	Frequency	Percentage

Cash	Banks	10	9.2
108(60.0)*	Financial self-help association	36	33.3
	Money lending	49	45.4
	House saving	86	79.6
Non-cash	Purchase of land	25	15.4
162(90)*	Storage of farm produce	127	78.4
	Livestock investment	143	88.3
	Rentals	20	12.3
	Building of houses	33	20.3

*Multiple responses recorded (N=180)

Saving financial resources in the house as identified by the study is one oldest traditional methods of saving among farming households in Ebonyi State. The essence of high prevalence of this form of saving can be attributed to the bureaucratic bottleneck involved in the bank saving, and the fear of being duped by financial intermediaries. Again, to maintain high liquidity with which immediate problems can be solved; and to avoid travelling far distance to withdraw cash from financial institutions can also be attributed to the finding.

Lending of cash to the needy has been identified as one of the methods of saving among the women. Lending money out in the rural areas of Ebonyi is mostly on interest basis which can be at 50% to 100%. On this note, most famers prefer to loan out their cash after sales to reap from their interest therein to the needy people who even prefer the method than going to the formal financial institutions that are characterised by bureaucracy. Storing of agricultural produce/products after harvest has been observed as one of the key ways through which rural women save their resources. Farmers can store directly their own harvested produce or can procure from the rural markets during harvest when prices are low and sell during lean period when prices will rise. With this method of saving, the women can easily access fund by selling the stored produce/product for immediate solving of household problems. Similarly, the women farmers equally resorted to investment in livestock as way saving in Ebonyi State. The motive of this form of saving can be attributed to the fact that livestock is a productive asset and which its return to investment is highly multiplicative if properly managed.

Constraints to saving capacity of rural women farmers

The study showed that the rural women farmers of Ebonyi State are faced with constraints to saving. These constraints as analyses with both percentages and likert scale rating (Table 4) are fear of bank failure (3.3), inadequate income due to lack of access to productive resources and low returns (2.7), high consumption rate out of available income (2.6), and bureaucracy involved in opening bank account (2.5).

Table 4: Percentage distribution of the rural women farmers on the constraints to saving capacity

Problem	Frequency (N = 180)	Percentage	Means score
Inadequate income due to lack of access to productive resources and low returns	177	98.3	2.7

High consumption rate out of available income	102	56.7	2.6
Lack of skilled due to low levels of literacy and formal education	100	55.6	1.9
Lack of access to banks or financial services	128	71.1	2.3
Low interest paid on saving by the bank	96	53.3	1.8
Fear of bank failure	160	88.9	3.3
Delay or waste of time involved in putting and withdrawing saving from the institution	74	41.1	1.2
Bureaucracy involved in opening bank account	156	86.7	2.5
Total	779*		

*Multiple responses recorded

Lack of access to productive resources and low returns to agricultural production has been identified as a bane to the saving capacity of the rural women. Rural women in sub-Sahara African found it difficult to increase their agricultural production and processing due to the lack of collateral to obtain fund from financial institutions to expand production as household property and security belong to the man who invariably are regarded as the head of the household. On this note, the man may not give approval to the women to obtain loan to boast production and income. The rate of bank failure in Nigeria has forced many farmers especially the women folk to refrain from saving and resorted more to consumerism. Over the years in Nigeria, many banks with customers' deposits have folded thus making the depositors to loose their saving. This discouraged many investors especially the farmers to find other ways save their resources. However, to stem the tide, the Central Bank of Nigeria introduced the policy of bank recapitalization to boost the customers' confidence in safe saving and banking. The high consumption among the rural household in Ebonyi State has been noted as one of the obstacles to saving among the rural women. This was justified as most farming households depend on agriculture for their livelihood and family upkeep. Again, most African households are more polygamous than nucleated thus result on consumption pressure on the available food which a times are not enough to feed the household population. In view of this, the capacity to save will invariably be affected. The bureaucracy involved in opening bank account has been seen as a constraint to saving capacity of rural women farmers. The bureaucratic bottleneck come in the form of delayed registration, difficulty in getting referee letter, etc and the cumulative effect discourage many women farmers from saving.

CONCLUSION AND RECOMMENDATIONS

Despite the various saving options available, it has been observed that the rural women farmers of Ebonyi State Nigeria are still adopting the traditional methods of saving such as saving in the house, money lending, investment in livestock, and storage of farm produce than adopting the modern methods of saving like saving the bank. Based on this the study recommended the creation of enabling socio-economic environment that will increase the rural women farm income through market creation for farm output and subsidy in the price of farm input. Again, the rural financial intermediaries should encourage farmers to save by raising the interest paid on saving; this will discourage farmers from saving in kind or hoarding cash in the house which usually lead to loss of wealth in case of thefts,

burglaries. Finally, Government and banks should create channels through which farmers especially rural women farmers can be educated on saving modalities; this will not only encourage investment and consequently their saving capacity.

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