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Consumption and Savings Pattern among Food Crop Farmers in Imeko Afon Local Government Area of Ogun State, Nigeria

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Abstract
This study examines savings and consumption patterns among food crop farmers in Imeko-Afon Local Government Area of Ogun State, Nigeria. The primary data used for the study were obtained through structured questionnaires using random sampling technique. Descriptive statistics and Ordinary Least Square Regression model were used to analyze the data. Descriptive analysis showed that 58.3% of the household heads were males, 64.2% of them were married, and 26.7% fell within the age bracket of 30 and 49 years, indicating that the majority of them are within agile and productive ages. Most of the respondents (70.9%) had tertiary education and the average household size was below 5 persons. Furthermore, the consumption pattern shows that ₦22,973.39 was expended on food items while ₦144,407.88 was spent on non-food items and ₦68,475.62 was incurred on agricultural purpose, and ₦13,602.33 was saved. The result of the Ordinary Least Square Regression model showed that the age of respondents, level of education and marital status of the household heads were significantly influenced by household's monthly food expenditure (consumption) in the study area, while, monthly income and amount of food expenditure were major determinants of savings. The study recommends among other things enlightenment programmes that will educate the rural dwellers on the need to eat good quality food and need for savings.
Keywords: Saving, Consumption, Loan Repayment, Multistage, Policy

Introduction

Consumption is the total spending by a household on goods and services that are not meant for sales (Sachdeva, 2008). Such consumption, which is part of the current income, has been in existence for a very long time. The need for survival necessitate consumption on food and materials items such as clothing, footwear, accommodation including electricity and other amenities, transportation and communication on personal goods and services that includes education, health products, cultural goods and cosmetics. Among the factors that determine how much to spend on these categories of commodities are income of the individual, prices of the commodities, taste and so on. These factors notwithstanding, the condition of the economic rationality of individual consumer is also crucial since the consumer aims at utility maximization. According to Ayanwale and Bamire (2000), household consumption is defined as the goods and services bought by people to produce some level of satisfaction. The consumption behavior of household is not altogether arbitrary as the economic pre-condition of rationally is very important.

Consumption occurs through both Institutions and Industry as well as by individuals. The individual consumption rise, also leads to increased aggregate demand. The accelerated demand leads to increase in production and thus brings back its return to the consumer in the form of wages & profit. Thus in a simple closed economy, the household spends their income. This spending on consumer goods (termed Consumption(C)) is the only component of Aggregate Demand (AD). But in present day open economy, international trade and government spending also constitute to the aggregate demand (ICMR, 2006).

Savings, on the other hand is that part of the current income that is not spent or consumed. Its importance in any economy particularly, developing countries like that of Nigeria cannot be over stressed. Savings can be defined, economically, as that part of income stored for future use, but in most cases their real value will probably decline due to inflation. Savings is important for rural and semi-urban households who find it difficult to obtain loans from banks for investment purpose. (Ajibola 2000). Observations from different authors, (Lester 1999) revealed that urban dwellers absolutely earn a higher income compared to the rural and semi-urban dwellers. But relatively, rural dwellers save more than urban dwellers because the urban dwellers spend a large proportion of their income on consumption (Wai, Mok, & Hanna 2001)

Savings is a sacrifice of current consumption that provides for the accumulation of capital, which in turn, provides additional output that can potentially be used for consumption in the future (Umeh and Adebisi 1998). In other words, savings is the difference between current earnings and consumption. It has also been defined as "deferred consumption" or part of income, which is not spent. Savings in an economy can assume one of several forms. These include personal savings, corporate or business savings and Government savings. Of these, the household savings or personal savings has been agreed to contribute the substantial part of aggregate savings in both industrialized and developing countries. Nweze (1991).

According to Tokoyoma (2003), Savings are of great importance in a developing economy like Nigeria. This is

because of the direct bearing it has on the level of economic activity of the nation. Similarly, within the agricultural sector, the degree of progress attained will largely depend upon what the farmers do with the additional incomes generated from year to year from their farm activities. This stems from the fact that the growth rate in the farming economy largely depends on the stock of capital built in a farm organization and the ploughing back of such stocks in form of savings for further improvement of the farm organization. If these increments are spent on household expenditure, without building up the necessary infrastructure, the future economic development of the nation will be hampered. Adequate integration of saving and consumption programmes into development strategies is capable of improving resource allocation, promoting equitable distribution of income, and reducing credit delivery and recovery costs.

In the study area, lack of savings facilities creates problems at three levels: the level of the individual, the level of the financial institution and the level of the national economy. At the level of the individual, the lack of appropriate institutional savings facilities forces the individual to rely upon in-kind savings such as savings in the form of gold, animals or raw materials, or upon informal financial intermediaries, such as Rotating Savings and Credit Associations (ROSCAs) or money-keepers. These informal savings options, however, do not offer a combination of security of funds, ready access or liquidity, positive real return and convenience in order to meet the various needs of the particular saver (Alderman 1996).

At the institutional level, Microfinance Institutions (MFIs) have microproducts service windows on both sides of the balance sheet, serving micro and small savers and borrowers with an average savings balance or loan amount below the average per capita annual income in the respective countries. Yet the number of MFIs that exclusively offer credit is much larger than MFIs with both savings and credit facilities. Empirical studies have demonstrated that the performance records of credit-only MFIs in outreach and sustainability have not been widely successful (Suitz and Zeitinger, 1996; Gupta; 1998, and Yaron 1992).

Those MFIs lacking effective savings mobilization strategies are unable to increase their outreach to a significant number of clients on a regional or national scale. In addition, few MFIs that do not mobilize savings have attained full financial self-sufficiency, independently covering their expenses for operations, loan loss, cost of funds and inflation with their revenues. Throughout the world, MFIs have often experienced that exclusively offering credit services can lead to undue dependency on external sources of financing. This dependency can cause the MFIs to concentrate on the demands of the donors rather than on the demands of potential clients, especially potential savings clients.

At the level of the national economy, high levels of savings increase the amount of national resources and decrease the need to resort to foreign indebtedness in order to cover domestic investment and consumption demand. Numerous countries with low internal savings rates must borrow from abroad, which results in a debt service burden. Having recognized that farmers incurred so many for expansion and increment in agricultural production output, it is also pertinent for him to save because of some unforeseen outcome and the future.

The broad objective of this study is to analyze the consumption and savings pattern among food crop farmers in Imeko-Afon Local Government Area of Ogun State Nigeria. The specific objectives of the study are to examine the determinants of consumption pattern of the farmers and estimate the marginal and average propensity to consume and save.

RESEARCH METHODOLOGY

Study Area and Methods of Data Collection

The study area is Imeko Afon Local Government Area, Ogun State, Nigeria. Survey data were collected from the sampled rural farmers within the study area. The study made use of both primary and secondary data. Primary data were collected from rural household heads with the aid of well-structured questionnaires to obtain information from the respondents and through oral interview while, Secondary data were sourced from journals, statistical publications, textbooks, articles, past projects, and the internet.

Sampling Techniques

A two stage sampling technique was used in selecting the sample size. The first stage was to randomly select six (6) towns from the Local Government Area. The second stage involved selecting twenty (20) farmers from each selected towns. In all a total of one hundred and twenty (120) respondents was used for this research work.

Methods of Data Analysis

The tools used for data analysis include descriptive analytical tools and inferential statistical tool.

This was achieved by using the descriptive statistics such as frequency tables and percentages were used to characterize the socio-economic factors and other non-demographic variables of the farmers. While inferential statistics were used to examine the determinants of consumption pattern and marginal propensity to consume and save.

Model Specification

Ordinary Least Square (OLS) regression technique was employed.

$Y = \beta_o + \beta_i X_i + U$

$Y = \beta_o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + U$

Where:

β_o = Constant or intercept

β_i = Coefficient of independent variables

X_i = Independent or explanatory variables

U = error term

Y= Total annual consumption (Naira)

X_1 = Marital status (1= single, 0 if otherwise)

X_2 = Gender (1= male.0 if otherwise)

X_3 = Age (years)

X_4 = Household size (number)

X_5 = Educational level (years)

X_6 = Income from major occupation (Naira)

X_7 = Income earners in the household (numbers)

U = Error term

To estimate the marginal and average propensity to consume among the farmers

Average Propensity to Consume (APC) is the percentage of income spent

APC = C/Y

Where: C = amount spent on items

Y = Income (Naira)

Marginal Propensity to Consume (MPC) measures increase in personal consumption occurring as a result of increase in disposable income (income after tax and other transfers)

Mathematically, the MPC function is expressed as the degree of responsive change of the consumption function with respect to disposable income

MPC = ΔC/ΔY

Where: C = Amount consumed (Naira)

Y= disposable income (Naira)

To estimate the marginal and average propensity to save among the farmers

Average Propensity to Save (APS) is the percentage of income not spent, rather being saved for further investment.

S = Y-C

Where S= Savings, Y= Income and C= Consumption.

APS= $\frac{Y-C}{Y} = \frac{S}{Y}$

Where S= amount saved

Y= Income (Naira)

Marginal Propensity to Save (MPS) measures increase in savings occurring as a result of increase in income.

Mathematically, the MPS function is expressed as the degree of responsive change of the savings function with respect to income

MPS= ΔS/ΔY

Where, S= amount saved (Naira)

Y= Income (Naira)

RESULTS AND DISCUSSIONS

Table 1: Distribution on Socio-Economic Characteristics Distribution of the Respondents

Variables	Frequency	Percentage
Age (years)		
Below 30	32	26.7
30-39	31	25.8
40-49	32	26.7
50-59	17	14.2
60 years and above	8	6.7
Sex		
Male	70	58.3
Female	50	41.7
Household Size		
Below 5 yrs	92	76.7
5 – 10yrs	25	20.8
Above 10yrs	3	2.5
Educational Level		
No formal education	11	9.2
Primary Education	15	12.5
Secondary education	9	7.5
OND/NCE education	41	34.2
HND/Bsc education	44	36.7
Marital Status		
Single	33	27.5
Married	77	64.2
Divorce	5	4.2
Widowed	5	4.2
Occupation		
Farming	61	50.8
Trading	32	26.7
Artisan	12	10.0
Civil servant	15	12.5
Income earning		
Daily	13	10.8
weekly	22	18.3
monthly	85	70.8
Annual Income (₦)		
Below ₦50,000	87	72.5
₦50,000-₦100,000	20	16.7
Above ₦100,000	13	10.8
Saving Pattern		
Daily	23	19.2
weekly	33	27.5
monthly	53	44.2
quarterly	2	1.7
irregularly	9	7.5
Method of Savings		
Bank	74	61.7
Home kept with friends	9	7.5
Cooperative	37	30.8
Reason for Credit		
Future purpose	83	69.2
Family upbringing	25	20.8
Settlement of debt	8	6.7
Others	4	3.3
Availability of Credit		
Yes	108	90.0
No	12	10.0
Total	**120**	**100.0**

Source: Field Survey, 2012

From Table 1, the age of the respondents is an important factor that affects their level of participation and overall coping ability in local institution. Age is also believed to influence the level of physical work and the willingness to take risk. Majority of the respondents (68.6%) were between the age group of 30 and 59 years; this implies that majority of the respondents are still in their active ages. 58.3% of the respondents were male, 41.7% were

female. This implies that the study area is gender sensitive and male dominated. This deals with the gender of the farmers in terms of their strength and ability to cope with stress. The total household size consists of husband, wife/wives, children and dependents. It consists of the people who feed from the same pot. The family size of the households in the study area ranges from below 5 persons to above 10 persons. It was deduced that majority of the respondents had household size falling below 5 persons; this implies that the respondents were able to control the abnormal growth on birth rate that is family planning was adopted in order to increase the living standard of the household members.

Education is an important factor in the recognition and utilization of investment opportunities. The study revealed that most the respondents interviewed are found to have some form of formal education. Majority of the respondents (91.8%) have formal education; this implies that an appreciable level of literacy exist among the respondents. The marital status of respondents helps to reduce labor cost especially when the respondents are married in which they can supply labour from their households. This in turn increases their income considerably. Majority of the respondents (64.2%) were married, implying that majority of the respondents were married and have family responsibility to undertake which induce the ability to consume more and reducing the saving tendencies.

Majority (70.8%) normally earn their income on a monthly basis. It was reported that 72.5% household members earning below ₦50,000. Savings is the proportion of income earned which is not spent but invested or kept for further purpose. It was that reported that 83.3% of the respondents engaged in savings while the remaining 16.7% do not save at all. 44.2% normally save on a monthly basis; this has negative implication their economic growth and standard of living.

It was found that 90% of the respondents make credit available through savings pattern while the remaining 10% do not make credit available through savings pattern. This implies that respondents are granted credit based on their saving rate and contribution to the society either weekly or monthly savings. As shown in Table 2, the finding however revealed that total food expenditure was ₦22,973.39, Non-food expenditure was ₦144, 407.88, and amount incurred on Agriculture and other farming activities was ₦68,475.62 and the total consumption is ₦188, 346.30; this implies that amount expended on non-food is high compare to other forms of expenditure.

Table 2: Food expenditure pattern

Variables	**Minimum (₦)**	**Maximum (₦)**	**Mean (₦)**
Food expenditure	10,840.00	152,700.00	22,973.39
Non-food expenditure	12,700.00	650,000.00	144,407.88
Agricultural purpose	12,500.00	540,000.00	68,475.62
Total consumption	55,400.00	877,150.00	188,346.30

Source: Field Survey, 2012

Determinants of consumption pattern among the farmers

Table 3: Ordinary Least Square (OLS) result

Variables	Parameter	Co-efficient	T-value
Constant	β_o	6.24*	4.384
Marital status	X_1	-0.056**	-2.535
Sex	X_2	-0.801	-1.311
Age of the respondents	X_3	1.045***	0.184
Household size	X_4	0.0734	0.907
Education qualification	X_5	0.0324	0.137
Income from major occupation	X_6	-1.824**	-2.312
Income earning non-farm activities	X_7	4.816***	7.979
R^2		0.138	
Adjusted R^2		0.840	
F-value		25.430*	

*Figures in parenthesis are t-ratios; * significant at 1%, ** sig. at 5% and *** sig. at 10%.*

Source: Field Survey, 2012

As shown in Table 3, the adjusted R^2 is 0.840 (84%) which explains the variability level of the independent variables on dependent variables; this implies that the explanatory variables explain 84% of the variation that occur in the dependent variable (consumption pattern) with F-value of 25.430 and 7 as degree of freedom. The Ordinary Least Square (OLS) result shows that marital status and education were significant at 5% while only age had a positive relationship at 10% with consumption pattern of the farmers. Marital status is negatively significant at 5% with respect to consumption of the farmers. This implies that, consumption is increased as a result of more number of farmers getting married and fixing up with responsibility. Also, education tends to show an inverse relationship with consumption pattern of the farmers. Age is positive and statistically significant

with consumption at 10%. This shows that the more the age of farmer increase, the more the consumption rate increased. That is, wants and needs increase as a result of increase in age of the farmers.

Distribution of savings and consumption pattern

Table 4 shows the savings and consumption pattern of the respondents. The total amount saved is ₦13,602.33, change in savings is ₦1,248.17, total income is ₦84,428.33, total consumption is ₦215,122.58 and change in consumption is ₦130,661.00. This implies that the farmers consume more than the amount saved. It was found that average propensity to consume and save of the households increases as income increases by ₦1.

Table 4: Budgetary Statistics on credit available

VARIABLES	**Minimum (₦'000)**	**Maximum (₦'000)**	**Mean (₦'000)**
Total amount saved	0.00	130,000	13,602.33
Change in savings	80,500.00	120,000.00	1,248.17
Total income	12,500.00	2,150,000.00	84,428.33
Change in income	5,000.00	2,140,000.00	73,761.67
Total consumption	55,400.00	877,150.00	215,122.58
Change in consumption	33,960.00	730,000.00	130,661.00

*Source: Field Survey, 2012*Average propensity to consume (APC) = $\frac{C}{Y} = \frac{21522.58}{84428.33} = 2.5479 = 2.55$

Marginal propensity to consume (MPC) = $\frac{\Delta C}{\Delta Y} = \frac{130661}{73761.67} = 1.77$

Average propensity to save = $\frac{13602.33}{84428.33} = 0.16$

Marginal propensity to save = $\frac{\Delta S}{\Delta Y} = \frac{1248.17}{73761.67} = 0.0169 = 0.02$

5.2 Conclusion and Recommendations

Consumption expenditure on different food items are generally used as main yardstick for measuring standard of living in developing nations. Study of temporal changes in consumption patterns provides an insight into status of welfare changes and helpful in planning future investment decisions. Factors such as urbanization will also lead to a dynamic shifting of demand within commodity groups. This has both an opportunity and risk. It would serve as opportunity, if increasing demand responded adequately, then it would serve as source of additional employment and income for producers and ultimately contribute for national growth. Also, it is concluded that income and food expenditure are factors determining the amount to be saved. This ongoing transition in food consumption pattern will affect domestic food market that supply side policy intervention highly recommended to meet increasing demand for high value food items.

Based on the findings, therefore, it is recommended that Nigerian government is to play its roles in directing investment, stimulating participation of private sector in the production of high value food items and regulating performance of markets for these commodities. Since agriculture is the main source of rural livelihood, any improvement of incomes and food supply would be an increase of agricultural production and the main aim should be to raise productivity. Failure to respond may result in price hike which could hamper demand for commodity. Household should be encourage and enlighten on how to source for more income so that savings habit will be improved upon. Educational programme should organize to educate them on hoe per capita expenditure would be increased. Thus measures should be taken by the government to enhance the living condition of the people, such as poverty reduction programmes.

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