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Government Policy, Agricultural Output and National Saving in Nigeria

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Abstract
The study examined the role government policy and agricultural output play in national saving in Nigeria, time series data on national savings, agricultural GDP, government policy–related variables as well as other relevant socio-demographic variables were sourced for the period of 1981 – 2012 and analyzed. The Augmented Dickey-Fuller (ADF) test for stationarity, the trace and maximum Eigen statistics for cointegrating vectors as well as the cointegration regression were used at various stages for the analysis.
It was found that government's recurrent expenditure, money supply and population all positively affect national saving. On the other hand, debt servicing by the government, unemployment rate and importation of goods all showed negative relationships with national saving.
It was thus recommended that government recurrent expenditure which empowers the populace economically should be given priority during national budget implementation, that unnecessary contraction of money supply should be avoided within reasonable inflation limits, that unrestrained borrowing as well as corruption, which prevents funds borrowed by the government from achieving their objectives thus making servicing of loans burdensome to the economy, be checked. Furthermore, it was recommended that local production of goods and services be supported to prevent excessive importation and the attendant devaluation of the Naira. Finally, it was recommended that employment generation through government expenditure which stimulates local production by the empowerment of the youth and the promotion of infant industries must be prioritized so that the Country's teeming population can be converted into a work force that will be a driver of economic growth.
Key words: government policy, agricultural output, national saving, time series

Introduction

One of the fundamental macroeconomic variables that determine economic growth in any nation is saving. The investment capacity of any nation rests largely on the amount of savings generated by its economy. Saving has been described as that part of disposable income that is not allocated to consumption (Carroll, 2006). Similarly, Rutherford (2002) defined saving as the residue of income of a government, a firm or a household after all their expenditures have been incurred. In national accounts terminology, saving is the net surplus of income over consumption or, stated differently, the amount of resources or income produced in the economy in a given period that is not consumed immediately but put to use in a way that will provide returns to the economy in future (Menander, 2010). Saving, therefore, means forgoing consumption today so as to enjoy a better standard of living in the future while national saving, on the other hand, is the sum of saving by households, businesses, and all levels of government. National saving thus represents resources available to government and businesses for investment in infrastructure, purchase of capital goods, human capital growth among other uses. Higher saving and investment in a nation's capital stock contribute to increased productivity and stronger economic growth over the long term. That is, saving today increases a nation's capacity to produce goods and services in the future and, therefore, serves as a basis for improved standards of living for future generations (GAO, 2001). Production often brings about an increase in income either of individuals (businesses) or government and invariably a corresponding propensity to save from the additional income.

Berube and Cote (2003) found that savings plays a central role in income determination both in the short run through aggregate demand, and in the long run through capital formation and capital accumulation. Furthermore, Aghevli *et al* (1990) found that the saving rate and investment in human capital are indeed closely linked to economic growth. Household saving is also an important determinant of welfare, especially when credit and insurance markets are not available as it helps households to tackle unanticipated variations in household incomes. Consequently, the interplay of consumption and saving decisions at a particular period of time determines the economic structure. Economic agents consider their planning horizon, their wealth and expected income in each period, relative prices in the economy, their preferences and how they value consumption in different periods. They then decide on how much to consume or save from their income. Through the consumption decision, there is an increase in the utility level of the economy while the saving decision defers consumption/utility to a future time.

The Nigerian Context

Nigeria is endowed with a wealth of physical and biological resources which, over the years, have been sustaining the nation's growth. Agriculture is the largest sector of the economy, accounting for about 42 percent of total GDP (NBS, 2014). Further, agriculture accounts for 40 percent of export value and 70 to 80 percent of the total workforce of the Country (FAO, 2006; IMF, 2006). Over 75 percent of the Country's total population lives in the rural area and depend on subsistence farming. Their livelihoods and welfare are thus tied directly to income and resources from farming. Moreover, the non-farming population also depends heavily on agriculture as a large portion of their income is spent on food and other agriculturally sourced raw materials. Therefore, agriculture contributes greatly to government revenue, employment and the general economic performance – the higher the agricultural output, the higher will be the overall expenditure, savings and, ultimately, investment in the economy. Consequently, any activity that will boost agriculture will be expected to result in increased saving and investment. This will, in the long run, stimulate economic growth and reduce poverty.

Unfortunately, Nigeria's agricultural sector suffers from extremely low productivity, largely due to its peasant nature. To illustrate, although overall agricultural production rose by 28% during the 1990s, per capita output rose by only 8.5% during the same decade meaning that agriculture has failed to keep pace with Nigeria's rapid population growth, so that the country, which once exported food, now relies on imports to sustain itself (NBS, 2014). The sector has also suffered from unstable and often inappropriate economic policies (of pricing, trade and exchange rate), the relative neglect of the sector, the negative impact of oil boom era (NBS, 2014), a land tenure system that does not encourage long-term investment in technology or modern production methods and a severe shortage of rural credit (FAO, 2009). Given the central role of agriculture in Nigeria's economy, this situation does not augur well for savings and investment. So, the need for agricultural growth–driven government policy is inevitable for sustained economic growth in Nigeria.

There is growing concern among researchers and policy makers over the declining trend in saving rates and its substantial divergence among countries. This is due to the critical importance of saving for the maintenance of strong and sustainable growth in the world economy. Over the past three decades, saving rates have doubled in East Asia but stagnated in sub-Saharan Africa, Latin America and the Caribbean (Loayza, Schmidt-Hebbel and Serven, 2000). This poor growth performance has generally led to a dramatic decline in investment. Domestic saving rates have not fared better, thus worsening the already precarious balance of payments position (Chete, 1999). This paper thus examines how government policy and agricultural output affect national saving in Nigeria based on the consumption/saving choice theory under uncertainty as developed by Samuelson (1969). It seeks to add to the body of knowledge on what determines savings in an economy considering the unique circumstances in Nigeria which is the most populous country in Africa and also still boasts one of the largest economies on the continent (in GDP terms) despite being gradually transformed over the years into a crude oil-based mono-economy.

Literature Review and Theoretical Framework

Anyanwu and Oaikhenan (1995) identified objective (quantifiable and verifiable) and subjective (non–quantifiable and non–traceable, psychological) determinants of national saving in Nigeria. The objective determinants were the level of income, the rate of interest, inflation rate, expectations about inflation rate and saving facilities. On the other hand, the subjective determinants of saving documented were the instinct for precaution, the desire for bequest, habits and cultural factors. Considering international determinants of saving behavior, Masson, Bayoumi, and Samiei (1998) found that demographics and growth are important determinants of private saving rates, and that interest rates and terms of trade have positive, but less robust, effects. Increases in per capita gross domestic product seem to increase saving at low income levels (relative to the United States) but decrease it at higher ones.

Collins (1991) examined saving behavior in nine Asian developing countries and Turkey dating from the early 1960s. Multiple regression analysis was used to separate the determinants of saving overtime and across countries. He reported three key findings: first, the standard of living and the real growth rate impact on saving. Second, there is a structural difference in saving behavior between the low income and the middle income countries. Third, saving is influenced by the explanatory variables through two separate channels: while living standard and age distribution appear to have significant structural effects on household behavior, changes in these variables tilt the mean age of consumption relative to the mean age of earning in the economies.

Schmidt-Hebbel, Webb and Corsetti (1992) used household data available from the U.N system of National Accounts for a sample of 10 developing countries. They estimated the household saving function using combined time-series and cross country observation to test household responses to income and growth, rates of return, monetary wealth, foreign saving and demographic variables on a time trend, using five year over lapping data series. They reported that income and wealth variables affect saving strongly and in ways consistent with standard theories. According to them, inflation and interest rates do not reflect clear effects on saving which was also consistent with their theoretical expectation. They also found that foreign saving and

monetary assets have strong negative effects on household saving, which suggest the importance of liquidity constraints and monetary wealth in developing countries.

Loayza, Schmidi-Hebbel, Serven (1998) investigated the factors behind the broad and considerable differences in saving across countries of the world and overtime. They used a time series data set constructed for the World Bank saving project to assess the policy and non-policy determinants of saving. They reported that the lagged private saving rate had a positive and significant coefficient which revealed a large degree of persistence. They reported further that both the (log) level and the growth rate of real per capita private disposable income have a positive and significant effect on the private saving rate. The real interest rate had a negative effect on private saving rate, which they interpreted to suggest that its income effect outweighs the sum of its substitution and human wealth effect. A rise in the public saving rate led to a significant decline in the private saving rate. Also, all the three demographic variables under consideration: the urbanization ratios, young and old dependency ratio, had significantly negative effects on private saving rate. They also found that a rise in inflation has a positive effect on saving.

Masson, Bayoumi and Samiei (1998) in an attempt to identify international evidence on the determinants of private savings, adopted the life cycle hypothesis and Ricardian equivalence. A number of possible determinants of private saving behaviour were examined using data from a large sample of industrial and developing countries. Both time-series and cross sectional estimates were obtained using panel data estimation techniques involving 21 industrial countries and over 40 developing countries covering 1971 – 1993. According to the authors, results suggest that there was a partial effect of changes in public saving and (for developing countries) in foreign saving on private saving. They found that demographic and growth variables are important determinants of private saving rate. They also reported that interest rates and terms of trade produce positive but less significant effects on private saving. Increase in per capita gross domestic product appears to increase saving at low income level but decreases it at higher levels.

Ozcan (2000) examined empirical determinants of private saving for a sample of economies in the Middle East and North Africa (MENA), over a period of 1981 to 1994. Using lifecycles hypothesis and panel estimation techniques, he investigated the relationship between private saving rates and several macroeconomic policy and non-policy variables. He reported that per capita income has a positive coefficient and was significant. It was also revealed by the author that the young dependency ratio, the old dependency ratio and urbanization turned out statistically insignificant. The results indicated a negative and significant impact of government saving while inflation rates and terms of trade showed a positive and significant impact. The effect of interest rate on saving was not found to be statistically significant. Loayza, Schmidt-Habbel and Serven (2000), on the other hand, discussed the design of the research projects on saving in developing countries and its core database. They summarized the main projects and placed the results of the projects in the context of the literature on saving. The authors stated that the variables which are statistically significant included the terms of trade, foreign borrowing constraints, fiscal policy variables and pension system variables. They also stated that the influence of income is greater in developing than in industrial countries. They also found that GDP growth rate increases the private saving rate.

Elbadawi and Mwega (2000) analyzed the determinants of private saving in sub-Sahara Africa. The study attempted to explain the region's dismal performance and identify policies that could help to reverse the decline in saving in the region. Empirical analysis showed that in sub-Sahara Africa, causality runs from growth to investment, whereas a rise in the saving rate Granger-causes an increase in investment. The empirical analysis was done on sub-Sahara Africa over 1970 – 1995. The result of the analysis revealed that Africa lags behind other regions (most notably, the high performing Asian economies) in its private saving. This is because of the region's low per capita income, high young–age dependency ratio, and high dependence on aid. The combined effects of these factors substantially outweigh Africa's advantage from its public saving and higher government consumption.

Chete (1999) examined the macroeconomic determinants of private saving in Nigeria. He adopted the neoclassical life cycle saving hypothesis developed by Ando and Modigliani (1963) and estimated the function on data covering 1973 to 1993. The author reported a positive relationship between real interest rate and saving. He found a significant negative effect on personal saving of the ratio of broad money (M3) to GDP. His result also shows that the growth rate of terms of trade exerts a positive and significant effect on private saving. External debt accumulation was reported by the author to have a negative impact on private saving. He observed that per capita income positively and significantly influences saving. Also, domestic inflation was positive and significant. Chete (1999) concluded that the results in terms of the direction of impact of the hypothesized determinants turned out to be mixed. According to the author, country peculiarities should be the supreme consideration in formulating policies towards boosting saving.

The Consumption/Saving Choice under Uncertainty

In examining the determinants of national saving in Nigeria, the study was guided by the consumption/saving

choice theory under uncertainty developed by Samuelson in 1969 (in Blanchard and Fischer, 1989).

Under the condition of certainty, individuals choose the slope of their consumption path according to the Keynes/Ramsey rule which states that consumption increases, stays constant or decreases based on whether the marginal product of capital (MPk) increases, is constant or decreases with respect to the rate of time preference (θ). For example, if MPk < θ, consumption will reduce, because k will lead to increased future consumption. This means that the consumer chooses the highest level of consumption consistent with their inter–temporal budget constraint. This can, however, only hold under the prevailing assumption of certainty of the consumer about future labour incomes as well as returns on assets. The real world, however, is characterized by uncertainty of incomes and returns on investments. Thus in examining the uncertainty condition, Samuelson (1969) made a number of assumptions: individuals can buy as many goods as they want as there is no rationing in the goods market, a riskless asset exists, individuals can borrow and lend freely at the riskless rate and the consumer is uncertain about future labour incomes and returns on assets. The model is developed further in the following sections.

The utility maximization problem: The consumer, under uncertainty, maximizes the present discounted value of his expected utility, conditional on information at the present, subject to his budget constraint, that is;

$$E\left[\sum_{t=0}^{T-1}(1+\theta)^{-t}U(C_t)\mid 0\right] \text{ (Equation 1) is maximized subject to:}$$

$$A_{t+1}=(A_t+Y_t-C_t)[(1+r_t)\omega_t+(1+z_t)(1-\omega_t)];Y_t\in I_t,A_t\geq 0 \text{ (Equation 2)}$$

Equation 1 is the expected utility of the consumer while equation 2 represents his budget constraint. C_t is the consumption at time t; A_t is the financial wealth at the beginning of the period being considered; ω_t is the proportion of investment in riskless assets; r_t and z_t represent rates of return on riskless and risky assets respectively; I_t is the information set available at time t; and Y_t represents labour income which is random but known at time t. r_t is a deterministic function of time while z_t is random and not known at time t.

The portfolio decision for a consumer is characterized by the share of portfolio invested in the riskless asset (ω_t). A consumer chooses a consumption and portfolio plan at time 0, knowing that he will be able to choose a new plan at time 1, and so on until time T-1, where T represents the time horizon open to the consumer.

In order to reduce the problem to a simple two-period decision problem, however, the expected utility of the consumer is expressed in terms of the present discounted value of expected utility at time t as follows:

$$V_t(A_t)=\max E\left[\sum_{t=0}^{T=1}(1+\theta)^{-(1-t)}U(C_t)\mid t\right] \text{ (Equation 3)}$$

Equation 3 (also known as the value function) is a function of financial wealth at the beginning of period t (A_t), the conditional joint distribution of future labour income and rates of return and the length of time between t and T. Equation 3 is then maximized subject to the budget equation (Equation 2).The value function (V_t) satisfies the following recursive equation known as the Bellman equation:

$$V_t(A_t)=\max_{\{C_t,\omega_t\}}\left\{U(C_t)+(1+\theta)^{-1}E\left[V_{t+1}(A_{t+1})\mid t\right]\right\} \text{ (Equation 4)}$$

The foregoing means that the value function at time t is equal to the utility of consumption at time t plus the expected value of the discounted value function at time t+1. Given that the value function at the present time (V_t) is known, the consumer's problem is now reduced from a multi-period problem to a 2–period problem. There is a tradeoff of consumption at time t for more financial wealth at time t+1. Therefore, the consumer seeks to maximize the right hand side of the Bellman equation subject to his budget constraint. The first order conditions for maximization with respects to consumption and proportion of investment in riskless assets respectively are as follows:

$$C_t: U'(C_t)=E\left[(1+\theta)^{-1}((1+r_t)\omega_t+(1+z_t)(1-\omega_t))V'_{t+1}(A_{t+1})\mid t\right] \text{ (Equation 5)}$$

$$\omega_t: E\left[V'_{t+1}(A_{t+1})(r_t-z_t)\mid t\right]=0 \text{ (Equation 6)}$$

The foregoing means that, along the optimal path of consumption, the marginal value of financial wealth must be equal to the marginal utility of consumption. The relationship between consumption in two periods t and t+1 can also be shown with respects to riskless and risky assets respectively:

$$U'(C_t)=(1+\theta)^{-1}(1+r_t)E\left[U'(C_{t+1})\mid t\right] \text{ (Equation 7)}$$

$$U'(C_t)=(1+\theta)^{-1}E\left[(1+z_t)U'(C_{t+1})\mid t\right] \text{ (Equation 8)}$$

This means that the marginal rate of substitution of consumption between two periods, t and t+1, must be equal to the marginal rate of transformation i.e. a decrease in consumption of ∂C_t at time *t* in favour of investment in

riskless assets yields an increase in expected utility equivalent to $(1+\theta)^{-1}(1+r_t)E[U'(C_{t+1})\,|\,t]$ at time *t+1* and the same goes for the risky asset. This brings about the concept of precautionary saving.

Precautionary saving: Labour income risk can be reduced or diversified to a limited extent through life insurance or holding a portfolio of financial assets whose returns are negatively correlated with labour income (e.g. pension schemes). However, since in reality much of labour risk is not diversifiable, the presence of uncertainty affects consumption and encourages prudence (saving).

Since the consumer, under uncertainty, does not have perfect knowledge of future labour incomes, labour income uncertainty introduces prudence (saving) into the consumer's utility maximization function. Assuming the consumer maximizes the following utility function under the constant absolute risk aversion condition (Kimball and Mankiw, 1987):

$$E\left[\sum_{t=0}^{T-1}\left(-\frac{1}{\alpha}\right)\exp(-\alpha C_t)\,|\,0\right] \quad \textbf{(Equation 9)}$$

subject to his budget constraint given by the following equation:

$$A_{t+1} = (A_t + Y_t - C_t) \quad \textbf{(Equation 10)}$$

where Y_t (current labour income) is a function of the previous period's income and a purely random error term as shown below:

$$Y_t = Y_{t-1} + e_t \qquad e_t \sim N(0, \sigma^2) \quad \textbf{(Equation 11)}$$

This means that the consumer has constant absolute risk aversion with coefficient "α" and lives for T periods. Y_t follows a random walk with normally distributed innovations (e_t). Optimal consumption therefore satisfies the following:

$$C_{t+1} = C_t + \frac{\alpha\sigma^2}{2} + e_t \quad \textbf{(Equation 12)}$$

Maximizing equation 12 subject to 10, therefore, yields the following consumption function:

$$C_t = \left(\frac{1}{T-t}\right)A_t + Y_t - \frac{\alpha(T-t-1)\sigma^2}{4} \quad \textbf{(Equation 13)}$$

Consumption under certainty ***Prudence***

Equation 12 shows that higher income uncertainty and, thus, higher risk aversion (α) leads to a steeper slope, that is, more prudent behavior. On the other hand, equation 13 shows that the level of consumption is a function of wealth, income and uncertainty – the higher the level of uncertainty (α), the lower the consumption as greater uncertainty brings about more prudent behaviour on the part of consumers. Thus a consumer who doesn't desire to end up with zero consumption in the next period due to non-diversifiable labour income has to put up more prudent behaviour in the form of saving.

Based on the foregoing, this paper seeks to empirically establish the factors that influence prudent behaviour (saving) in Nigeria with focus on government policy and agricultural output.

Methodology

Secondary data from 1981 – 2012 on national savings, agricultural GDP, debt servicing, public expenditure, narrow money supply, interest rate, inflation rate, exchange rate (Naira to US Dollar), oil and non-oil imports and exports as well as demographic variables like population and unemployment rate were sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin for 2012, the National Bureau of Statistics (NBS) Statistical Year Book for various years and the International Monetary Fund (IMF) World Economic Outlook (WEO) for 2012.

The Model

The model showing the relationship between the dependent variable (national saving) and the independent variables is shown below:

$LnTNS_t = \alpha_0 + \beta_1 LnAGD_t + \beta_2 LnGRE_t + \beta_3 LnGCE_t + \beta_4 LnDSV_t + \beta_5 LnMSP_t + \beta_6 INT_t + \beta_7 INR_t + \beta_8 LnEXR_t + \beta_9 LnVOI_t + \beta_{10} LnVOE_t + \beta_{11} LnVNI_t + \beta_{12} LnVNE_t + \beta_{13} LnPOP_t + \beta_{14} UER_t + \mu_i$ **(Equation 14)**

Where;
TNS_t = Total national savings (Million Naira)
AGD_t = Agricultural output (GDP) (Million Naira)
GRE_t = Government recurrent expenditure (Million Naira)
GCE_t = Government capital expenditure (Million Naira)
DSV_t = Government debt servicing (Million Naira)
MSP_t = Narrow money supply (Million Naira)
INT_t = Interest rate (%)
INR_t = Inflation rate (%)
EXR_t = Exchange rate (Naira to US Dollar)
VOI_t = Value of oil imports (Million Naira)
VOE_t = Value of oil exports (Million Naira)
VNI_t = Value of non–oil imports (Million Naira)
VNE_t = Value of non–oil exports (Million Naira)
POP_t = Population (Number)
UER_t = Unemployment rate (% of Total Labour Force)
Ln = Natural logarithm
α_0 = Intercept
$\beta_1 - \beta_{14}$ = Coefficients

Results and Discussion

Macroeconomic time series are often non-stationary. The Augmented Dickey-Fuller (ADF) test was thus carried out on each of the variables to ascertain their stationarity and at what differencing level they become stationary if otherwise as meaningful inferences can only be drawn from stationary series. The results are presented in table 1.

Table 1: Results of the Augmented Dickey-Fuller (ADF) test for Stationarity

Variable	Specification	Lag length*	5% critical value	10% critical value	ADF test statistic	Differencing level**
$D(TNS_t)$	CONSTANT	6	-2.9919	-2.6355	-3.2468	1
$D(AGD_t)$	CONSTANT	0	-2.9604	-2.6192	16.1130	0
$D(GRE_t)$	CONSTANT	2	-2.9678	-2.6230	4.7573	0
$D(GCE_t)$	CONSTANT	7	-2.9919	-2.6355	3.4586	0
$D(DSV_t)$	CONSTANT	0	-2.9640	-2.6210	-6.3049	1
$D(MSP_t)$	CONSTANT	6	-2.9862	-2.6326	8.9834	0
$D(INT_t)$	CONSTANT	1	-2.9678	-2.6230	-4.6250	1
$D(INR_t)$	CONSTANT	3	-2.9763	-2.6274	-4.3349	1
$D(EXR_t)$	CONSTANT	0	-2.9640	-2.6210	-5.2353	1
$D(VOI_t)$	CONSTANT	2	-2.9719	-2.6251	5.8411	1
$D(VOE_t)$	CONSTANT	7	-2.9919	-2.6355	4.2929	0
$D(VNI_t)$	CONSTANT	2	-2.9678	-2.6230	6.7344	0
$D(VNE_t)$	CONSTANT	6	-2.9862	-2.6326	5.1461	0
$D(POP_t)$	CONSTANT	0	-2.9640	-2.62101	2.8975	1
$D(UER_t)$	CONSTANT	0	-2.9640	-2.62101	-4.6358	1

***Chosen on the basis of the Schwartz Criterion; **0 = at level; 1 = first difference**

The results above show that seven of the variables are stationary at level while eight are stationary at the first difference.

Table 2 shows the results of the Johansen test to determine whether or not cointegration exists among the variables chosen for analysis. This test is necessary because of the non-stationarity of some of the variables which means that establishing causal relationships among them will provide misleading results.

Table 2: Results of the Johansen test for Determining Cointegration Rank

Rank	Eigen Value	Trace test	P-Value	L–Max test	P–Value
0	0.99999	1140.6	0.0000***	350.83	0.0000***
1	0.99376	789.72	0.0000***	157.36	0.0000***
2	0.98410	632.36	0.0000***	128.39	0.0000***
3	0.96195	503.96	0.0000***	101.33	0.0000***
4	0.94209	402.63	0.0000***	88.315	0.0002***
5	0.92395	314.32	0.0000***	79.866	0.0003***
6	0.85115	234.45	0.0001***	59.049	0.0388*
7	0.75382	175.40	0.0045***	43.452	0.3141
8	0.70772	131.95	0.0182**	38.132	0.2929
9	0.68072	93.817	0.0656*	35.393	0.1564
10	0.54070	58.424	0.2886	24.120	0.4599
11	0.43570	34.304	0.4901	17.737	0.5284
12	0.25265	16.567	0.6790	9.0280	0.8296
13	0.21356	7.5389	0.5229	7.4474	0.4465
14	0.0029488	0.091547	0.7622	0.091547	0.7622

*** = significant at 10% ** = significant at 5% *** = significant at 1%**

The results above show that the variables can co-integrate. Specifically, table 2 shows that there are nine (P<0.05) and six (P<0.05) co-integrating vectors among the variables using the trace and L-Max tests respectively, thus confirming long-run relationships among them. Thus, from the foregoing, a causal relationship can be established between national saving and the independent variables using the co-integration regression

The co-integration regression result is presented in table 3 and it shows that seven of the independent variables significantly influence national saving in Nigeria. The significant variables are government recurrent expenditure, debt servicing, money supply, interest rate, non-oil imports, population as well as unemployment rate.

Table 3: Result of the Cointegration Regression Model

Regressor	Coefficient	Standard error	t–statistic	P–Value
α_0	-9.5831	5.8850	-1.628	0.1218
$D(AGD_t)$	-0.3142	0.1976	-1.590	0.1303
$D(GRE_t)$	0.4711	0.1906**	2.472	0.0243
$D(GCE_t)$	-0.1215	0.1249	-0.973	0.3442
$D(DSV_t)$	-0.1692	0.0942*	-1.796	0.0903
$D(MSP_t)$	0.7953	0.2025***	3.928	0.0011
$D(INT_t)$	-0.0203	0.0088**	-2.311	0.0336
$D(INR_t)$	-0.0010	0.0022	-0.452	0.6571
$D(EXR_t)$	0.0033	0.0023	1.434	0.1698
$D(VOI_t)$	0.0270	0.0558	0.048	0.6351
$D(VOE_t)$	0.0379	0.1111	0.341	0.7372
$D(VNI_t)$	-0.2405	0.1212*	-1.984	0.0636
$D(VNE_t)$	0.0660	0.0895	0.738	0.4708
$D(POP_t)$	3.3839	1.7542*	1.929	0.0706
$D(UER_t)$	-0.0685	0.0173***	-3.958	0.0010
Mean dependent variable	**11.99280**	**S.D. dependent variable**	**2.079519**	
R-squared	**0.996638**	**Durbin-Watson**	**2.084552**	
Log-likelihood	**32.41036**	**Schwarz criterion**	**-12.83468**	

*** = significant at 10% ** = significant at 5% *** = significant at 1%**

Agricultural GDP was revealed not to be a significant factor that influences national saving in Nigeria despite the sector holding most of the Country's labour force and being a significant contributor to GDP. This might be traceable to the fact that much of the increase in agricultural output experienced through the years in Nigeria have come as a result of sudden "jumps" in the number of participants trying to take advantage of previous-season increases in commodity prices or favourable policy changes and not as a result of productivity improvements of the average farmer, which would more likely have influenced national saving positively.

Among the significant factors, it was found that for every N1million increase in government's recurrent spending, national saving would increase by as much as N0.47million while a similar increase in money supply by the Central Bank would cause a N0.79million increase in saving, thereby showing that expansionary fiscal and monetary policy actions of the government positively affect saving in Nigeria. Similarly, population growth in the Country was revealed to favour national saving as a 1% increase in population was shown to be capable of bringing about a N3.4million increase in saving.

On the other hand, debt servicing by the government results in crowding out of national saving as it can be seen in table 3 that a N1million increase in spending on debt servicing would cause saving to contract by N0.17million. Expectedly, unemployment rate showed a negative relationship with the dependent variable; a 1% increase in the number of the unemployed would result in an approximately N0.07million decrease in saving in the Country. Importation of various goods (non-oil) would also reduce national saving as is shown. Thus, increasing the amount spent on such imports by N1million would force down saving by N0.03million.

Conclusion and Recommendations

This paper examined how different government policy variables and agricultural output affect national saving in Nigeria. The findings reveal that agricultural output is not a significant determinant of national saving in Nigeria despite its being a largely agrarian society. This may be attributed to the peasant nature of farming in the Country which is characterized by low productivity. Rather, population growth and expansionary policies like increased government spending and money supply are factors that can increase Nigeria's national saving. Conversely, unrestrained government borrowing and the consequent burden of servicing such debt on the economy, rising unemployment rate as well as the expenditure of scarce foreign exchange on the import of goods all hamper national saving; a situation which comes with serious implications for economic growth since investment, which is the driver of growth, is a direct consequence of how much saving occurs in an economy.

It is thus recommended, based on the presented findings, that government recurrent spending which empowers the populace economically (e.g. prompt payment of salaries and arrears, contract fees, remuneration packages and so on) should be given priority during national budget implementation so as to stimulate the economy through saving and investment. Along this line, government agencies concerned should also strive for higher budget implementation indices. Also, unnecessary contraction of money supply should be avoided within reasonable inflation limits in order not to stifle economic activity.

Endemic corruption in Nigeria prevents funds borrowed by the government from achieving their objective of economic stimulation, thus, making servicing (or repaying) such loans burdensome to the economy. Therefore, unrestrained borrowing by government from international agencies along with the biting effects of corruption must be checked so as not to crowd out national saving. Furthermore, it is recommended that local production of goods and services should be supported to prevent excessive importation and the attendant devaluation of the Naira.

Finally, it is recommended that employment generation through the empowerment of the youth and the promotion of infant industries must be prioritized so that the Country's teeming population can be converted into a work force that will be a driver of economic growth like the fast emerging economies of India and China. The Small and Medium Scale Enterprises Development Agency of Nigeria (SMEDAN) can be a useful tool in this regard if it is better empowered and its activities properly targeted in order to achieve greater productivity in the Nigerian Economy.

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