Savings as a Predicator for Sustainable Economic Growth in Nigeria

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Abstract

The Marginal Propensity to Save (MPS) is the non-unitary coefficient in a bi-variate savings-national income model which measures the proclivity of the population to savings. The research set out to determine its value in Nigeria and what that portends for economic growth as savings forms the basis for capital accumulation and hence investment. The study covers the period 1986-2015. The research adopted the Vector Error Correction Model (VECM) in ascertaining the relationship between gross domestic product (GDP) and private savings (SAV) including other relevant exogenous variables in the model namely PCE, CCPS, INR and GFCF. The results showed a positive relationship between GDP and SAV and that a percent change in SAV would result in an 8.29% change in GDP. The sign of the coefficients of INR, GFCF and CCPS on a priori were wrong. The OLS methodology was adopted to determine the MPS and the result showed that in the period of the study, the MPS had a value of 0.12 indicating a low savings culture in the country. The research recommends that government through the Central Bank of Nigeria (CBN) adopt policies that ensure accountability of the Deposit Money Banks (DMBs) in their business practices as it concerns the banked populace which will promote trust and a greater predilection to save and also addressing the macroeconomic issues bedevilling the country such as a high rate of unemployment and persistent increases in price which already puts a great strain on the already low incomes of most Nigerians.

Keywords: **Marginal Propensity to Save, Economic Growth, Multiplier, Nigeria Economy**

1.0   Introduction

The capitalist economic system stresses a strong nexus between savings and economic growth. According to proponents, it is the main source of capital accumulation which is the main determinant of investments and hence growth in the economy. In highly developed countries, the level of savings has led to greater transformations of these societies over time and still yet, saving rates are higher due to higher incomes (Utemadu, 2007). In sub-Saharan Africa, the propensity to save is low as this region is predominated by countries ravaged by wars, struggling economies with a preponderance of poverty. Osudina and Osudina (2014) emphasised that peoples in LDCs (which most sub-Saharan African countries are) are incapable of high levels of individual savings because of a multiple of reasons ranging from low levels of per capita income, indulgence in frivolous and conspicuous consumption by the few who have an excess of disposable income.

In Nigeria, Temidayo & Taiwo (2011) noted that gross domestic savings has been quite high as a proportion of gross domestic product (GDP) however; gross capital formation which is a proxy for investment has been low. Nigeria's investment to GDP ratio which stood at an average figure of 22.9% in 1970- 1979, dropped to 16.5% in the period between 1980- 1989 and rose slightly to 19.8% in the preceding decade, yet, this is low when considering that a minimum of 20% is required to spur the nation on its path to growth and development (Usman, 2007). A key metric in determining the performance of the banking sector is in its ability to promote the banking habit which is measured by the currency ratio (that is, ratio of currency to broadly defined money supply). The ratio fell from 36.0 per cent to 22.1 per cent between 1970 and 1980 indicating a high level of patronage to commercial banks by the public. The ratio rose slightly in the succeeding years to 25 per cent only to decline by 1984. In 1989, the upward trend then remerged which occurred simultaneously with periods of distress in the banking sector. The ratio stood at 34.2 per cent in 1994, a peak for that decade, only for declines in the currency ratio in 1998 and 2000 with values of 29.81 per cent and 26.65 per cent respectively (Mordi, Englama & Adebusuyi , 2010). In the period before the global crisis in 2007 and 2008, total savings was 2, 693.55 and 4,118.17 billion naira respectively. In the succeeding period post the global financial crisis, the levels of savings has maintained its steady upward trend as shown by

statistics: in 2011, it was 6,531.91 billion naira then 11, 418.41 billion naira. Total savings as a percentage of GDP has shown a tendency though to be unstable with a rise then a fall almost exhibiting a cyclical pattern. CBN (2015) data shows that for the period from 2008 and 2014, the percentage stood at: 16.95, 23.25, 10.90, 10.37, 11.24, 10.81 and 13.41 respectively.

In economic theorizing, there is a linkage between savings and interest rate, the former being the source of capital accumulation. According to Fuller (1990), the factor reward for capital is interest which is measured by the rate of interest. Keynes (1936) elaborated on this when he said "...the quantity of money which people desire to hold for speculative purpose is a function (dependent on) of interest rate. At higher rate of interest, people prefer to hold their wealth in one form of interest bearing asset". Mckinon and Shaw (1973) in their financial intermediation hypothesis found a positive relationship between interest rate and savings. Interest rate is an important economic parameter due to the varying roles it plays within the economy either as the cost of capital or the opportunity cost of funds. The rate of interest is determined in two ways and they are fixed and floating. Fixed interest rates are rates that are established through monetary authorities while floating interest rates are determined by market forces (Udude, 2015). Pre-SAP, Nigeria operated a fixed interest rate policy which was exclusively determined by the Central Bank to achieve some macroeconomic objectives namely: to achieve socially optimum resource allocation, promote orderly growth in the financial market and to facilitate flow of credit to interest sectors- agriculture and machinery (Soludo, 2008). This period of Nigeria's financial development was marred by negative real interest rates which resulted in lower savings, lower investments and low levels of economic growth (Nwachukwu & Odigie, 2009). With the adoption of the programs embedded in the structural adjustment program (SAP) in 1986, commercial banks were allowed to determine the deposit and lending rates in the country through the dynamics of market forces (Udude, 2015).

While savings play a crucial role of mobilizing funds in the economy, its most vital function is in providing a large pool of capital for investment which provides the pathway to economic growth and development. In this context, interest rate as the cost of capital becomes an essential component in determining the

levels of growth in the economy. Private savings in every economy is the portion of the household's disposable income which is not spent on consumption, as such, the expenditure on goods and services impact greatly on the level of savings. Ostry & Reinhart (1995) observed that financial liberation aimed at raising the real interest rates in an economy to increase the household's savings culture would only be effective if and only if they defer on consumption. In other words, if families continue on the path of frivolous spending with a disregard to savings, increasing of the real interest rate would be insignificant. Acha (2011) listed a number of reasons for the negative response of Nigerians toward the interest rates as the opportunity cost of funds and they include: a lack of confidence in the banking sector, low income and a preference for holding cash. From the latter, it can be deduced that currency and demand deposits are the choice of most Nigerians as compared to other forms of savings which may include time and savings deposits with commercial banks which are longer forms of savings bound by time and whose contributions to a deepening of the financial resource base is more effective .

It is against this backdrop that this research seeks to achieve these objectives namely: to determine the effect of saving on economic growth in Nigeria, and to ascertain the multiplier effect of income on marginal propensity to save in Nigeria. The rest of the paper proceeds as follows. Section 2 is the review of related literature which deals with the theoretical framework of the research and the empirical review. Sections 3, 4 and 5 discuss the research methodology, analysis of result, and conclusion and recommendations respectively.

2.0   Review of Related Literature
Theoretical Framework
Economic growth theories have been used in several empirical studies. Researchers have used growth theories from Solow's to Keynes', Kaldor's to Meade's. In this paper, the researcher adopts Harrod-Domar's growth theory. The growth theory was achieved through the works of Harrod (1939) and

Domar (1946). Harrod and Domar were both interested in ascertaining the growth rate of income which was seen as necessary condition for the smooth and uninterrupted functioning of the economy. While their works were both different, both arrived at a similar conclusion. Investment was assigned a key role but greater emphasis was laid on the dual nature it possessed. One of investments characteristic was its ability to create income and the other being its capacity to increase capital stock by supplementing the productive capacity of the economy (Jhingan, 2010). The former is the 'demand effect' of investment and the latter the 'supply effect'.

They postulated that to maintain a full employment equilibrium level of income in the economy, both real income and output should expand at the same rate as the productive capacity of capital stock and if there ever was a shortfall in either, there would be an excess or idle capacity forcing entrepreneurs to limit their investment expenditure. This has the tendency to truncate economic growth and a lowering of incomes in the succeeding periods moving the economy off the path of equilibrium steady growth. Therefore, if full employment is to be maintained in the long run, there should be a continuous expansion of net investment which demands continuous growth in real income at a rate sufficient enough to ensure full utilisation of the growing stock of capital. This level of growth is what Harrod-Domar termed *the warranted rate of growth* or "full capacity growth rate"

In advanced countries, economic growth has been linked to core economic concepts. They include the following: the savings function, autonomous and induced investments, and the productivity of capital. The Harrod-Domar models were developed to direct attention and focus to stagnation in advanced nations in the post-war periods. Their application has been extended to developing economies. According to Hirschman (Jhingan, 2010),

> *"The Domar model, in particular, has proved to be remarkably versatile, it permits us to show not only the rate at which*

the economy must grow if it is to make full use of the capacity created by new investment but inversely, the required savings and the capital-output ratios if income is to attain a certain target growth rate. In such exercises, the capital-output ratio is usually assumed at some value between 2.5 and 5; sometimes several alternative projections are undertaken; with given growth rates, overall or per capita, and with given population projections, in the latter case, total capital requirements for five- to ten-year plans are then easily derived".

In modifying his model to make it more applicable to developing countries, Sir Roy Harrod emphasised on the supply side of his fundamental equation by illuminating the role of interest rate as the determinant in the supply of savings and the demand for savings. He defined the natural rate of interest, rn as the ratio of the product of the natural growth rate of per capita output, pc and natural growth rate of income to the elasticity of diminishing utility of income, e (Jhingan, 2010). Represented as:

$$rn = Pc.Gn/e$$

Given the values of Pc and Gn, the natural rate of interest depends on the value of e which is assumed to be less than unity. There is an inverse relationship between rn and e; as e falls, rn rises and vice versa.

Empirical Review

Udude (2015) in his research article titled "impact of interest rate on savings on the Nigeria's economy adopted the VAR methodology using data covering the scope of 1981-2013. Variables in the model included gross domestic product (GDP) and interest rate as exogenous while savings was the regressand. It was found that there existed a positive relationship between savings and economic growth and that for every 1% increase in national income, savings rose by 0.04%. The CBN, according to the researcher should therefore adopt an interest rate policy that would encourage savings in the real sector.

Osundina & Osundina (2015) in the work, "capital accumulation, savings and economic growth of a nation-evidence from Nigeria" sought to address the problem of low savings and capital accumulation as it concerns economic growth. Data covering a span of thirty- three years was used for its scope (1980-2012). Multiple regression analysis was adopted and the variables in the model were: gross national savings, savings deposit rate, real gross domestic product

gross fixed capital formation and inflation. In the findings, it was found that a percentage change in real gross domestic product would account for a 22% change in savings and the relationship was positive. It was recommended that attention be paid to socio-cultural and economic shocks to create an environment where savings and investment can thrive to enhance economic growth.

Okwori, Sule & Abu (2016) in their research article "the multiplier effect of consumption function on aggregate demand in Nigeria: aftermath of the global financial recession" found that the Nigerian economy fared better post the global financial recession and that consumption, investment, government expenditure and balance of trade contributed positively to economic growth. The multiplier was found to be 0.68 and accounted for a N3.30 increase in income for every N1.0 in investment. They adopted OLS methodology using data covering the scope of 2009-2014. They recommended government respond to shortcomings in investment by implementing demand management policies through fiscal and monetary policies and a need for regular intervention to address market imperfections and slow adjustments which could impede the multiplier.

Temidayo &Taiwo (2011) using data from 1970 to 2006 and adopting the descriptive statistics as their methodology found their research article titled "descriptive analysis of savings and growth" that the difficulty with the Nigerian economy is one not of domestic capital mobilisation but of intervention. Hence, they recommended that government should adopt policies that ensure an intermediation between savings and investment in the economy by providing regulatory and coordinating functions. Gross domestic product, investments and savings were the variables used in their analysis.

Okere & Ngbudu (2015) in a research titled "macroeconomic variables and savings mobilisation in Nigeria" used data from 1993-2012 to analyse their effects. Secondary data were obtained from the CBN and include the following domestic savings, inflation rate, deposit rate, naira/Dollar exchange rate, and number of bank branches, per capita income and financial deepening variable. The analysis was conducted using linear regression based on the Ordinary Least Squares. It was found from the estimated results that there is a strong, positive relationship between the selected exogenous macroeconomic variables and domestic savings. The following recommendations were reached; namely:

efforts should be directed toward a well articulated fiscal and monetary policy, government should ensure adequate macroeconomic policies that will promote foreign direct investment and measures should be pushed to encourage banks to open branches in rural areas to mop up deposits.

Kendall (2000) adopting the methodology of two stage least squares (2SLS) among other econometric techniques, used the McKinnon-Shaw model to evaluate the hypothesis "a rise in the expected real deposit interest rate leads to an increased savings-income ratio". His endogenous variable was gross domestic product (GDP) and he had five other independent variables. In his findings, it was determined that the parameter estimates of the variables employed were of the correct sign and were significant providing support for the McKinnon-Shaw hypothesis.

Employing cross-sectional data within the period 1960-1997 and adopting Granger causality methodology, Anoruo & Ahmad (2001) evaluated the causal relationships between the rate of growth of domestic savings and economic growth in a number of African countries: Congo, Cote d'Ivoire, Ghana, Kenya, Nigeria, South Africa and Zambia. In their findings, it was established that savings in all the countries except Nigeria are co-integrated and that economic growth Granger-causes the rate of growth of domestic savings in all the countries except Congo. There was a bi-directional causality in Cote d'Ivoire and South Africa.

Soyibo & Adekanye (1992) adopted five models in their study of which three had a direct relation with the study. In the first equation, private savings was the dependent variable with foreign savings ratio, rate of growth of income, real per capita income, adjusted ex ante interest rate and lagged savings ratio were exogenous variables. The result of their methodology- multiple regression- showed that all variables except the lagged savings ratio were insignificant including ex ante real interest rate. What the findings showed was that there ex ante interest rate had no significant impact on private savings. The work also sought to determine the applicability of the McKinnon and Shaw's model of financial intermediation and found that financial liberalization is supported rather weakly by Nigeria's data.

Odhiambo (2008) in his investigation of the relationship between savings and economic growth in Kenya determined that there was Granger causality between savings and economic growth and that savings were essential for the development of the financial sector. The research was aimed at investigating the causal relationship between savings, economic growth and the fiscal deficit using panel data from 1991-2005. His emphasis was on two-way causality which distinguished his work from other such studies.

3.0   Methodology
Model Specification
Two models are used to give empirical content to the stated objectives. The first measures the effect of savings on economic growth in Nigeria while the second measures the multiplier effect of income on Marginal Propensity to Save (MPS) in Nigeria.

Model 1
This study adapts the empirical model used by Okwori, Sule & Abu (2016) which has been modified as follows.

The functional form of the model is specified below:

$$GDP = \beta_0 + \beta_1 SAV + \beta_2 PCE + \beta_3 GFCF + \beta_4 INR + \beta_5 CCPS + \mu$$

Where: GDP   =   Gross Domestic Product
            SAV   =   Total Savings
            PCE   =   Private Consumption Expenditure
            GFCF   =   Gross Fixed Capital Formation
            INR   =   Interest Rate
            CCPS   =   Core Credit to the Private Sector

The Harrod and Domar model assumes equality between savings and investment, thus what is saved is ultimately invested in the economy – hence the inclusion of SAV and GFCF as proxies for savings and investment respectively. The level of savings affects the quantum of investment which is determined by the rate of interest charged which either discourages or encourages borrowing. The amount of interest charged also has a ripple effect on the credit banks are willing to advance to the real sector. Consumption expenditure affects how much individuals are willing to save. All these variables jointly affect the rate of growth of an economy.

Model 2

To determine the multiplier effect of income on marginal propensity to save, a cue is taken from Okwori et al (2016) and was modified as follows:

$$SAV = \beta_0 + \beta_1 GDP + \mu \qquad\qquad 0 < \beta_1 < 1$$

Where: SAV   =   Total Savings

GDP   =   Gross domestic Product (Income)

β_0 and β_1 are parameters to be estimated

μ =   Error term

Note: β_1 is the Marginal Propensity to Save (MPS)

3   Method of Study

The VAR methodology is employed in this study to examine the multiplier effect of savings on economic growth in Nigeria. The Marginal Propensity to Save (MPS) is also evaluated through a simple linear regression model based on the Ordinary Least Square (OLS) method. Regression analysis is used to measure the causal effect relationship between savings and economic growth in Nigeria. Diagnostic tests including Unit root test, Co integration test and parameter stability test are used to determine the statistical reliability of the parameter estimates. Secondary data are obtained for the period 1986 – 2015 from the Central Bank of Nigeria (CBN) Statistical Bulletin. This time period is chosen because it underlies the introduction of the Structural Adjustment Programme (SAP) and the post SAP era within which savings and economic growth have undergone different rhythms.

4.0   Data Analysis

To determine the stationarity of the variables included in the model, the unit root test was conducted. The unit root test is also a necessary first condition needed if the regression analysis is to be the appropriate methodology. The results of the unit root are presented below:

Table 1: Stationary Test

Variable	ADF Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value	Prob.	Order of Integration
GDP	-3.71	-3.69	-2.97	-2.63	0.0096	I(1)
SAV	-11.91	-3.70	-2.98	-2.63	0.0000	I(1)
PCE	-11.17	-3.71	-2.98	-2.62	0.0000	I(1)
GFCF	-4.11	-3.69	-2.97	-2.63	0.0036	I(1)
INR	-5.94	-3.70	-2.98	-2.63	0.0000	I(1)
CCPS	-3.88	-3.69	-2.97	-2.63	0.0061	I(1)

Source: *Author's Computation, EViews 8*

From the above table, the ADF values at absolute values is greatest than   at the 1%, 5% and 10% critical values respectively (showing that it is significant). It can also be inferred from the above that the variables are stationary and this is at the first difference, that is I(1).

VAR Lag Order Selection Criteria

For the empiri cal model in this study, the optimal lag is 2. The values of the several criteria are shown thus:

Table 2: Lag Order Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-1317.730	NA	4.66e+33	94.55214	94.83761	94.63941
1	-1162.354	233.0640	9.86e+29	86.02528	88.02359	86.63619
2	-1051.479	118.7947*	6.97e+27*	80.67707*	84.38821*	81.81160*

Source: Author's Computation, EViews8

Where the criteria above LR, FPE, AIC, SC and HQ respectively are; Sequential Modified LR Test Statistic, Final Prediction Error, Akaike   Information Criterion, Schwarz |Information Criterion and Hannan-Quinn Information Criterion.

Effect of Savings on Economic Growth

The stated stochastic function for the relationship is given;

$$GDP = \beta_0 + \beta_1 SAV + \beta_2 PCE + \beta_3 GFCF + \beta_4 INR + \beta_5 CCPS + \mu$$

The numerical estimates for the above variables computed using the Vector Error Correction Model are presented in the mathematical form below,

$$GDP = -13.92 + 8.29 SAV + 4.04 PCE - 0.03 GFCF + 0.98 INR - 12.43 CCPS$$
$$(1.13) \quad (0.46) \quad (0.36) \quad (0.53) \quad (1.35)$$

The estimated equation obtained above is for the long run VECM, from which deductions can be drawn with respect to the a priori expectations in connections with the signs of the estimated parameters. It can be observed that SAV and PCE are in conformity with economic theory while GCFC, INR and CCPS are not.

The result shows that a percentage change in SAV will cause GDP to rise by 8.29 per cent of that unit change. The positive relationship amplifies theoretical postulates that savings contributes to economic growth. But the magnitude of this estimate reveals the low contribution of savings to growth since it is the major source of capital accumulation necessary for growth. The positive relationship between INR and GDP shows that a rise in INR will result in an increase in GDP; hence, a 1% change in its value will result in a 0.98% change in GDP, but this is an aberration as economic postulates posits a negative relationship between both variables. Given that INR is the cost of capital and the determinant of investment, the estimated parameter reveals its contribution to growth is minimal. Private Consumption Expenditure (PCE) represents household consumption spending which reveals that a unit change in household expenditure will cause GDP to rise by 4.04%.

GFCF has a negative relationship with GDP which is contrary to economic theory as it represents the totality of capital formation and is expected to have a positive relationship with economic growth. A unit change in its value will result to a 0.03% decrease in GDP by that unit change. Core Credit to the Private Sector (CCPS) has a negative relationship with GDP. From the estimated model, a percentage change in CCPS will lead to a 12.43% change in gross domestic product (GDP) by that unit change.

The statistical criterion for determining the statistical sufficiency of a parameter estimate is based the relationship between the standard error and its estimated estimate. If the standard error is less than half the parameter estimate, then the null hypothesis is rejected (that is, $S. E < \frac{1}{2} b_i$) and vice versa. From the estimated model estimated above, the estimates SAV and PCE are statistically significant while GFCF, INR and CCPS are insignificant. This implies that while SAV and PCE contribute to economic growth, GFCF, INR and CCPS have no contribution to GDP.

Short Run Model

The short run effect of the VAR model is shown below:

Table 3: Error Correction Model

Variable	Coefficient	Standard Error	T-Statistics
ECM	-0.11	0.07	-1.59
D(LOG(GDP(-1)))	-0.18	0.39	-0.46
D(LOG(SAV(-1)))	1.30	0.79	1.64
D(LOG(PCE(-1)))	0.69	0.40	1.71
D(LOG(GFCF(-1)))	-0.09	0.27	-0.34
D(LOG(INR(-1)))	-0.16	0.26	-0.61
D(LOG(CCPS(-1)))	-1.20	0.66	-1.81
C	-0.06	0.16	-0.37

Adjusted R^2 = 0.53, F Statistics = 5.12, $F_{0.05}$ = 2.62

Source: **Author's Computation from EViews8**

From the short run model above, the estimates of GFCF, INR and CCPS are of the wrong sign while all variables (SAV, PCE, GFCF, INR and CCPS) are statistically insignificant. The adjusted R^2 value shows a positive and moderate relationship between economic growth and the listed exogenous variables as the statistic shows that about 53% of the variations in GDP are accounted for by changes in these variables. The F statistic obtained from the short run VAR and its tabulated value at 5% critical value shows a joint impact of the exogenous variables on GDP. The coefficient of the error correction parameter indicates that in the long run, deviations are adjusted slowly and only about 11% of the disequilibrium is removed in each period. This also signifies that at a rate of 11% when there is an initial disequilibrium, GDP will attain equilibrium.

Model 2

Given the estimated savings function as:

$$SAV = \beta_0 + \beta_1 GDP + \mu$$

The regression result above for the savings

And substituting for their numerical values the parameter estimates $\beta_0 + \beta_1$

Table 4: Regression Analysis

SAV = -99.74 + 0.12GDP			
S(b$_i$)	=	(166.74)	(0.01)
t*	=	(-0.60)	(25.87)
Prob.	=	(0.55)	(0.00)
R^2	= 0.96, Adjusted R^2 = 0.96, DW= 1.50		

*Source: **Author's Computation, EViews8***

function shows that the coefficient of GDP is positive hence there is a positive relationship between the endogenous and exogenous variable. The small size of the coefficient of GDP though is an indicator the weak relationship between the two variables. A percentage change in GDP will result in 0.12% change in savings by that unit change. This estimated coefficient is also known as the Marginal Propensity to Save (MPS). The t test shows that the estimate is statistically significant. The R^2 of 0.96 shows that 96% of the variation in savings is accounted for by Gross Domestic Product (GDP). This is further supported the Adjusted R^2 value of 0.96, that is 96%. The Durbin-Watson statistic (DW) of 1.50 indicates that there is no evidence of positive first order serial correlation in the data as the observed d is greater than the upper limit of the DW (that is, d_U)

The Effect of the Multiplier on Marginal Propensity to Save

In macroeconomic analysis, the MPS is used in determining the value of the multiplier, which is a factor used in ascertaining by how much a variable, in this case income would rise if its parameter were adjusted. Its formula is given,

$$m = 1/(1 - MPS)$$

Given that the computed MPS from our model was found to be 0.12. The multiplier therefore is 1.14. The impact this has on the economy is that if an economic agent (households, governments and firms) raised expenditure by say N1, national income would rise by N1.14. This represents a 14% rise in national income.

5. Summary of Findings and Conclusion

This study reveals that there exists a positive relationship between savings and economic growth in Nigeria. In the national income model, it was found that Private Savings and Private Consumption Expenditure contributed to economic growth of the Nigerian economy. Gross Fixed Capital Formation and Core Credit to the Private Sector though were found to be insignificant. The research also found that in a simple regression between SAV and GDP, there exists a positive relationship between both variables but the magnitude of the computed MPS is small indicating a poor savings culture among Nigerians giving credence to the research by Anoruo & Ahmad (2001). This therefore explains the size of the multiplier and its effect on economic growth in Nigeria. It is on the findings of this research that the following recommendations are proffered:

That government through its monetary agency enact policies that ensure the need for Deposit Money Banks (DMBs) to operate in ways which promote trust among the population- banked and unbanked, especially as it concerns prompt payment of interests on deposits mandating transparency in all its dealings to spur and embolden public confidence. Attention should be paid to impediments to private savings such as high cost of living. When price stability is attained and market prices of essential commodities are reduced, real income rises, households have more income for saving which raises the multiplier and hence its impact on the national income.

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DATA USED FOR THE STUDY

YEAR	GDP	SAV	PCE	GFCF	INR	CCPS
1986	134.60	13.93	51.54	11.35	12	15.25
1987	193.13	18.68	75.98	15.23	19.2	21.08
1988	263.29	23.25	106.68	17.56	17.6	27.33
1989	382.26	23.80	126.19	26.83	24.6	30.40
1990	472.65	29.65	177.23	40.12	27.7	33.55
1991	545.67	37.74	206.81	45.19	20.8	41.35
1992	875.34	55.12	373.53	70.81	31.2	58.12
1993	1,089.68	85.03	502.78	96.92	36.09	127.12
1994	1,399.70	108.46	610.34	105.58	21	143.42
1995	2,907.36	108.49	1,387.45	141.92	20.79	180.00
1996	4,032.30	134.50	2,124.27	204.05	20.86	238.60
1997	4,189.25	177.64	2,091.07	242.90	23.32	316.21
1998	3,989.45	200.06	2,371.33	242.26	21.34	351.96
1999	4,679.21	277.67	2,454.79	231.66	27.19	431.17
2000	6,713.57	385.19	2,478.78	331.06	21.55	530.37
2001	6,895.20	488.05	3,687.66	372.14	21.34	764.96
2002	7,795.76	592.09	5,540.19	499.68	30.19	930.49
2003	9,913.52	655.74	7,044.54	865.88	22.88	1,096.54
2004	11,411.07	797.52	8,637.73	863.07	20.82	1,421.66
2005	14,610.88	1,316.96	11,075.06	804.40	19.49	1,838.39
2006	18,564.59	1,739.64	11,834.58	1,546.53	18.7	2,290.62
2007	20,657.32	2,693.55	16,243.72	1,936.96	18.36	3,680.09
2008	24,296.33	4,118.17	16,090.50	2,053.01	18.7	6,941.38
2009	24,794.24	5,763.51	18,980.96	3,050.58	22.62	9,147.42
2010	54,204.80	5,954.26	36,452.42	9,183.06	22.51	10,157.02
2011	63,258.58	6,531.91	41,437.72	9,897.2	22.42	10,660.07
2012	71,186.53	8,062.90	42,115.91	10,281.95	23.79	14,649.28
2013	80,222.10	8,656.12	58,745.85	11,478.09	24.69	15,751.84
2014	89,043.62	12,008.21	64,334.92	13,595.84	25.74	17,129.68
2015	94,144.96	11,418.41	73,821.36	14,130.18	26.71	18,674.15

Source: CBN Statistical Bulletin