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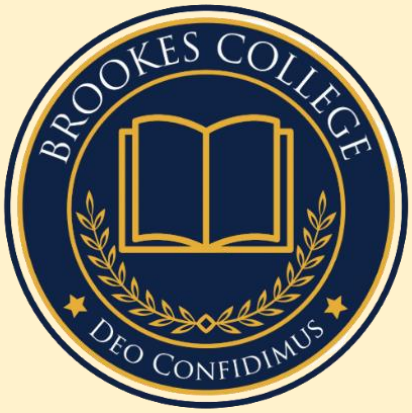

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DETERMINANTS OF HOUSEHOLD SAVINGS IN NIGERIA

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ABSTRACT

An Autoregressive Distributed Lag (ARDL) model and Granger Causality econometric technique were employed to identify the determinants of savings in Nigeria over the period 1981 and 2015. Based on the Random-Walk Hypothesis of Hall (1978), the ARDL result showed that the major determinant of savings in Nigeria is the interest rate, with a significant positive relationship of 3.11% for every 1% increase in interest rate. The result as well showed that income is also a determinant of the level of savings, but the marginal propensity to save is low. Thus, for every 1% increase in income, savings increase by 0.003% which thus corroborate the assertion that the savings culture of developing countries such as Nigeria is not significant enough to drive growth. The Granger causality showed uni-directional causality between savings and income, with the causality flowing from savings to income. Based on these findings, the study recommends a policy that incentivizes the citizens towards developing a culture of savings so as to ultimately increase income and spur the needed high economic growth. It also recommends the policy makers to be more prudent in the management of the macroeconomic environment in Nigeria.

1. INTRODUCTION

It has been argued that savings in a stable macroeconomic environment, is the ultimate vehicle for a long run increase in consumption (Collier, P., Van Der Ploeg, R., Spence, M., & Venables, A. J., 2010) and thus the decision for a rational consumer to defer present consumption for future consumption emanated from the incentive to be received. If the incentive outweighs the cost of deferring present consumption, the household would defer present consumption in favour of the incentive; otherwise, the reverse is the case. The culture behind household savings, however, defers among developing and developed countries. The culture among developed countries is to save a larger proportion of their income, while the opposite is the case with most developing countries, and these can be attributed to low level of income, the unstable macroeconomic environment in the developing countries, and non-availability of the financial institutions in the rural areas to harness the financial surplus. In most developing countries, the rate of economic growth has experienced significant slowdown which can also be attributed to the low level of savings. Nwachukwu and Odigie (2011) indicated in their study that the rate of growth in developing countries has been unsatisfactory which is due to the poor attitude towards savings and

investment. The Harrod-Domar model emphasizes that the major determinant of growth is savings, while the Neo-classical growth model also emphasized the significant role capital accumulation played in economic growth. In situations where domestic savings is not sufficient enough to drive growth, foreign savings can serve as a substitute. Developing countries, especially most of the Sub-Saharan African countries have adopted this model of soliciting foreign savings and investment so as to augment domestic savings and economic growth, and this has not greatly lead to high economic growth. Therefore, the focus should be on improving the saving culture of the domestic economy rather than depending on foreign capital. This is because foreign capital can lead to capital flight and bread instability in the macroeconomic environment as we are witnessing in Nigeria. Also, the extent to which foreign savings will translate into economic growth depends on the rate of absorption and how efficient the economy works. With all the problems associated with foreign savings there is the need to look inward on how to increase the domestic savings. Also, in the light of technological development that has make it possible for people in the rural areas to enjoy financial services and the modification in micro financial institutions, there is the need to revisit the determinant of savings in Nigeria. It is in this regards that this study is set out to look at the determinant of savings in Nigeria with the aim of identifying what has changed in the light of the development in the financial sector in Nigeria.

This study is structured into five sections, with section one being introduction, section two is the literature review. Methodology adopted is presented in section three and data source and estimation is contained in section four. Conclusion and summary of findings ends the work in section five.

2. LITERATURE REVIEW

Khatkhate (1988) divided the developing countries into three groups, depending on whether they had positive real interest rate, moderately negative real interest rate and strongly negative real interest rate. He estimated the response of saving rate to these types of interest rates and concludes that saving rate is high for positive real interest countries vice versa.

Lavoto (1992) analysed the impact of the interest rate on the saving rate in the developing countries. He also compares the interest elasticity of saving in the United States with the developed countries. Wealth effect outweighs in importance with the elasticity of substitution between the present and future consumption. The study reveals that interest elasticity of savings is high and the value of substitution's elasticity is slow.

Doshi (1994) observed that life expectancy is an important factor that affects the level of savings in less developed countries, as the significant positive relationship was observed between them.

Edwards (1996) reveals that per capita income growth is the most important determinant of private and public savings.

Wakabayashi and Mackellar (1999) used the lifecycle hypothesis as a standard model and applied panel data for China. The data used was for the period 1993 to 1998. In a validation of the lifecycle hypothesis, the authors found that income was positively related to savings. The effect of the dependency rate on savings was found to have an inverse relationship in both the rural and urban areas of China.

Özcan .K .M .A, Gunay and Ertac .S (2003) observed that the level of income impacted positively and significantly on the savings in their investigation of savings determinant for Turkey during the period 1968-1994.

Hondroyiannis (2006) used the life cycle hypothesis in the analysis of savings determinant among the European countries. The result of the analysis showed that in the long run, savings is sensitive to liquidity, real disposable income, economic growth, public finances, dependency ratio, real interest rate, old dependency ratio and inflation.

Horioka and Wan (2007) analysed the relationship between savings and income growth. Using data ranging from 1995 to 2004 in China, the author observed that lagged savings rate and income growth rate presented a positive and significant coefficient which thus reinforcing the economic expectation.

Azam, M., Khan, M., Khan, Z., Shafiqullah, Ali, S. I., & Qaiyum, A. (2010) examined the relationship between saving and investment in Pakistan for the period 1970-2009. They observed a positive influence of per-capita income on savings and concluded that there may be an increase in the level of the per-capita income which can increase household saving and can accelerate economic growth.

Munir, R. S., Maqbool, H., Sarwar, G., & Shaheen, S. (2011) employed an ARDL Bound test and Cointegration method to examine the effect of workers' remittances on the private savings behavior in Pakistan. They concluded that the workers' remittances have a positive impact on the private savings both in the long run and in the short run, thus workers' remittances are both consumed and saved.

Mahlo (2011) employed an ordinary least square method to examine the relationship between household savings and income in South Africa for the period 1990 to 2009. The author observed a significant positive correlation between household savings and income.

Farhan and Akram (2011) employed an ARDL model to investigate the influence of the income level on the savings behavior in Pakistan. They observed a significant positive relationship between income level and savings behavior in both the short and the long run.

Thanoon and Baharumshah (2012) concluded in their analysis and comparison of the savings behavior in Asia and Latin America that economic growth (income) has a negative impact on savings rate in Latin America, whereas the opposite was observed in the case of Asia.

Larbi (2013) found in their analysis of savings determinant for Ghana that per-capita income, financial liberalization, fiscal deficit, and inflation have a positive impact on the private savings.

3. METHODOLOGY

3.1 THEORETICAL FRAMEWORK

The theoretical framework for this work is rooted in the lifecycle–permanent income hypothesis. This view emanated from the work of Kudaisi (2013) who believed that the life-cycle hypothesis is not sufficient enough for the objective of the savings determinant nexus. The theoretical framework to be employed is the one developed by Hall (1978) as it combines the views of both the life-cycle income hypothesis and the permanent income hypothesis which gave birth to the Random-walk hypothesis. The Life-cycle income hypothesis emphasized how savings could be used to transfer purchasing power from one phase of life to another. In the early life, labour income is usually low relative to later working years. Income typically peaks in the last part of the working life, then drops at retirement. Consumers who wish to smooth consumption would prefer to borrow during the early low-income years, repay those loans and build up wealth during the high-income years, then spend off the accrued savings during retirement.

Implicit in the life-cycle approach is the idea of a lifetime budget constraint that links consumption at various dates during the lifetime. The slope of the budget constraint, which determines the tradeoff between period t consumption and period $t + 1$ consumption, is $-(1 + r)$, where r is the real interest rate at which consumers lend and borrow.

The position of the budget constraint depends on the present value of lifetime earnings, which is usually simply called wealth. In terms of the modern utility-maximization model, wealth is:

$$\Omega_0 = A_0 + \sum_{t=0}^{T} \frac{Y_t}{(1+r)^t} \quad (1)$$

where Ω_0 is the stock of wealth (human and nonhuman) as of time zero, A0 is the value of current nonhuman (financial or physical) assets, Y_t for t = 0, 1, 2, ..., T is the expected stream of real labour income over the lifetime, and r is the real interest rate.

The Permanent Income Hypothesis proposed by Milton Friedman focused on the problems faced by households when their income is not certain over time. He failed to consider the infinite life cycle and business cycle effect in his analysis and focused on permanent income which is used for permanent consumption and transitory income which emanated from unexpected income and thus responsible for transitory consumption within which medical bills and other temporary spending falls. It is believed that households plan their consumption spending based on their average (permanent) income over their finite life.

He further assumed that both permanent and transitory consumption are independent of transitory income and that transitory consumption in any period is independent of permanent income. Thus, consumption consists of a planned part that depends on permanent income and an unplanned part that is totally independent of income. Transitory consumption can be identified with the random error term in a consumption function regression. The focus of the permanent-income model, then, is the estimation of the relationship between consumption and a measure of permanent income.

In terms of the modern consumption model, permanent income can be thought of as the size of a constant annual flow of income that would have the same present value as the (possibly uneven) flow of income that is actually expected. If we know the future income path, we can calculate permanent income from the budget constraint as:

$$\sum_{t=0}^{\infty} \frac{Y^P}{(1+r)^t} = A_0 + \sum_{t=0}^{\infty} \frac{Y_t}{(1+r)^t} \qquad (2)$$

Where Y^p represents permanent income. It can be shown that $Y^p = r\Omega$, where Ω is the wealth measure from equation (1). This shows the close relationship between the life-cycle model, in which consumption is assumed to depend on wealth, and the permanent income model, where consumption depends on permanent income.

Early empirical estimation of the permanent-income model relied on the rather shaky assumption that future income could be predicted as a stable linear function of current and past income.

Hall (1978) presented the random-walk hypothesis in a manner that captures the savings behaviour and uncertainty using a simple Keynesian consumption function that an individual's savings in period *t* is the difference between income and consumption (savings) in period *t*.

$$Y_t = C_t + S_t \qquad (3)$$

Where

$S_t = A_0 + Y_t - C_t$ (4)

Based on equation (4), any change in savings (S_t) must be as a result of changes in income or consumption; thus:

$$S_t = \left(Y_t - \frac{1}{T}\sum_{r=1}^{r} Y_t\right) - \frac{1}{T}A_0 \quad (5)$$

Thus, this means that saving is high when income is high relative to its average – that is when transitory income is high. Similarly, when current income is less than permanent income, saving is negative. Thus, individual uses saving to smooth the path of consumption.

3.2 MODEL SPECIFICATION

In line with the effort to analyse the determinants of savings, this study adapted its model from the work of Kudaisi (2013), where life-cycle and permanent-income hypothesis where used to model the determinant of household savings in the West Africa countries. This study adapted this model to a country specific study, and thus the following econometric model is specified.

$$\frac{\text{SAVE}}{\text{GDP}} = f(\text{GDPPC}, \text{INT}, \text{INF}, \text{INVF}, \text{AGED}) \quad (6)$$

$$\frac{\text{SAVE}}{\text{GDP}} = \alpha_0 + \alpha_1 \log\text{GDPPC} + \alpha_2 \text{INT} + \alpha_3 \text{INF} + \alpha_4 \text{INVF} + \alpha_5 \text{AGED} + \varepsilon_t \quad (7)$$

Where, SAVE/GDP = Ratio of Savings to GDP

GDPPC= Gross Domestic Product Per Capita

INT= Interest Rate

INF = Inflation Rate

INVF = Investment Freedom (www.theglobaleconomy.com)

AGED = Aged Dependency Rate

All these variables have been selected on the basis of how relevant they are to this analysis.

4. DATA SOURCES AND ESTIMATION TECHNIQUES

The data set for this study comprises of annual time series data that runs from 1981 to 2015. The source of the data is Central Bank of Nigeria Statistical Bulletin various edition and the Word Bank Development Indicators. Most (developing countries) time series data are non-stationary. A test for stationarity that has become widely popular over the past several years is the unit root test (Gujarati, 2003). Augmented Dickey-Fuller (ADF) and Phillip-Perron (PP) unit root test will be employed to determine the stationarity of the variables. Similarly, Bound test for Cointegration

will be carried out to determine if a unique long run relationship exists between the variables. Granger-Causality test will be conducted to determine the direction of causality between savings and its determinants, while the Autoregressive Distributed Lag (ARDL) model will be utilized for the model estimation.

Table 1: STATIONARITY TEST

	ADF (Trend & Intercept)			PP (Trend & Intercept)		
Variables	T-Stat	Critical Value	Order of Integration	T-Stat	Critical Value	Order of Integration
SAVE/GDP	-4.0186*	-3.639407 -2.951125 -2.614300	I(0)	-4.0186*	-3.639407 -2.951125 -2.614300	I(0)
logGDPPC	-4.3468*	-3.646342 -2.954021 -2.615817	I(1)	-4.3327*	-3.646342 -2.954021 -2.615817	I(1)
INF	-5.3486*	-3.646342 -2.954021 -2.615817	I(1)	-8.5794*	-3.646342 -2.954021 -2.615817	I(1)
INT	-2.9397***	-3.639407 -2.951125 -2.614300	I(0)	-2.8267***	-3.639407 -2.951125 -2.614300	I(0)
INVF	-4.2961*	-3.646342 -2.954021 -2.615817	I(1)	-4.2798*	-3.646342 -2.954021 -2.615817	I(1)
AGED	-6.2690*	-3.689194 -2.971853 -2.625121	I(1)	-2.6301***	-3.646342 -2.954021 -2.615817	I(1)

*,*** denotes significance at 1% and 10% level respectively.

Source: Authors Computation

The result of the stationarity test as reported using Augmented Dickey Fuller test for stationary showed that four out of the six variables were not stationary at Level, but became stationary at the First difference. The result was obtained from the analysis of Augmented Dickey-Fuller (ADF) and Phillip Perron (PP) test, as only two variables were stationary at Level while the remaining four variables became stationary at the First difference at the 1% and 10% critical values respectively. The computed Absolute T statistic value for SAVE/GDP and INT is greater than the Mackinnon DF absolute critical value at 1% and 10% critical value at Level under both the ADF and PP test, while the remaining variables became stationary at First Difference at 1% critical level, as their absolute T-statistic is greater than the Mackinnon DF absolute critical value at First

Difference under both the ADF and PP test. The overall view of this result is the rejection of the null hypothesis that logGDPPC, INF, INVF, and AGED are stationary. Due to the fact that two variables are stationary at Level [I(0)] while the remaining variables became stationary at First difference [I(1)], we proceed to the test for cointegration using the Bound test so as to determine if a unique long run relationship exists among the variables.

Table 2: ARDL BOUND TEST FOR COINTEGRATION

Test Statistic	Value	k
F-statistic	7.108918	5
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.26	3.35 (*)
5%	2.62	3.79 (*)
2.5%	2.96	4.18 (*)
1%	3.41	4.68 (*)

* denotes cointegration in the model.

Table 6 depicts the ARDL Bound test for Cointegration. The F-statistic valued as depicted in the diagram is compared to the upper (I1) and lower (I0) critical bound so as to determine the presence of cointegration among the variables. If the F-statistic is lower than the lower critical bound (I0), we can conclude that there exists no presence of cointegration among the variables. In the same vein, if the F-statistic value is greater than the upper critical bound (I1), we conclude that the variables are cointegrated, and if the value falls between the lower (I0) and upper (I1) bound, the conclusion for cointegration is inconclusive, and we may have to consider alternative measures to determine the presence of cointegration. Our analysis showed that the F-statistic value is greater than the upper critical bound at all the upper bound critical values, and thus, we conclude that there exists a unique long run relationship among the variables.

Table 3: ARDL (4,4,4,4,4,4) MODEL

Dependent Variable: SAVE_GDP				
Number of models evaluated: 12500				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
SAVE_GDP(-1)	0.132095	0.133945	0.986193	0.5044

SAVE_GDP(-2)	2.311396	0.173987	13.28486	0.0478
SAVE_GDP(-3)	2.905012	0.202737	14.32898	0.0444
SAVE_GDP(-4)	1.425487	0.117926	12.08797	0.0525
LOGGDPPC	-28.33287	14.86603	-1.905880	0.3076
LOGGDPPC(-1)	247.2818	16.46159	15.02175	0.0423
LOGGDPPC(-2)	288.2500	20.60138	13.99178	0.0454
LOGGDPPC(-3)	20.10755	17.49689	1.149207	0.4559
LOGGDPPC(-4)	-521.0997	39.09006	-13.33075	0.0477
INF	0.600858	0.096987	6.195234	0.1019
INF(-1)	2.833151	0.183461	15.44282	0.0412
INF(-2)	-0.501514	0.081472	-6.155653	0.1025
INF(-3)	-0.308652	0.126671	-2.436641	0.2479
INF(-4)	-0.985733	0.105431	-9.349522	0.0678
INT	-5.218181	0.283731	-18.39127	0.0346
INT(-1)	-3.944124	0.486321	-8.110128	0.0781
INT(-2)	-2.212524	0.263665	-8.391422	0.0755
INT(-3)	-4.126044	0.234443	-17.59938	0.0361
INT(-4)	-3.900700	0.298115	-13.08454	0.0486
INVF	-0.087417	0.111459	-0.784301	0.5766
INVF(-1)	2.121865	0.212039	10.00694	0.0634
INVF(-2)	1.971064	0.135960	14.49743	0.0438
INVF(-3)	-1.522221	0.107707	-14.13299	0.0450
INVF(-4)	1.861451	0.155520	11.96917	0.0531
AGED	-29.19780	3.696649	-7.898451	0.0802
AGED(-1)	44.90452	4.337533	10.35255	0.0613
AGED(-2)	5.272158	3.405069	1.548326	0.3651
AGED(-3)	-56.28847	6.613224	-8.511502	0.0745
AGED(-4)	70.63123	6.504100	10.85949	0.0585
C	-3039.761	131.6200	-23.09499	0.0275
R-squared	0.999613	Mean dependent var		16.90065
Adjusted R-squared	0.988390	S.D. dependent var		9.162138
S.E. of regression	0.987237	Akaike info criterion		1.313684
Sum squared resid	0.974637	Schwarz criterion		2.701413
Log likelihood	9.637901	Hannan-Quinn criterion		1.766049
F-statistic	89.06474	Durbin-Watson stat		3.010513
Prob(F-statistic)	0.083657			

Table 4: Long Run Coefficients Estimate

Variable	Coefficient	Std. Error	t-Statistic	Prob.
logGDPPC	0.002889	0.000477	6.062935	0.1041
INF	-0.035928	0.036342	-0.988602	0.5036
INT (**)	3.110619	0.082704	37.611484	0.0169
INVF (**)	-0.607027	0.014454	-41.998199	0.0152
AGED (**)	-5.790244	0.176359	-32.832050	0.0194
C	481.888770	14.964049	32.203100	0.0198

** denotes significance at the 5% critical level.

The ARDL long run coefficient estimate was extracted from the body of the main ARDL model using Eviews 9, and it shows that interest rate (INT) and income (logGDPPC) are the major determinants of savings in Nigeria, as they both impacted positively on savings.

The Coefficient of Determination value for the ARDL (4,4,4,4,4,4) is 99.96% which indicated that about 99.96% variation in savings (logSAVE/GDP) is explained by variations in the explanatory variables and that only 0.004% variation in savings is left unaccounted for by the model which is attributed to the error term. Similarly, the Adjusted Coefficient of Determination value of 98.84% means that 98.84% variation in the dependent variable is explained by variation in the explanatory variables. The F-statistic value which is greater than 3.5, and accompanied with minimum probability value shows the significance of the model employed. Durbin Watson Statistics shows a value that is greater that the upper critical value and thus, we concluded that the model does not have a positive serial correlation issue.

The ARDL result showed that interest rate (INT) is the main factor that determines savings in Nigeria. Every ₦1 increase in income will bring about an insignificant increase in savings by ₦0.0029. The implication of this finding is that the relationship between income and savings is positive but insignificant in Nigeria. This is more justified in that the marginal propensity to consume among developing countries has been empirically proven to be higher than their marginal propensity to save, and as such, income contributes minimally to increase in savings in Nigeria. Mushtaq and Siddiqui (2016) also observed similar findings in their analysis; they observed that per capita income and interest rate were among the major determinants of savings in non-Islamic economies.

Similarly, interest rate impacted positively and significantly on savings to the tune of 3.11%. This implies that for every 1% increase in interest rate, savings increases by 3.11%, and thus it is not

inappropriate to say that interest rate is the major determinant of savings in the case of Nigeria. The rationale behind this view is that individuals are handsomely compensated for deferring consumption in the current period, and thus a decision that increases the compensation for deferring consumption in the current period (increasing interest rate) creates an incentive for savings so as to increase the level of consumption at some time in the future. This finding is in line with that of Khan et. al (2014), as they observed that interest rate stimulates household savings in their analysis of Pakistan.

We also observed that inflation rate (INF), investment freedom (INVF) and aged dependency rate (AGED) all impacted negatively and significantly on savings in Nigeria. This implies that increase in the level of inflation erodes the value of money, and thus investors will prefer to consume today rather than save their asset unless they are offered higher returns (higher interest rate). The life cycle income hypothesis stated that savings are low in the early life of a labour, and as they grow older, the level of savings and investment increases. However, our finding showed that age dependency rate impacted negatively on savings in Nigeria, and thus as people get older, they tend to save less and consume more, and thus age dependency rate is a negative determinant of savings in Nigeria.

Table 5: GRANGER CAUSALITY

Null Hypothesis:	Obs	F-Statistic	Prob.
LOGGDPPC does not Granger Cause SAVE_GDP	26	0.91698	0.5589
SAVE_GDP does not Granger Cause LOGGDPPC (***)		3.01112	0.0801
INF does not Granger Cause SAVE_GDP	26	1.54330	0.2903
SAVE_GDP does not Granger Cause INF		0.82792	0.6132
INT does not Granger Cause SAVE_GDP	26	1.03990	0.4908
SAVE_GDP does not Granger Cause INT		0.43649	0.8772
INVF does not Granger Cause SAVE_GDP	26	1.60787	0.2720
SAVE_GDP does not Granger Cause INVF		0.93893	0.5462
AGED does not Granger Cause SAVE_GDP	26	1.82378	0.2202
SAVE_GDP does not Granger Cause AGED		1.27757	0.3818

*** denotes causality at the 10% level.

In order to capture the direction of causality between savings and its determinants in Nigeria, the Granger-causality test was carried out. The causality results revealed uni-directional causality between savings and per capita GDP, with the causality flowing from savings to per capita GDP. The implication of this is that savings are ultimately drivers of income and economic growth in the case of Nigeria.

5. CONCLUSION

The objective of this research work is to identify the determinants of household savings in the Nigerian economy. The findings showed clearly that interest rate (INT) and income (logGDPPC) impacted savings positively in Nigeria, while inflation rate (INF), investment freedom (INVF) and age dependency (AGED) all impacted savings negatively in Nigeria. We also observed that the marginal propensity to save in Nigeria is low which obviously have its policy implication. This study recommends effort towards inducing consumers to save more which thus reduces their marginal propensity to consume in the current period in exchange for increased consumption in the long run. Increasing the level of interest rate should, however, be implemented in a manner that does not increase the cost of fund beyond what is competitive for investors.

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APPENDIX

YEAR	SAVE/GDP	GDPPC	INF	INT	INVF	AGED
1981	26.6	1649.24	20.8	10.00	0	88.99
1982	24.48	1589.87	7.7	11.75	0	89.97
1983	20.79	1471.72	23.2	11.50	0	90.74
1984	16.09	1405.89	17.8	13.00	0	91.28
1985	15.54	1484.31	7.4	11.75	0	91.56
1986	10.49	1319.51	5.7	12.00	0	92.15
1987	14.39	1147.07	11.3	19.20	0	92.37
1988	17.95	1201.51	54.5	17.60	0	92.28
1989	30.66	1246.18	50.5	24.60	0	91.94
1990	23.11	1369.44	7.4	27.70	0	91.37
1991	23.66	1326.74	13	20.80	0	91.27
1992	19.26	1299.28	44.6	31.20	0	90.9
1993	13.07	1293.62	57.2	36.09	0	90.31
1994	8.99	1273.19	57	21.00	0	89.55
1995	12.8	1238	72.8	20.79	50	88.67
1996	10	1267.79	29.3	20.86	70	88.43
1997	11.46	1271.18	8.5	23.32	70	87.99
1998	-1.01	1273.45	10	21.34	70	87.44
1999	2.54	1247.83	6.6	27.19	70	86.84
2000	28.64	1281.56	6.9	21.55	70	86.24
2001	11.08	1304.77	18.9	21.34	50	86.39
2002	7.57	1320.3	12.9	30.19	50	86.43
2003	5.04	1420.35	14	22.88	50	86.4
2004	9.25	1851.32	15	20.82	50	86.33
2005	8.13	1866.01	17.9	19.49	30	86.23
2006	37.11	1967	8.2	18.70	30	86.73

2007	15.82	2046.56	5.4	18.36	30	87.06
2008	24.75	2117.84	11.6	18.70	30	87.28
2009	15.27	2205	11.5	22.90	30	87.41
2010	25.1	2314.96	13.7	22.51	40	87.46
2011	25.56	2363.67	10.8	22.42	40	87.82
2012	33.31	2399.33	12.2	23.79	40	88.07
2013	19.19	2461.8	8.5	24.69	40	88.16
2014	22.25	2548.43	8.1	25.74	40	88.04
2015	22.94	2548.17	9	26.71	40	87.71

Source: CBN Statistical Bulletin, The World Bank Data, and www.theglobaleconomy.com

Where, SAVE/GDP = Ratio of Savings to GDP

GDPPC= Gross Domestic Product Per Capita

INT= Interest Rate

INF = Inflation Rate

INVF = Investment Freedom

AGED = Aged Dependency Rate

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