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GROWTH IMPACT OF SAVINGS ON THE NIGERIAN ECONOMY

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Abstract:
Savings in an economy can assume one of the several forms. These includes: personal savings, corporate savings or business savings and Government savings. This study evaluated growth impact of savings on the Nigerian economy. The study specifically examined the effect total savings, private consumption expenditure, gross fixed capital formation and core credit to the private sector on the gross domestic product of Nigeria. Data for the study were sources from CBN statistical bulletin for a period of ten (10) years spanning through 2011 to 2020. The sourced data were analysed using multiple regression analysis, result of the analysis shows that total savings has positive and significant effect on the gross domestic product of Nigeria. It was also observed that private consumption expenditure has a negative and insignificant effect on the gross domestic product of Nigeria. The study further revealed that gross fixed capital formation has a negative and significant effect on the gross domestic product of Nigeria. It was also observed that core credit to the private sector has positive and significant effect on the gross domestic product of Nigeria. Based on the findings, the study recommends that the government should set a sound and fertile environment in order to foster domestic saving that will help to increase the level of economic growth in Nigeria. Government should increase the deposit rate of the deposit money banks in Nigeria through monetary policy. Government should transform the financial sector of the

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country. Government should create favorable condition in order to mobilize domestic savings from the small depositors.

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1. Introduction

There has been a serious debate on the implications of savings and investment in promoting economic growth in many countries around the world. The central idea of traditional theory of savings was that increasing saving would accelerate economic growth, while theory of investment specified investment as the key to promoting economic growth. On the other hand, neoclassical theory argues that increase in the savings rate boosts steady-state output by more than its direct implications on investment. This is because the increase in income raises savings, leading to a further rise in investment (Verma, 2017). The persistence of rising magnitude of savings and investment in Nigeria which was characterised by the level of private sector operation has adverse implication on economic growth.

According to Keynesian economics, defined savings as the amount left over when the cost of a person's consumer expenditure is subtracted from the amount of disposable income that he or she earns in a given period of time. Savings is also the portion of disposable income not spent on consumption of consumer goods but accumulated or invested directly in capital equipment or in paying off a home mortgage, or indirectly through purchase of securities.

In finance, investment is the purchase of a financial product or other items of value with an expectation of favourable future returns. In general terms, investment means the use of money in the hope of making more money. Keynes (2017) defined investment as the production of new capital goods, plants and equipment. He also refers investment as real investment and not financial investment. Investment is a conscious act of an individual or any entity that involves deployment of money (cash) in securities or assets issued by any financial institution with a view to obtain the target returns over a specified period of time.

Mohamed (2014) defined economic growth as a sustained expansion of potential output as measured by the increase in real Gross Domestic Product over certain period of time. He also stated that economic growth requires investment and it can be financed through private savings.

The study of the implications of savings and investment on economic growth is very important in Nigeria because it will provide useful information on which economic variable(s) that the government and relevant authorities need to control in order to attain the desired level of the targeted growth (Syid and Sarfraz (2018) in Abu (2010)). In explaining the implications of savings and investment on economic growth, Syid and

Sarfraz (2018) in Abu (2010) stated that increases in savings results to increase in capital formation and investment and thereby raising the growth of the nation's economy. Endogenous growth theory suggests that high investment and savings rate are crucial in view of their strong positive correlation with the economic growth rate (Agrawal, 2011).

Wondwesen (2011) opined that Keynesian theory helps investment to play a critical role both as a component of aggregate demand as well as a vehicle of creation of productive capacity on the supply side and in determining medium run growth rates. Savings and investment are the basic requirements for economic growth and development in any nation. Savings and investment have been considered as two macro-economic variables for achieving price stability and promoting employment opportunities thereby contributing to sustainable economic growth (Shimelis, 2014).

Whether savings and investment cause economic growth or get caused by economic growth has been a serious theoretical as well as empirical debate among researchers. In classical theory, an increase in savings and investment will lead to an increase in the output (Ramakrishna and Rao, 2012).

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, 2017). 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 to16.5% in the period between 2010- 2019 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, 2017). 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 2010 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 2014. In 2019, 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 2014, a peak for that decade, only for declines in the currency ratio in 2018 and 2010 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 2017 and 2018, 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 have 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 (2010), 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, 2018). 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, 2019). With the adoption of the programs embedded in the structural adjustment program (SAP) in 2016, 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 (2015) 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. Literature Review

The Nigerian economy, like any other, comprises of the public and private sectors, with both engaging in investment expenditures. Both sectors have to save and to borrow in other to meet their investment requirements. The immediate source of funds is own savings. The government, which represents the public sector, collects revenue from both tax and non-tax sources. After meeting its expenditure requirements on purchases of goods and services, the government uses whatever surplus there is to increase its stock of capital i.e. investment. This is also true of economic agents in the private sector. When investment expenditure exceeds the level of savings, the private and the public sectors mainly borrow from financial institutions.

The financial institutions that actually engage in providing funds or credits for investment in Nigeria include deposit money banks, mortgage institutions and development financial institutions. Other sources include non-bank financial institutions like the insurance companies, the capital market, mutual trust funds, pension funds, equipment leasing companies, cooperative and thrift societies, etc. all these are regarded as formal sources of investment finance in Nigeria because they are well organized with appropriate records and their operations are relatively open and regulated. Altogether, they provide the largest portion of the domestic funds for investment.

There are a large number of informal providers of domestic funds for investment in Nigeria. They are termed informal because of their mode of operations and for lack of enough documented information about them. They provide investment funds for individuals and small enterprises operating in the informal sector of the economic. As a result of lack of information on their operations, it is difficult to know the exact proportion of the total domestic funds for investment that are made available by the so-called informal providers of funds. However, for a country like Nigeria whose informal sector is adjudged to be large, the informal providers of investible funds are playing a significant role in the process of capital accumulation in the country. The informal providers for investment funds in Nigeria include individuals, groups, town unions, occupational groups, „esusu", religious organizations, etc.

Udede (2015) researched on the "Impact of interest rate on savings on the Nigeria's economy using Vector Autoregressive Model. 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 (2010-2012). 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 2010-2014. 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 2016 and adopting the descriptive statistics as their methodology found their research article titled "Descriptive analysis of savings and growth" found 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 2003-2012 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 (2010), 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 2010-2017 and adopting Granger causality methodology, Anoruo & Ahmad (2011) evaluated the causal relationships between the rate of growth of domestic savings and economic growth in a number of African countries: Congo, Cote d'lvoire, 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 (2012) 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 their 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 (2018) 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 2011-2015. His emphasis was on two-way causality which distinguished his work from other such studies.

Verma and Wilson (2015) examined the relationship between savings, investment, foreign inflows and economic growth in Indian using ordinary least square method and annual time series data from 1950 to 2011. The study revealed that savings and investment affect GDP in the long run while GDP has significant but small effects on household savings and investment in the short run. This means that the feedbacks to GDP are absent in the long run and only small in the short run. However, their results and findings did not support the Solow and endogenous growth theory which states that there is need to increase household savings and investment so as to encourage economic growth.

Verma (2017) investigated the relationship between savings, investment and economic growth in India from 1951 to 2014 using Autoregressive Distributed Lag (ARDL) Bounds Testing technique to test for Cointegration. The result of ARDL co-integration revealed that GDP, GDS and GDI have long-run relationship except when GDP is the dependent variable. The study also examines the long-run and short-run elasticities of the correlation between GDS, GDI and GDP growth. The result shows that savings do not cause growth, but growth causes savings, savings drive investment both in the short-run and in long-run and that investment is the driver of economic growth in India during the period.

Ramesh (2011) used Granger causality test, Johansen co-integration test and vector error correction model to examine the direction of relationship between saving, investment and economic growth in India at both aggregate level and sectoral level for the period 1951 to 2010. The co-integration test result suggests that there exists co-integration relationship among all series with GDP except private corporate savings. The study also found that the direction of causality runs from savings and investment to economic growth collectively as well as individually and there is no causality from economic growth to savings and (or) investment. Sultan and Haque (2011) investigated the estimation of the relationship between domestic investment, export and economic growth in India using Johnson's co-integration methodology. The result showed that there is presence of a long run relationship between investment, export and economic growth in India. The study also shows that only domestic investment significantly contributes to economic growth both in long run and short run, while export has positive and insignificant impact on economic growth in India. This means that India should continue to focus on domestic investment while diversifying investment towards promoting export sector through investment in infrastructure.

Budha (2012) employed the Autoregressive Distributed Lag (ARDL) approach to test for Co-integration, error correction and granger causality analysis in examining the relationship between the gross domestic savings, investment and growth in Nepal for the period of 1975 to 2010. The results of the study show that co-integration exists between gross domestic savings, investment and gross domestic product when each of them is taken as dependent variable. The result of the granger causality test revealed that there is short-run and long-run bidirectional causality between investment and gross domestic product as well as between gross domestic savings and investment. Nevertheless, no short-run causality is found between gross domestic savings and gross domestic product. Mohamed (2014) examines the causal relationship among savings, investment and economic growth in Ethiopia using annual time series data from 1970-2011 in a multivariate framework. Result from the ARDL Bounds Testing indicates that there exists co-integration among savings, investment and gross domestic product when GDP is taken as dependent variable. The study also revealed that labor force and investment have significant positive effect on economic growth of Ethiopia both in the short-run and in the long-run while savings and human capital are statistically insignificant.

Turan and Olesia (2014) investigated the impact of savings on economic growth in Albania over the period of 2000 to 2012 using Johansen co-integration test and error

correction model. The result revealed that savings and economic growth are co-integrated, therefore showing the existence of a stable long-run equilibrium relationship. Based on the literature reviewed, there are mixed modelling in the studies revealed and there are inconsistences in the choice of variables, the geographical area of the study and the scope are also inconsistence.

3. Methodology

The data for this study were collected using the secondary source. The data were obtained from CBN statistical Bulletin for a period of ten (10) years.

Data for the study were collected through the annual reports and accounts of the sampled firms.

The study also involved test of significance of the parameter estimates by using t-statistics at 5% level. This will enable us compare the probability of computed t-statistics at various situation of empirical analysis with the critical value at 5% to establish significance.

However, the use of purposive sampling was greatly guided by reasonable data availability because most deposit money banks had capital-based problems which led to merger and acquisition in the banking sector. The study used CBN as the sample of the study since it is the apex bank.

3.1 Model Specification

In order to evaluate growth impact of savings on the Nigerian economy, a multiple regression model will be formed. In writing our equation the following symbols will be used to denote the respective variables.

Gross Domestic Product = GDP
Total Savings = TSV
Private Consumption Expenditure = PCE
Gross Fixed Capital Formation = GFCF
Core Credit to the Private Sector = CCPS
a = Regression equation intercept
b = Regression equation coefficient
e = Error Term.

The regression models for the hypotheses will be represented as follows:

$$GDP = \beta o + b_1 TSV_{it} + b_2 PCE_{it} + b_3 GFCF_{it} + b_3 CCPS_{it} + e_{it} \ldots\ldots\ldots\ldots (1)$$

4. Results and Discussion

4.1 Descriptive Statistics

Table 1: Descriptive Statistics

	GDP	TSV	PCE	GFCF	CCPS
Mean	-3732288.	-5234525.	479802.7	3608842.	413280.
Median	746404.0	56170.00	-25601.00	-17888.00	36404.0
Maximum	7168642.	9547751.	14767263	1.07E+08	2168611.
Minimum	-1.02E+08	-1.04E+08	-13540130	-22132965	-2.02E+08
Std. Dev.	18078111	20287034	4562009.	20090362	16078112
Skewness	-4.093620	-3.311778	0.995467	3.327136	-3.093699
Kurtosis	20.71435	14.40743	6.927775	16.29261	16.71428
Jarque-Bera	777.5260	355.2521	39.59045	451.1531	128.5260
Probability	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	-1.83E+08	-2.56E+08	23510330	1.77E+08	-1.83E+08
Sum Sq. Dev.	1.57E+16	1.98E+16	9.99E+14	1.94E+16	1.57E+16
Observations	10	10	10	10	10

The descriptive statistics in the table above presents the statistical characteristics of all the observations. These include measures of central tendency the mean and median. Dispersions in the series are also indicated using the standard deviation. The results show the mean to stand at -N373228, -N5234525, N479802 and N3608842 with a standard deviation of N18078111, N20287034, N4562009, N20090362 and N413280 for Gross domestic product, total savings, Private consumption expenditure, Gross Fixed Capital Formation and Core Credit to the Private Sector respectively.

In addition to statistical description of the panel above, the descriptive statistics also test or checks for the normality of the observed variables. In other words, the test helps us to ascertain if the variables are normally distributed. To reject the null hypothesis that the data are not normally distributed, the JB (Jarque-Bera) statistics must be significant at a critical value of 0.05 (Gujarati and Porter, 2009). The normality test results therefore reveal that there is strong evidence that the panel variables and dataset are normally distributed as the probability of JB-statistic for each of the variable is < the critical value of 0.05. Hence, the null hypothesis (H_0) is rejected in favour of the alternative (H_1) that the residuals of the distribution of the model are normally distributed.

From the model below, R^2 of 0.623221 shows that 40% variation on gross domestic product was explained by changes in total savings. The adjusted $R^2$of 0.610524 which considers more number of repressors explains that 41% variations in the dependent variable (GDP) are caused by total savings and lagged values of gross domestic product. The results further indicate that the overall regression is significant as explained by the prob(F-statistics) of 84.75613 which is significant at 0.05 or 5%. This implies that the entire

model is significant. The Durbin Watson statistics (DW) of above 2 shows no trace of autocorrelation in the model.

Table 2: Panel Least Squares Method

Panel Regression Results
Dependent Variable: GDP
Method: Panel Least Squares
Date: 08/03/21 Time: 10:20
Sample: 2011 2020
Periods included: 10
Cross-sections included: 1
Total panel (unbalanced) observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TSV	0.565856	0.100414	5.635258	0.0000
C	-770300.0	2083586.	-0.369699	0.7133
R-squared	0.623221	Mean dependent var		-3732288.
Adjusted R-squared	0.610524	S.D. dependent var		18078111
S.E. of regression	14113394	Akaike info criterion		35.80311
Sum squared resid	9.36E+15	Schwarz criterion		35.88032
Log likelihood	-875.1761	Hannan-Quinn criter.		35.83240
F-statistic	84.75613	Durbin-Watson stat		0.793173
Prob(F-statistic)	0.000001			

Source: Author's Computation 2021.

The above table shows that the coefficient of 0.56585 is positive, the t-statistics of 5.635258 > 2 and the probability value of 0.0000 < 0.05 and significant at 5% critical value. Thus, the study rejects the null hypothesis and accepts the alternate that total savings has positive and significant effect on the gross domestic product of Nigeria.

From the model below, R^2 of 0.003117 shows that 31% variation on gross domestic product was explained by changes in private consumption expenditure. The adjusted $R^2$of 0.018093 which considers more number of repressors explains that 20% variations in the dependent variable (GDP) are caused by total savings and lagged values of gross domestic product. The results further indicate that the overall regression is significant as explained by the prob(F-statistics) of 0.146977 which is significant at 0.05 or 5%. This implies that the entire model is significant. The Durbin Watson statistics (DW) of above 2 shows no trace of autocorrelation in the model.

Table 3: Panel Least Squares Method

Panel Regression Results
Dependent Variable: GDP
Method: Panel Least Squares
Date: 08/03/21 Time: 10:22
Sample: 2011 2020
Periods included: 10
Cross-sections included: 1
Total panel (unbalanced) observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PCE	-0.221256	0.577125	-0.383376	0.7032
C	-3626129.	2620517.	-1.383746	0.1730

R-squared	0.003117	Mean dependent var	-3732288.
Adjusted R-squared	-0.018093	S.D. dependent var	18078111
S.E. of regression	18240920	Akaike info criterion	36.31619
Sum squared resid	1.56E+16	Schwarz criterion	36.39341
Log likelihood	-887.7467	Hannan-Quinn criter.	36.34549
F-statistic	0.146977	Durbin-Watson stat	1.022829
Prob(F-statistic)	0.703170		

Source: Author's Computation 2021.

The above table shows that the coefficient of -0.221256 is negative, the t-statistics of -0.383376 < 2 and the probability value of 0.7032 > 0.05 and significant at 5% critical value. Thus, the study rejects the alternative hypothesis and accepts the null that private consumption expenditure has a negative and insignificant effect on the gross domestic product of Nigeria.

From the model below, R^2 of 0.355404 shows that 36% variation on gross domestic product was explained by changes in Gross Fixed Capital Formation. The adjusted $R^2$of 0.341689 which considers more number of repressors explains that 34% variations in the dependent variable (GDP) are caused by gross fixed capital formation and lagged values of gross domestic product. The results further indicate that the overall regression is significant as explained by the prob(F-statistics) of 25.91389 which is significant at 0.05 or 5%. This implies that the entire model is significant. The Durbin Watson statistics (DW) of above 2 shows no trace of autocorrelation in the model.

The above below shows that the coefficient of -0.536447 is negative, the t-statistics of -5.090569 > 2 and the probability value of 0.0000 < 0.05 and significant at 5% critical value. Thus, the study rejects the null hypothesis and accepts the alternate that gross fixed capital formation has a negative and significant effect on the gross domestic product of Nigeria.

Table 4: Panel Least Squares Method

Panel Regression Results
Dependent Variable: GDP
Method: Panel Least Squares
Date: 08/03/21 Time: 10:23
Sample: 2011 2020
Periods included: 10
Cross-sections included: 1
Total panel (unbalanced) observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GFCF	-0.536447	0.105380	-5.090569	0.0000
C	-1796337.	2129648.	-0.843490	0.4032
R-squared	0.355404	Mean dependent var		-3732288.
Adjusted R-squared	0.341689	S.D. dependent var		18078111
S.E. of regression	14667920	Akaike info criterion		35.88018
Sum squared resid	1.01E+16	Schwarz criterion		35.95740
Log likelihood	-877.0645	Hannan-Quinn criter.		35.90948
F-statistic	25.91389	Durbin-Watson stat		0.963445
Prob(F-statistic)	0.000006			

Source: Author's Computation, 2021

Table 5: Panel Least Squares Method

Panel Regression Results
Dependent Variable: GDP
Method: Panel Least Squares
Date: 08/03/21 Time: 10:20
Sample: 2011 2020
Periods included: 10
Cross-sections included: 1
Total panel (unbalanced) observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CCPS	0.765856	0.100414	6.867222	0.0015
C	-770300.0	2083586.	-0.369699	0.7133
R-squared	0.569084	Mean dependent var		-3732288.
Adjusted R-squared	0.557890	S.D. dependent var		18078111
S.E. of regression	14113394	Akaike info criterion		35.80311
Sum squared resid	9.36E+15	Schwarz criterion		35.88032
Log likelihood	-875.1761	Hannan-Quinn criter.		35.83240
F-statistic	42.75613	Durbin-Watson stat		0.793173
Prob(F-statistic)	0.000001			

Source: Author's computation, 2021.

From the model above, R^2 of 0.569084 shows that 57% variation on gross domestic product was explained by changes in core credit to the private sector. The adjusted R^2 of

0.557890 which considers more number of repressors explains that 44% variations in the dependent variable (GDP) are caused by core credit to the private sector and lagged values of gross domestic product. The results further indicate that the overall regression is significant as explained by the prob(F-statistics) of 42.75613 which is significant at 0.05 or 5%. This implies that the entire model is significant. The Durbin Watson statistics (DW) of above 2 shows no trace of autocorrelation in the model.

The above table shows that the coefficient of 0.765856 is positive, the t-statistics of 6.867222 > 2 and the probability value of 0.0015 < 0.05 and significant at 5% critical value. Thus, the study rejects the null hypothesis and accepts the alternate that core credit to the private sector has positive and significant effect on the gross domestic product of Nigeria.

5. Conclusion and Recommendation

Savings and investment play a key role in promoting economic growth of any nation. Theories of savings and investment suggests that savings causes investment and thereby increases economic growth. However, the issue of long run relationship between savings, investment and economic growth is debatable both theoretically and empirically. Empirical literatures reviewed are mixed and do not provide conclusive empirical evidences. Most of the existing empirical literature studies the relationship between savings and growth and investment and economic growth within a bivariate framework in Nigeria. Based on the findings of this study, the researcher comes to the conclusion that change in gross domestic savings movements has negative and significant effect on the change in economic growth in Nigeria; that the change in gross domestic investment has positive and significant effect on the change in the Nigerian economic growth. The result also revealed that there is long run relationship between savings, investment and economic growth in Nigeria. The major economic implication of this evidence for investors of the NSE is that the returns from stock investments protect their wealth against inflation only in the long-run.

Conflict of Interest Statement
The authors declare no conflicts of interests.

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