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# IMPACT OF SAVINGS ON ECONOMIC GROWTH IN NIGERIA (1990 – 2020)

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## **Abstract**

The study analyzed the impact of National Savings on economic growth in Nigeria (1990-2020). Secondary data was adopted and sourced from CBN Statistical Bulletin (2020). Ordinary Least Square with the aid of E-view version 9 was used to determine the effects of National Savings on Gross Domestic Product. The study utilized Augmented Dickey-Fuller test, to verify, the stationarity of the variables so as to avoid spuriousness of empirical result. Time series techniques were used to determine the impact of National Savings (NS) on economic growth (GDP). The results of the unit roots test indicated that all other variables are stationary at first differences-I(1), therefore, I(1) series were adopted to test for co-integration using Johansen co-integration test. The result revealed that there is a positive and significant relationship between national savings and economic growth in Nigeria. However, a negative but significant relationship exists between inflation and economic growth in Nigeria. The study recommends that the policy makers should make concerted effort at improving the income of the citizens in order to improve their saving ability so as to increase the impact of national savings on economic growth. The Financial sector should be developed by both government and private sector so as to facilitate their accessibility in both urban and the rural areas. Government should make savings attractive through competitive interest rates and the existing saving schemes should be promoted to inculcate saving culture; since the relationship between savings and economic growth is inelastic as reported by the study.

Keywords: National Savings, Economic Growth, Inflation, Gross Domestic Product

JEL Classification: E20, E21, E24, E40

# 1. Introduction.

The implications of savings in promoting economic growth have been a serious debate in many countries around the world. The central idea of traditional theory of savings was that increasing saving would accelerate 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).

According to Keynesian economics, savings is defined 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.

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. In explaining the implications of savings and investment 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).

The strong nexus between savings and economic growth has been emphasized in the capitalist economic system. 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 (Uremadu, 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.

In Nigeria, Olajide (2019) 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 (CBN, 2020). 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 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.

Furthermore, 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. Adeleke (2014) 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 the real interest rate would be insignificant. Aiyedogbon (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:

- (i) Finding the relationship between the savings and economic growth in Nigeria
- (ii) Evaluating the impact of savings on economic growth in Nigeria.

# **Hypothesis:**

 $H_1$ : There is no relationship between savings and economic growth in Nigeria.

 $H_2$ : Aggregate savings has no impact on economic growth in Nigeria

The paper is organized into five sections, namely: Introduction, Literature review, Methodology, Results and discussion, Conclusion and Recommendation.

## 2. Literature Review

#### 2.1 Theoretical Framework

## **Harrod-Domar Growth Model**

This is referred to the economic mechanism by which more investment leads to more growth. It is often referred to as the AK model because it is based on the linear production function with output given by the capital stock K times a constant, often labeled A. In order to grow, new investments representing net additions to the capital stock are necessary. In this theory, investment is considered fundamental in the process of economic growth. Investment according to the theory creates income as well as augments the productive capacity of the economy by increasing the capital stock. In as much as there is net investment real income and output will continue to expand. According to the theory, for the economy to maintain a full employment, in the long run, net investment must increase continuously as well as growth in the real income at a rate sufficient enough to ensure full capacity use of a growing stock of capital. It follows that any net addition to the capital stock in the form of new investment will bring about corresponding increase in the flow of national output. If this relationship, known in economics as the capital-output ration, is roughly 3 to 1. If we define the capital-out put ratio as K and assume further that the national net savings ratio, S is a fixed proportion of national output and that total new investment is determined by the level of total savings, economic growth model could be constructed; net savings (S) is some proportion S, of national income (Y), such that we have:

$$S = Y \qquad (1)$$

Net investment is defined as the change in the capital stock, K and can be represented by  $\Delta K$ ;

$$I = \Delta K \tag{2}$$

But because the total capital stock, K, bear a direct relationship to total national income, Y, as expressed

by the capital output ratio, k, it follows that = k or = k OR

$$\Delta K = k \Delta Y \tag{3}$$

Because net national savings, S, must equal net investment, I, we can write this equality as;

$$S = I . (4)$$

But from equation 4 we know that S = sY, and from equation 2 and 3;  $I = \Delta K = k\Delta Y$ 

The identity of saving equaling investment in 4 could be written as

$$S = Y = k\Delta Y = \Delta K = I \tag{5}$$

or simply as

$$SY = k \Delta Y \tag{6}$$

Dividing both sides of equation 6 first by Y and the by k,

$$\Delta Y/Y = s/k \tag{7}$$

 $\Delta Y/Y$  represents rate of growth of GDP. Equation 7, states that the rate of growth of GDP is determined jointly by the net national saving ratio, s, and the national capital-output, k.

# 2.2 Empirical Review

Budha (2012)employed the Autoregressive Distributed Lag (ARDL) approach to test for Cointegration, 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.

Verma and Wilson (2005) examined the relationship between savings, investment, foreign inflows and economic growth in India using ordinary least square method and annual time series data from 1950 to 2001. 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.

In explaining the implications of savings and investment on economic growth, Syid and Sarfraz (1998) 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, 2001). 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 causes economic growth or get caused by economic growth has been a serious theoretical as well as empirical debate among researchers.

Romm (2005) used Johansen VECM estimation technique to study the relationship between Growth and Savings in South Africa. The study confirmed that private saving rate has direct as well as indirect effect on economic growth. Olajide and Oladipo (2009) employed the Toda and Yamamoto methodology to analyze the direction of causal relationship between savings and economic growth in Nigeria between 1970 and 2006, the findings revealed that a unidirectional causality between savings and

economic growth. But the result from the study was different from what Nurudeen (2010) found out causality run from economic growth to saving, implying that economic growth proceeded and Granger causes saving. Adeleke (2014) revealed that there is bidirectional causality exists between savings and economic growth in Nigeria. Bakare(2011) used OLS Multiple Regression analytical method in the economy of Nigeria to examine the relationship between capital formation and economic growth. Mphuka (2010) investigated the causality between savings and economic growth in Zambia using bivariate vector auto-regression (VAR) estimation procedure. The test indicated that economic growth granger causes savings, even though the article argues that savings may influence the economic growth indirectly, because the savings will cause accumulation of capital and will inject the technologies from developed countries.

Kanu, Ozurumba and Anyanwu (2014), writing on "Capital expenditures and capital formation in Nigeria posits that Capital Expenditures (CAPEX) had a negative significant relationship with Gross Fixed Capital Formation (GFCF) in Nigeria at both 1% and 5% Alpha levels, while it had a positive significant relationship other macro-economic variables such as Imports, National Savings and Gross Domestic Product formation of human capital. Meanwhile, most of the existing studies (Verma and Wilson 2005; Verma 2007; Ramesh 2011; Sultan and Hague 2011; Budha 2012; Mohamed 2014 and Turan and Olesia 2014) on savings, investment and economic growth are cross section and cross country studies and they do not use long period of data for analysis. The problem with such studies is the homogenous assumption across the countries, which is unrealistic because of difference in culture, social, economic and institutional conditions. Therefore, country specific studies are needed to fill the gap by throwing more insight on the effect of savings and investment on economic growth in Nigeria because such studies are scanty in Nigeria.

This study is also very important because empirical studies that examine the relationship between saving and economic growth in Nigeria remain scanty (see Olajide, 2009). Besides, the study by Olajide included foreign direct investment as a domestic complementary variable to saving. Unfortunately, foreign capital inflow to Nigeria has continued to decline, thus increasing the need by government and policy makers to look inward and promote the mobilization of domestic saving. In addition, is the desire of the Nigerian economy in attaining higher economic growth rate? Moreover, this work employs both granger causality and cointegration techniques to analyze the relationship between saving and economic growth in Nigeria.

Furthermore, Ogbonna (2014) employs vector error correction model (VECM) estimation to examine the government size and the dynamics of inflation in Nigeria for the period 1981–2013. The results indicate long-run relationship between government size and consumer price index, while there is no causal relationship between the two variables, and that consumer price index in Nigeria is affected by its lagged value and current period of exchange rate of the domestic currency. Anochiwa and Maduka (2015) determine if any relationship can be found between the growth of the economy and inflation rate in Nigeria during 42 years (1970–2012). The results of Johansen co-integration test reveal the nonlinear negative influence between the two economic variables, while Granger causality indicates no causal relationship between them. Chude and Chude (2015) employ timeseries data from 2000 to 2009 using ordinary least squares regression estimation technique to examine the influence of inflation on economic growth of Nigeria. The result indicates the positive and significant relationship between inflation, exchange rate and growth of the economy.

Olu and Idih (2015), using least squares method, analyze the influence of inflation on economic growth of Nigeria from 1980 to 2013. The result shows an insignificant positive relationship between two variables. Shuaib et al. (2015) employ co-integration and Granger causality tests to examine

how inflation rate affects the economy of Nigeria for the period 1960–2012. The result reveals no long-run relationship in the model, while causality test also indicates no causal relationship among the variables. Enejoh and Tsauni (2017) examined how inflation rate affects the country's economy using ARDL techniques and Granger causality during 47 years (1970–2016). The result indicates that inflation rate and exchange rate have a positive impact on economic growth, while the lagged value of exchange rate indicates a negative relationship with the growth of the economy. The causality test shows no causal relationship between inflation rate, exchange rate and the growth of Nigeria economy.

# 3. Methodology

## 3.1. Research Design

As a result of the interest in carrying out a study the impact of National Savings and Economic Growth in Nigeria; as measured by the various Economic Growth indicators such as Gross Domestic Product (GDP). The population of this study shall consist of the whole economy in Nigeria. However, the sample population will be drawn from all available data representing National Savings and Economic Growth as stated above. This study will cover the period of 1990 to 2020.

#### 3.2. Data and Sources

Data used for this study were secondary data, as represented by the "Annual Report and Account" of the Nigerian stock exchange and Central Bank of Nigeria statistical bulletin. The use of Secondary data was necessary because of the quantifiable and verifiable nature of the variables involved; capital market and economic development. Other secondary data and information used were gotten from textbooks, Journals, the internet, newspapers etc. The data used for this study are basically time series data covering 1990 to 2020.

# 3.3. Model Specification

In examining the impact of National Savings on Economic Growth in Nigeria from the period of 1990 to 2020, we adopted the conventional method of using their proxies. Thus National Savings (NS) and Inflation were used as independent variables, while economic growth was proxied by Real Gross Domestic Product Growth (GDP) as a dependent variable. The study specifies the functional relationship of the model as:

GDP = f(NS) (8)

The model is specified as follows:

$$GDP = \beta_0 + \beta_1 NS + \beta_2 INF + \mu. \tag{9}$$

Where: GDP=Gross Domestic product Growth, NS= National Savings and INF = Inflation.

Where  $\beta_0 > 0$ ,  $\beta_1 > 0$ ,  $\beta_0 = 0$  constant parameters  $\beta_1$  and  $\beta_2 = 0$  coefficients to be estimated and  $\mu = 0$  the error term.

Taking the log values of the variables in equation two produces the following equation which is estimated to address the objectives of the study.

$$\ln GDP = \beta_0 + \beta_1 \ln NS + \beta_2 \ln INF + \mu \tag{10}$$

# 3.4. Method of Data Analysis

Simply method of data analysis means the statistical total or technique utilized in processing the data collected, with a view to arriving at valid conclusions. The statistical technique adopted for this study is

simple regression econometric procedure, is ordinary Least Square (OLS) using the E-Views software. The study commenced its analysis with Augmented Dickey-Fuller test, to verify, the stationarity of the variables so as to avoid spuriousness of empirical result. The t-test was employed to ascertain the significance of each of the constant parameters, while the diagnostic test based on the coefficient of determination (R<sup>2</sup>) was used to check for the goodness of fit of the model. The Durbin-Watson statistic will be employed also to measures the serial correlation in the residuals.

## 4. Results and Discussion

## 4.1 Unit Root/Stationarity Test

Researchers have developed several procedures for the test of order of integration. The most popular ones are Augmented Dickey-Fuller (ADF) test due to Dickey and Fuller (1979, 1981), Augmented Dickey-Fuller test relies on rejecting a null hypothesis of unit root (the series are non-stationary) in favor of the alternative hypotheses of stationarity. The results for Augmented Dickey-Fuller test (ADF) is presented in table 1

Table 1: Augmented Dickey-Fuller Test Unit Root Test Results:

AUGMENTED DICKEY-FULLER							
	LEVELS FIRST DIFFERENCED						
Variable	t-statistic	Critical value	p-value	t-statistic	Critical value	p-value	I(d)
Log(GDP)	-2.329071	-2.963972	0.1699	-17.75950	-3.004861	0.0000 <b>a</b> ***	<i>I</i> (1)
Log(NS)	-1.762498	-2.963972	0.3910	-5.611573	-2.967767	0.0001 <b>a</b> ***	<i>I</i> (1)
Log(INF)	-1.000327	-2.963972	0.7407	-8.893841	-2.967767	0.0000 <b>a</b> ***	<i>I</i> (1)

Source: Researcher's computation using E-view 9.0

Note: \*\*\*, \*\* and \* imply statistical significance at 1%, 5% and 10% levels respectively. Also, 'a' denotes model with constant.

The results presented in Table 1 revealed the revealed that Gross Domestic Product (GDP), National Savings (NS) and Inflation (INF) have unit root problem at their levels but are integrated of order one using Augmented Dickey-Fuller. The results of the unit root

test have necessitated the co-integration test. Since all the variables have the same order of integration; I(1), Johansen cointegration test will be appropriate.

# 4.2: Johansen Co-integration Test Results

**Table 2: Johansen Co-integration Test Results** 

Unrestricted Cointegration Rank Test (Trace)							
Hypothesized		Trace	0.05				
No. of CE(s)	Eigenvalue	Statistic	Critical	Prob.**			
			Value				
None *	0.507044	40.38209	29.79707	0.0021			
At most 1 *	0.373011	19.86936	15.49471	0.0103			
At most 2 *	0.196135	6.331381	3.841466	0.0119			
Trace test indic	cates 3 cointegr	atingeqn(s) at th	e 0.05 level				
* denotes rejec	* denotes rejection of the hypothesis at the 0.05 level						
**MacKinnon-Haug-Michelis (1999) p-values							
Unrestricted Co	Unrestricted Cointegration Rank Test (Maximum Eigenvalue)						
Hypothesized		Max-Eigen	0.05				
No. of CE(s)	Eigenvalue	Statistic	Critical	Prob.**			
			Value				
None*	0.507044	20.51273	21.13162	0.0008			
At most 1*	0.373011	13.53798	14.26460	0.0049			
At most 2 *	At most 2 * 0.196135 6.331381 3.841466 0.0119						
Trace test indicates 3 cointegratingeqn(s) at the 0.05 level							
* denotes rejection of the hypothesis at the 0.05 level							
**MacKinnon-Haug-Michelis (1999) p-values							
Unrestricted Cointegrating Coefficients (normalized by b'*S11*b=I):							

Source: Researcher's computation using E-view 9.0

Table 2 shows the result of cointegration test in order of Johansen. Both the Trace statistic and the Maximum Eigen value indicate three cointegration equations at 5% level of significance. This means that, even though the variables drift apart in the short-run, they, however, converge in the long run. This is an evidence of strong long-run relationship between and among real gross domestic product, national savings and inflation. This result support the findings of Budha (2012) who employed the Autoregressive Distributed Lag (ARDL) using bounds test approach to test for

Cointegration, 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. It is also in line with the findings of Turan and Olesia (2014) who investigated the impact of savings on economic growth in Albania over the period of 1992 to 2012 using Johansen co-integration test and error correction model.

**4.3:** O L S Estimation Result Savings and Economic Growth Model in Nigeria.

Table 3: Ordinary Least Square Estimation Result Savings and Economic Growth Model in Nigeria

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.527475	0.766961	5.903138	0.0000
LOG(NS)	0.755322	0.079645	9.483647	0.0000
LOG(INF)	-1.580775	0.618125	-2.557372	0.0167
R-squared	0.962743	Mean dep	endent var	9.846525
Adjusted R-squared	0.945796	S.D. dependent var		1.835893
S.E. of regression	0.925632	Akaike info criterion		2.775086

Sum squared resid	23.99026	Schwarz criterion	2.913859
Log likelihood	-40.01384	Hannan-Quinn criter.	2.820323
F-statistic	45.00778	Durbin-Watson stat	1.864680
Prob(F-statistic)	0.000000		

Source: Researcher's computation using E-view 9.0

Table 3 presents the result of ordinary least square estimation. In terms of direction of relationship, there is a positive relationship between national savings, the variable of interest in the research, and economic growth. This means that increase in national savings will result to increase in economic growth. However Inflation, which is used in the research, revealed a negative relationship with economic growth within the study period.

regards to significance, With all the independent variables used in the research are significant in explaining economic growth in Nigeria. A closer look at the coefficient of national savings shows that a one Naira increase/decrease in national savings will increase/decrease economic growth by about 76 percent ceteris paribus and it stands inelastic in explain growth variation in Nigeria within the study period. National savings is statistically significant, at 1% level of significance, in explaining economic growth in Nigeria. The result of the study agrees with the findings of Verma and Wilson (2005) who examined the relationship between investment, foreign inflows and economic growth in Indian using ordinary least square method and annual time series data from 1950 to 2001. The findings of the study also buttress those of Romm (2005) who used Johansen VECM estimation technique to study the relationship between Growth and Savings in South Africa.

The control variable, inflation, used in the study is negatively related to economic growth. This means that increase in inflation will result to a decrease in economic growth and vice versa. Precisely,

a one percent increase/decrease in inflation will decrease/increase economic growth by about 158%, ceteris paribus, at 5% level of significance. Inflation is elastic in explaining economic growth in Nigeria within the study period. This findings buttress the findings of the research conducted by Ogbonna, 2014.

The adjusted R<sup>2</sup> which measures the proportion of variation in the dependent variable (real gross domestic product) that is explained by the variables included in the model is quite high. About 95 percent of the variation in dependent variable is caused by the variables included in the model, which is national savings and inflation. It is only about 5% of the variation in real gross domestic product that is due to the error term. In other words, 95 percent of the variation in economic growth is explained within the model and only about 5 percent that is explained by the variables outside the model. This suggests an appropriate goodness of fit.

The Durbin-Watson statistic of 1.864680 which is approximately one indicates the absence of serial correlation of the residuals. This absence of serial correlation is confirmed using the Breusch-Godfrey Lagrange Multiplier (LM) statistic diagnostic teas statistic.

#### **4.4:Post-Estimation Tests:**

Batteries of diagnostics tests are conducted to test the validity of the result.

## 4.4.1: Linearity Test:

**Table 4: Ramsey RESET Test** 

	Value	df	Probability
t-statistic	1.625592	27	0.1157
F-statistic	2.642550	(1, 27)	0.1031
Likelihood ratio	2.894593	1	0.1889

Source: Researcher's Computation Using E-view 9.0

Ramsey's RESET statistic is reported to judge misspecification. The Ramsey's Regression Equation Specification Error Test (RESET) is carried out to test the null hypothesis the relationship between the variables is linear. Given its probability value of

0.1157, 0.1031 and 0.1889 for t-statistic and F-statistic and Likelihood ratio respectively, the RESET statistics are highly insignificant, supporting correct specification of the model.

**4.4.2: Serial Correlation Test:** 

Table 5: Breusch-Godfrey Serial Correlation LM Test:				
F-statistic	0.274796	Prob. F(2,26)	0.7619	
Obs*R-squared	0.641718	Prob. Chi-Square(2)	0.7255	

Source: Researcher's Computation Using E-view 9.0

To make sure residuals of the optimum model are autocorrelation free, the researcher reported the Breusch-Godfrey Lagrange Multiplier (LM) statistic. The LM statistic is insignificant since the 5% is less

than the probability values of 0.7619 and 0.7255 for F-statistic and Obs\*R-squared respectively. Therefore, there is no evidence of serial correlation.

4.4.3: Heteroskadasticity Test:

Table 6: Heteroskedasticity Test: Breusch-Pagan-Godfrey					
F-statistic	0.529116	Prob. F(2,28)	0.5949		
Obs*R-squared	1.128947	Prob. Chi-Square(2)	0.5687		

Source: Researcher's Computation Using E-view 9.0

Table 6 presents the results of heteroskadasticity test. The P-values of 0.5949 and 0.5687 for F-statistic and Obs\*R-squared from Breusch-Pagan-Godfrey ARCH is in support of the null hypothesis of no evidence of heteroscadasticity

The above battery of diagnostic tests was also applied to the empirical models to gauge the adequacy of the models' specifications. The Breusch–Godfrey LM test statistic rejects a serial correlation for the equations. The ARCH test confirms that the residuals are homoscedastic in all equations, and the Ramsey Reset test confirms the correct functional form of the equations.

## 5. Conclusion and Recommendations

The main objective of this study was to empirically determine the impact of savings on economic growth in Nigeria using annual data for the period 1990 to 2020. Time series techniques were used to determine the impact of National Savings (NS) on economic growth (GDP). The results of the unit roots test indicated that all other variables are stationary in first

differences-I(1), therefore, I(1) series were adopted to test for co-integration Using Johansen co-integration test. The co-integration tests results showed that the long-run relationships exist between the GDP, national savings and inflation.

The result revealed strong evidence that there is a positive and significance relationship between national savings and economic growth in Nigeria. However, a negative but significant relationship exists between inflation and economic growth in Nigeria.

The study recommends the following;

To increase the impact of national savings on economic growth, a concerted effort should be directed toward improving the income of the citizens in order to improve their saving ability. Financial sector should be developed by both government and private sectors to facilitate the accessibility of financial institution both in urban areas and the rural areas. Government should emphasize on the importance of savings and the existing saving schemes should be promoted as well as developing new ones since the relationship between savings and economic growth is inelastic as reported by the study.

Efforts should be made by monetary authorities to reduce the high level of inflation in the economy since the present level of inflation is higher than the

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