

IMPLICATIONS OF SAVINGS AND INVESTMENT ON ECONOMIC GROWTH IN NIGERIA

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ABSTRACT: *The implication of savings and investment on economic growth is mixed and controversial both theoretically and empirically. There is large empirical literature which examines the relationship between savings and economic growth in Nigeria. There is also a considerable literature which looks at the relationship between economic growth and investment. However, little attention has been given to examining the implications of savings and investment on economic growth in Nigeria. The aim of this paper is to evaluate the implications of savings and investment on economic growth in Nigeria using ordinary least square regression. Results for ADF and PP unit root tests show that all variables under consideration are I(1). The study also revealed that there is long run relationship between savings, investment and economic growth in Nigeria. The result of the regression indicates that change in gross domestic savings movements has negative and significant effect on the change in economic growth in Nigeria and that the change in gross domestic investment has positive and significant effect on the change in the Nigerian economic growth. We therefore recommend that 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.*

KEYWORDS: Savings, Investment, Economic Growth, ADF, PP.

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, 2007). 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 (2007) defined investment as the production of new capital goods, plants and equipments. 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 (1998) in Abu (2010)). 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. In classical theory, an increase in savings and investment will lead to an increase in the output (Ramakrishna and Rao, 2012).

The issue of savings and investment is certainly not new but their implications on economic growth has had mixed results in both developing and developed countries. We all know that economic growth of any nation requires investment which can be financed through private savings. This means that economic growth depends on investment through private savings and capital accumulation (Mohamed, 2014). The evaluation of the impact of savings and investment on economic growth in Nigeria is very important because it will provide useful information on which of the macro-economic variables will be used to monitor the level of economic growth through savings and investment. The major problem of this study is to know whether or not the traditional view of growth that gross domestic savings and gross domestic investment promotes economic growth is valid? This is because the level of economic growth may itself affect the savings and investment rate. Barro (1991) and Romer (1990) stated that human capital investment and labour force also plays a special role in economic growth. Human capital investment and labour force are the key input which generates new ideas that leads to faster economic growth. Human capital investment is an important source of long-term economic growth (Mohamed, 2014).

Understanding the impact of savings and investment on economic growth has become more relevant for its policy implications in Nigerian economy. Perhaps, if savings and investment

causes economic growth, then promoting gross domestic savings and investment should be focused on to boost the level of economic growth in Nigeria. Meanwhile, most of the existing studies (Verma and Wilson 2005; Verma 2007; Ramesh 2011; Sultan and Haque 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 either scanty or do not exist in Nigeria.

Objectives of the Study

In the light of the above problem, the general objective of the research work is to investigate the effect of savings and investment on economic growth in Nigeria (1970-2014).

Specifically, the study objectives are:

1. To determine the impact of gross domestic savings on economic growth in Nigeria.
2. To ascertain the impact of gross domestic investment on economic growth in Nigeria.

REVIEW OF RELATED LITERATURE

Empirical Review

Most literature on savings, investment and economic growth have concentrated on the developed and developing countries, and aggregation of developing and emerging countries. These studies have not really focused on how the falling savings and investment rate impact on economic growth in Nigeria bearing in mind the significant role played by savings and investment in economic growth and development of a nation. This section tries to present some of these empirical studies.

Verma and Wilson (2005) 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 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. 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 (2007) investigated the relationship between savings, investment and economic growth in India from 1951 to 2004 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 examine 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 2008. The co-integration test result suggests that there exist 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 1992 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 inconsistencies in the choice of variables, the geographical area of the study and the scope are also inconsistency. The extent to which savings and investment affects economic growth has remained uncertain and undetermined in Nigeria. This has been identified as the existing gap of knowledge in literature.

Theoretical Framework

Two savings, investment and growth theories namely; neoclassical theory of savings and investment and endogenous growth theory will be used to explain the impact of saving and investment on economic growth in Nigeria.

Neoclassical Theory of Savings and Investment

Neoclassical Economics is the name given to an economic theory that was developed at the end of the 19th and the beginning of the 20th Century in Europe. The main contributors to this theory were Léon Walras (1834-1910), Alfred Marshall (1842-1924) and Vilfredo Pareto (1848-1923). The issue that neoclassical economists dealt with was the distribution of power between industrialists and workers so as to ensure proper savings and investment. Neoclassical theory of savings and investment are today a matter of intense concern to millions of people around the world. The most basic questions people faces are: How much of their income should they save for the future? What risks should they insure against? How should they invest what they save? This theory believed that since consumption is a function of disposable income, and savings is income not spent while investment is the income spent. This means that savings and investment are also a function of disposable income. This theory states that savings determine investment and is concerned primarily with market equilibrium and economic growth at full employment instead of with the under-employment of resources.

Endogenous Growth Theory

This study will also be anchored on Endogenous theory propounded by Pagano (1993). The theory captures the potential effects of savings and investment on economic growth as a linear function of capital accumulation. The theory assumes that efficient financial sector might affect economic growth through three channels namely: reduction in transaction costs and channeling of increased savings to firms for productive investments, improving the allocation of capital and rate of savings.

The two theoretical frameworks are very essential because they offer useful explanations on how savings and investment affects economic growth in Nigeria. Neoclassical theory of savings and investment theory explains how savings and investment determine the level of economic growth. The endogenous growth theory offers useful link through which accumulated savings are channelled to productive investments (through lending activities) for economic growth. All these attributes of the theories make them useful for this present study.

METHODOLOGY

Ex-post facto research design were adopted in carrying out the study. Ex-post facto research design is a type of research design that utilizes existing data on past events (Onwumere, 2005). Such data are already in existence and are not manipulated. The justification for using this design is that the study will utilize already existing quantitative data on past events for which the relevant variables cannot be manipulated.

Quantitative data on research variables will be generated on quarterly basis from secondary sources, namely: CBN Statistical Bulletin, International Financial Statistics, World Bank and OECD Account Data files.

Description of Research Variables

Gross Domestic Product (GDP): Gross domestic product is the general index of economic development. It shows how inefficiency of savings and investment affects economic growth and it was used based on the existing literature and as the main determinant of economic

growth. This refers to the market or money value of all goods and services produced in a country at a particular period of time. GDP measures the economic size of a country.

Gross Domestic Saving (GDS): Gross domestic savings will be measured as a percentage of GDP. It measures the volume of savings that flows to the private sector of the economy for investment. It is expected to have positive impact with economic growth.

Gross Domestic Investment (GDI): Gross domestic investment will be measured as a percentage of GDP. Gross domestic investment will be proxied by gross capital formation as a percentage of GDP. This variable will capture the level of investment and how it affects economic growth in Nigeria. The justification for using capital formation as a proxy for gross domestic investment is that it offers useful link through which accumulated savings are channelled to productive investments (through lending activities) for economic growth. High investment is an indication of accumulated savings for economic growth. It is expected to have positive impact on growth.

Model Specification

We adopted multiple linear regression model. The choice of multiple linear regression model is because the regression model involves more than a single independent variable (Onwumere, 2005). The equation for multiple linear regression is given as follows:

$$Y = b_0 + b_1X_1 + b_2X_2 + \dots + b_nX_n \dots 1$$

Where; Y= dependent variable, b_0 = intercept term, $b_1, b_2 \dots b_n$ =regression coefficients to be determined, $X_1, X_2 \dots X_n$ = set of explanatory variables.

We re-specify the model to capture the objectives of our study.

$$GDP_t = \beta_0 + \beta_1GDS_t + \beta_2GDI_t + \mu_t \dots 2$$

Where; GDP_t = Gross Domestic Product (dependent variable), GDS_t = Gross Domestic Savings, GDI_t = Gross Domestic Investment, and μ_t = Error term.

Descriptive Results

This part of the study presented result of the statistical data employed in the conduct of this study. Data sources were mainly from the secondary sources from 1981-2014. The empirical results obtained after the diagnostic test are also presented in this section. The diagnostic tests include stationarity test, Co-integration tests, Causality test and vector error correction model. Here, our data are being interpreted alongside the objectives of our study.

Unit Root Tests.

This is used to test for the stationarity of the time series data. In this section, we analyze the time series of the chosen data during the period of 1981-2014. Augmented Dickey Fuller (ADF) and Phillip-Peron (PP) unit root tests were conducted on all the variables to know the existence of stationarity or reliability of the data. The results, presented in Table (1), judging by the Augmented Dickey Fuller (ADF) and Phillip-Peron (PP) tests statistics, R-Squared and Durbin-Watson statistics at 1%, 5% and 10% level of significance, reveals that all the variables (GDP, GDS, GDI) are non-stationary at level but stationary at first differencing. This means that they are integrated of order 1(1). In order to determine whether the variables

are stationary or otherwise, unit root tests are conducted. If non-stationary at levels, the order of integration will be determined. Next is a test of co-integration which is carried out between Economic Growth proxy on Gross Domestic Product (GDP), Gross Domestic Savings (GDS) and Gross Domestic Investment (GDI). Test for the stationarity of the variables are presented in table 1 below.

The test results suggest that the null hypothesis of unit root for the three time series namely, Economic Growth proxy on Gross Domestic Product (GDP), Gross Domestic Savings (GDS) and Gross Domestic Investment (GDI) cannot be rejected at levels. This prompted us to test the Augmented Dickey-Fuller (ADF) and Philip Peron (PP) tests at first and second levels. The result as shown in table 1 suggests that the null hypothesis of the variables can be rejected in the first difference. These shows that all the variables are stationary at first difference and are integrated of order one or are 1(1) series. The test results are presented below:

Table 1: Augmented Dickey Fuller (ADF) Unit Root Test (Trend and Intercept)

Variables	T. statistics	Critical levels	1%	5%	10%	Decision
GDP	-5.552754		-4.296729		-3.5684	-3.2184 1(1)
GDS	-5.646364		-4.284580		-3.5629	-3.2153 1(1)
GDI	-6.353736		-3.661661		-2.9604	-2.6192 1(1)

Source: E-View 7.0 Computer Result

Table 2: Philip Peron (PP) Unit Root Test (Trend and Intercept)

Variables	T. statistics	1%	5%	10%	Decision
GDP	-4.873530	-4.532598	-3.6736	-3.2773	1(1)
GDS	-4.336059	-4.498307	-3.6584	-3.2689	1(1)
GDI	-9.712451	-4.532598	-3.6736	-3.2773	1(1)

Source: E-View 7.0 Computer Result

NOTE: All variables are stationary at first differencing.

From the above table, the empirical result shows that GDP, GDS and GDI are integrated of order one. Looking at the tables above, it was discovered that both ADF and PP with trend and intercept test statistics are greater at 5% and 10% critical values. This means that the series are stationary at first differencing.

For the ADF statistics, the 99%, 95%, and 90% critical values are shown after each T-statistics at the left hand side of second column of tables 1 and 2. The result in tables 1 and 2 above shows that none of the variables were stationary at levels. This can be seen by comparing the observed values (in absolute terms) of the ADF and PP tests statistics at 1%, 5% and 10% levels of significance. The result provides some evidence that none of the variables were stationary when differenced at levels, hence there is evidence of non-stationarity. However, differencing once indicates stationarity in all the variables (GDP, GDS and GDI). Therefore, the null hypothesis is accepted for non-stationary of the variables at levels and it is sufficient to conclude that there is a presence of unit root at levels. As a result all the variables were differenced and the ADF tests were conducted on them; the result is shown in tables 1 and 2 above.

This reveals that none of the variables were stationary at level but at first difference. On these bases, the null hypothesis of non-stationarity is rejected for all the variables and we therefore, conclude that the variables are stationary. This further implies that the variables are integrated of order one, I (1).

Co-integration Tests

This is used to test for the existence of long-run relationship between dependent and independent variables. The Johansen co-integration test was conducted on the selected variables. The results obtained from the above unit root test confirm that all the explanatory variables: GDP, GDS and GDI are co-integrated of order one. The test indicates three co-integrating equation at 5% level of significance.

After forming the stationary of the variables, we proceed to test for the co-integration among the variables. When co- integration is present, it means that gross domestic product, gross domestic savings and gross domestic investment share a common trend and long-run equilibrium as suggested in the Theory. We started the co-integration analysis by employing the Johansen and Juselius multivariate co-integration tests. The maximum Eigen value statistics indicated (3) co-integrating equation at the 5 percent level of significance, suggesting that there is co-integration relation between the determinants of stock market returns in emerging market economies like Nigeria. It is also used to test for the existence of long run relationship between dependent and independent variables. The Johansen co-integration test was conducted on the selected variables. The variables can therefore be said to have reliable long-run relationship among them with dependent variable coefficient of normalized co-integration of 1.000000. The result is presented in Table 3 below:

Table 3: Co-integration Test Results

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Probability
None*	0.940627	187.1919	88.80380	0.0000
At most 1*	0.825665	99.65069	63.87610	0.0000
At most 2*	0.526567	45.50069	42.91525	0.0269

Source: E-View 7.0 Computer Result

() denotes rejection of the hypothesis at 5% significance level. The trace test indicates 3 co-integration equation(s) at 5% significance level.

Considering the tables above, there is a long run relationship between dependent variable (GDP) and the independent variables (GDS ad GDI) within the period under review 1981-2014.

Normalized 1 Co-integrating Coefficients Equation(s): The normalized co-integrating coefficients for one co-integrating equation given by the existence of long run relationship are shown below:

$$\text{GDP } 1.000000 = \text{GDS} + 0.000000, \text{ GDI} + 9994.372 (6801.27).$$

Where GDP is the dependent variable, 1.00000 is the coefficient, +0.000000 is the coefficient of Gross Domestic Savings (GDS), 9994.372 is the coefficient of Gross Domestic Investment (GDI).

The figures in parentheses behind the estimated coefficients are the standard errors. The values were extracted from Johansen's Co-integration test under the "Normalized 1 co-integrating coefficient equation" sub-section. They are the coefficients showing the direction and strength of the relationship which exist between dependent variable and independent variables in the long run.

The table above reveals that there is strong positive relationship between Economic Growth proxied by Gross Domestic Product (GDP), Gross Domestic Savings (GDS) and Gross Domestic Investment (GDI). As indicated in the table above, the variables under consideration are co-integrated because the probability values are all less than the significance level at 5%.

Regression Result on the Implications of Savings and Investment on Economic Growth in Nigeria.

In this study, mathematically, Implications of Savings and Investment on Economic Growth in Nigeria are established. Available data on Economic Growth proxy on Gross Domestic Product (GDP), Gross Domestic Savings (GDS) and Gross Domestic Investment (GDI) were collected and used for the purpose of this analysis. Two simple regression models were formed to capture the assumed Implications of Savings and Investment on Economic Growth in Nigeria.

The general aim of this study is to identify the Implications of Savings and Investment on Economic Growth in Nigeria. Therefore the empirical data associated with this regression results are used for hypotheses testing and are as stated below:

Test of Research Hypotheses

In this section, we tested the three variables (GDP, GDS and GDI). In doing this, some steps were followed:

Test of Hypothesis One

Restatement of hypothesis in null and alternative forms

Hypothesis one is restated as follows:

H_{01} : Gross domestic savings have no significant impact on economic growth in Nigeria.

H_A : Gross domestic savings has significant impact on economic growth in Nigeria.

Decision Rules

Decision Rule 1: Accept null hypothesis if prob. (F-statistic) is less than 0.05 and reject null hypothesis if prob. (F-statistic) is greater than 0.05.

Estimated Model Result for the Test.

SUMMARY RESULTS OF ESTIMATION OF MODEL: $GDP = f(GDS)$.

GDP = f (GDS) Model 1

TABLE 5: REGRESSION OF LOG (GDP) ON LOG (GDS)

Dependent Variable: LOG (GDP)

Method: Least Squares

Sample: 1981-2014

No of observations 33

Variable	Coefficient	Standard Error	t-Statistic	Prob.
C(constant- GDP)	225738.7	83736.91	2.695808	0.0112
LOG(GDS)	-7639.335	6088.700	-1.254674	0.0000
R-squared	0.848327	Mean dependent var		126760.7
Adjusted R-squared	0.817628	S.D. dependent var		162764.6
S.E. of regression	161323.7	Akaike info criterion		26.87891
Sum squared resid	8.07E+11	Schwarz criterion		26.96960
Log likelihood	-441.5019	Hannan-Quinn criter.		26.90942
F-statistic	1.574207	Durbin-Watson stat.		2.271096
Prob(F-statistic)	0.000000			

*Source: E-view 7.0 Computer Results.***Analysis of Result 1**

Considering the uncertain quality of data used in the study, the level of statistical significance chosen for testing the hypothesis is at 5% level. The regression result shows that there is an existence of a linear and proportionate implication of savings and investment on economic growth in Nigeria. The sign of the co-efficient estimates are rightly assigned, reflecting a negative relationship with economic growth and thus confirms to a prior expectation. The statistical evidence emanating from the study of co-efficient of determination R^2 shows that the endogenous variable jointly explained over 84.83% of the total variation in the dependent variable (GDP). The value of the adjusted R^2 (0.848327) which is over 84% re-affirms the goodness of fit and signifies that over 84% variations did not merely result from the use of simple variable in the model. The F-statistic (1.574207) of the model estimate is statistically satisfactory such that the hypothesis of the equation being equal to zero can be rejected. The joint influence of the explanatory variable was statistically significant at 5 percent level of significance. Durbin Watson test of auto-correlation (2.271096) indicates the presence of positive auto-correlation.

Specifically, at 5% level of significance, gross domestic savings has direct and significant negative implication on economic growth in Nigeria. This confirms the hypothesis that changes in gross domestic savings movements has no positive and significant effect on the change in economic growth in Nigeria within the period under review.

Based on the results, we reject the alternative hypothesis, and accept the null hypothesis and conclude that changes in gross domestic savings movements have negative and significant effect on the change in Nigerian economic growth. This means that the low size of domestic savings rate is a good measure for economic growth and employment generation in Nigeria.

Test of Hypothesis Two

Restatement of hypothesis in null and alternative forms

Hypothesis two is restated as follows:

H₀: Gross domestic investments have no significant implications on economic growth in Nigeria.

H_{A2}: Gross domestic investments has significant implications on economic growth in Nigeria.

Decision Rules

Decision Rule 1: Accept null hypothesis if prob. (F-statistic) is greater than 0.05 and reject null hypothesis if prob. (F-statistic) is less than 0.05.

Estimated Model Result for the Test.

OLS Regression (GDI and Economic Growth GDP: 1981-2014).

Variable	Coefficient	St.Error	t-Statistic	Prob.
C	1.802176	0.650119	2.772073	0.0093
LOG(GDI)	0.692997	0.050527	13.71542	0.0000
R ² = 0.858520				

Source: E-views 7.0 Computer Result.

The equation in the third model regressed LOG (GDP) on LOG (GDI). The regression coefficient of LOG (GDI) carries positive sign and its t-value (13.71542) is statistically significant at 5% level. This implies that GDI affects the GDP significantly. The t-value or marginal value for the regression coefficient of LOG (GDI) is significant as confirmed by the t-probability (0.0000). It is estimated from the result that 1% increase in LOG (GDI), on the average, will lead to 0.69% increase in LOG (GDP). The computed value of R² = 0.858520 shows that 85.85% of the total variation in the growth of Nigerian economy (GDP) is accounted for by the explanatory variable (GDI) while 14.15% of the total variation in GDP is attributable to influence of other variables which are not included in the regression model.

Changes in gross domestic investment (GDI) represent the instability in domestic investment. It has positive significant implication on economic growth both in the ordinary least square and the Co-integration test. Judging from the F-Statistic, it reveals that the calculated F-Statistic of 188.1127 is greater than the tabulated F-Value of 2.128 which states that the F-Statistic is significant at 5% level of 4 degrees of freedom and 33 observations. The implication of this is that if the volume of gross domestic investment is stable, it will contribute positively to the growth of the Nigerian economy. In explaining these findings relatively with the earlier one, we can say that despite the level or the degree of implications of domestic investment, change in gross domestic investment has positive and significant implication on the change in economic growth in Nigeria.

CONCLUSION AND RECOMMENDATIONS

Conclusion

Savings and investment plays 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.

Recommendations

Following the analysis of this study, we recommend as follows:

1. 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.
2. The government should increase the deposit rate of the deposit money banks in Nigeria through monetary policy.
3. The government should transform the financial sector of the country.
4. Government should create favorable condition in order to mobilize domestic savings from the small depositors.

REFERENCES

- Abu, A. B. (2010), the Causal Relationship between Savings and economic Growth: Some Evidence from MENA Countries. *Paper Presented at the 30th MEEA Meeting in Atlanta*.
- Abu, N. (2010), Savings and Economic Growth Nexus in Nigeria: Granger Causality and Co-integration Analysis. *Review of Economic and Business Studies*, 3(1): 93-104.
- Agrawal, P. (2001), The relationship between savings and growth in South Asia. Co-integration and causality evidence from Asia. *Applied Economics*, 33: 499-513
- Mohamed, S. A. E. (2014), Testing the relationship between Private Savings and Economic Growth in Bahrain. *Global Journal of Commerce and Management Perspective*, 4(6): 1-6.
- Onwumere, J.U.J. (2005). *Business and Economic Research Methods*, Don-Vinto Ltd, Lagos, 272P.
- Pagano, M. (1993). Financial Markets and Growth: An Overview, *European Economic Review*, 37, 613-622.

- Shimelis, K. H. (2014), Savings, Investment and Economic Growth in Ethiopia: Evidence from ARDL approach to co-integration and TYDL granger causality tests. *Journal of Economics and International Finance*, 6(10): 232-248
- Sultan, Z. A. and Haque, M. I. (2011), The estimation of the co-integration relationship between Growth, Domestic Investment and Export in Indian economy. *International Journal of Economics and Finance*, 3(4): 226-232
- Turan, G. and Olesia, G. (2014), what is the impact of savings on economic growth? The case of Small Open Economy in Albania. *Mediterranean Journal of Social Sciences*, 5(13): 360-368
- Verma, R. (2007). Savings, Investment and Growth in India: An Application of the ARDL Bounds Testing Approach. *South Asia Economic Journal*, 8(1), 87-98.
- Verma, R., and Wilson, E. (2005). Savings, Investment, Foreign Inflows and Economic of the Indian Economy 1950-2001. *Economics Working Paper Series, University of Wollongong*.
- Wondwesen, W. (2011). The Impact of Foreign Capital Inflows on Economic Growth, Savings and Investment in Ethiopia. *Unpublished M.Sc. Thesis, Addis Ababa University*.