

Effects of Fiscal Strategy on Private Investment in Nigeria (1980-2015)**Mustapha Bojuwon**

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Abstract

The paper examines the effect of fiscal strategy on private investment in Nigeria. It adopted secondary data which were sourced from the publications of the Central Bank of Nigeria Statistical Bulletins and the National Bureau of Statistics between 1980 -2015. The estimation techniques employed were the Augmented Dickey-Fuller (ADF) test of unit root that affirms the stationarity of the series to guard against spurious regression outcomes from time series data. The Johansen Cointegration test also affirms the existence of Cointegration among the variables in the long run and their Cointegration vectors. The Error Correction Model (ECM) examines the short and long run effects of fiscal variables on private investment. The Granger Causality evaluates the dependency directions between fiscal variables and private investments. The results show that government expenditure had positive effect on private investment in the long run ($\beta = 3115709$; $p \leq 0.05$) while a significant negative effect exists on taxation in the short run ($\beta = -6642058$; $p \leq 0.05$). The study concludes that fiscal strategy has positive significant effect on private investment in Nigeria. The study therefore recommends that government should as a matter of fact re-assess its spending to make it commensurate with investment and to direct more credit facilities to the private sector.

Keywords: Fiscal Strategy, Private Investment, Fiscal Variables, Government Expenditure, Taxation

Introduction

The theory of investment has remained an unsettled issue in economics. Different approaches have been adopted in explaining investment behaviour based on the experience of developed countries without taking cognizance of the developing and emerging economies. Investment is an important component of aggregate demand and a leading source of economic growth. An increase in the level of investment does not only influence aggregate demand but also enhances the productive capacity of an economy. Private investment plays a fundamental role in influencing productive capacity and promoting long term economic growth (Jongwanich and Kohpaiboon, 2008). It is to be noted however that higher investment rate has the potential to trigger the economy on the path of sustainable growth and development. Levine and Renelt (1992) have posited that private investment in capital goods is considered as important determinant of economic growth. Coincidentally, gross domestic investment can boost economic growth by

increasing physical capital directly and indirectly through technological spillovers in the economy (De Long and Summers, 1995).

In investigating the economic performance of a country, investment remains one of the key determinants of economic growth. Moreover, most of the countries that grow rapidly commit a reasonable part of the annual Gross Domestic Product (GDP) to investment (Maqbool, et al, 2010). In contrast, nations that grow slowly are those economies that slowly invest and which remain poor (Solow, 1956). According to the United Nations (UN, 2005), a favourable investment climate can be explained as having unhindered access to basic physical infrastructures such as stable electricity, efficient tax administration and tax rates; telephone, water and roads; business regulations and trade facilitation services, access to unhindered information and advisory services; higher labour productivity; access to finance; availability and affordability of urban land; among other elements.

For developing countries of the world like Nigeria, the main challenge in their economy is on to achieving a large portion of output over a time and improving the standard of living of their people so that there will be dramatic change in their socio-economic and political spheres of life. In achieving this target, various tools are considered, which include promoting investment as the primary engine of growth, although all investments undertaken in an economy cannot be taken as productive and crucial to the advancement of economic growth in an economy.

Theoretical Review

A robust investment climate provides opportunities and incentives for investors to invest, making profit from their enterprise, creating jobs, and expanding national output thereby enhancing private investment and boosting economic growth (World Bank, 2004). In the 2005 World Development Report (WDR), Bernal *et al.* (2004) note that improvements in the investment climate in developing countries are key to increasing the flow of investments and, consequently, a higher level of economic growth and development. However, in the less developing countries, such as Nigeria, business enterprises often operate in investment climates that discourage their incentive to invest and grow. In line with this environment, Nigerian investors argue about poor infrastructures, particularly poor transport, power shortages; poor telecom connectivity of business locations and lack of efficient tax administration (Mima and David, 2012; World Bank, 2004).

Private investment impacts positively on socio-economic and political developments of a country. This forms a good platform for employment generation in the economy by way of accumulating capital for productive undertakings. It is capable of stimulating economic activity and enhancing long-term economic growth by expanding the capacity for production of goods and services (Ahuja, 2007). Provision of more goods and services in the economy has its effect on consumption patterns, which in turn enhances the welfare of consumers. Developing countries need to maintain private investment at a sizeable proportion of Gross Domestic Product in order to create and sustain their economic growth. Gillis, Perkins, Roemer and Sodgrass, (1987) were of the opinion that this proportion should not be lower than 15% of Gross Domestic Product at any point in time, and that such (developing countries) should aim at sustaining private investment level of at least 25% of Gross Domestic Product.

Increase in private investment may lead to increase in government revenue as a result of taxes from the earnings of factors of production (Ahuja, 2007). The result of the survey conducted by International Labour Organization, (ILO) in Nigeria shows that persons aged 0 to 14 years constituted 39.6%, those aged between 15 and 64 (the economically active population) constitutes 56.3% of the population, while those above age 65 years ranked 4.2%.

There exists a common consensus in the literature that an adequate and effective macro-economic policy is critical to successful developmental process of any economy to achieving high employment, sustainable economic growth, price stability, long-viability of the balance of payment and external equilibrium (Jhigan, 2006, Gbosi, 2008, Phillips, 1997, Tombofa, 1999, Agiobenebo, 2003, Brennan and Buchanan, 1980). The growth and development of the Nigerian economy has not been stable over the years as a result, the economy of the country has witnessed numerous shocks and disturbances following the negative impact of the decline in global crude prices on the nation's economy in recent times which (oil) is regarded as the main source of the Nigerian foreign exchange.

This global glut has not only exacerbated our economic crisis with its attendant adverse effects being noticed in government dwindling resources as state governments across the country were not left out of this incapacitation. This has made state governments unable to pay salary of their staff. Sharp reductions in budgetary allocation for operational capacities of most companies in the oil industry have forced many companies to re-negotiate contracts while some clients were being made to delay payments. The threats of workforce reduction by multinationals and the escalations of volatility amongst others are contributory factors to reckon with (Buhari, 2016).

The concept of investment has been defined differently by different economists. Investment is described as a capital formation or the acquisition or creation of resources to be used in production. Greater attention is focused on business investment in physical capital building, equipment and inventories in the capitalist economies. But investment is also an undertaking of the government, non-profit organizations and various households, and it further consists of the acquisition of human and non-tangible capital as well as physical capital (Coen and Eisher, 1992). Private investment refers to investment undertaken by private business owners for the purpose of generating profits (Kumo, 2006).

The following models of private investment are available in the theoretical literature: the flexible accelerator, the neo-classical investment model, the q theory of investment, the cash flow and the Post-Keynesian investment model. Apart from the theories above, another approach used in forecasting future levels of private investment is the 'time series/auto regressive models of investment'. The latter approach has become so popular because it does not take into account the economic theory *a priori* and uses the past levels of investment in forecasting the future period's investment levels.

The Accelerator Models of Investment

This investment model that dominated after the World War II was based around 'accelerator theory' and it is generally associated with Keynesian approach. Clark (1917) was the first who postulated the accelerator mechanism. He argues that businesses invest in response to growing demand for output and not on the level of output. Harrod (1936, 1939) also elaborated the ideas and argues that firms decide about investments after

looking at capital-output ratio and this is determined by the factors like technological conditions, the state of confidence and interest rates. Firms make decisions to maximise their output level and use the capital-output ratio to estimate the value of capital goods required to produce that increment to output. So the net investment (change in capital stock) is determined by the changes in output. This idea is the basis of the simple accelerator theories.

Keynesian approach towards investment is not clearly linked with accelerator theories because Keynes argues that 'factors such as expected future income from various investments and capital goods prices are important determinants of investment activity because these factors are key components of the marginal efficiency of capital'. About this link, Mathew (1959) explains that investment decisions are made by the entrepreneurs in response to profit expectations. Uncertainty constraints are also there and they have to prevent them from forming clear, quantifiable expectations of expected future profitability. So, observable quantity variable can be used such as output growth as proxy for future profitability.

Investment models are simple in nature and imply that investment activity is the process of adjustment towards a desired capital stock. It is one of the most important characteristics of the accelerator model that it is based on the assumption of fixed capital-output ratio (Baddeley, 2003). This model involves that fiscal and monetary policies in terms of wages, prices, taxes and interest rates have no direct effect on capital spending but may have only some indirect effects (Toit and Moolman, 2004). Accelerator models have two well-known versions i.e. The Naïve Accelerator Model and The Flexible Accelerator Model.

The Naïve Accelerator Model

The Naïve Accelerator model was originally developed by Chenery (1952). According to this model, investment is proportional to the changes in the level of output. The cost of finance does not enter into the model due to the assumption of fixed capital-output ratio. The basics behind the simple accelerator model imply that desired capital stock is a function of expected level of demand for output. Investors set the target to accumulate enough capital so that they could produce this expected output. Since expectations about future cannot be observed, current output can be used as proxy for output expectations. So, desired capital stock becomes a function of current demand for output. It follows that being change in capital stock, net investment is determined by changes in output (Baddeley, 2003). The implementation of this model seems hard to justify and hence unpopular due to restriction of instantaneous capital adjustment (Erdinc, 1997).

Flexible Accelerator Model

Due to the empirical shortcomings of the simple accelerator model, Goodwin (1948) and Chenery (1952) formulated the flexible accelerator model. Many studies related to investment and its determinants on developing countries used this model or its modification.

Neo-classical Model of Investment

The neo-classical theory of investment developed by Jorgenson (1963) is based on the profit maximization problem of a representative firm, which yields the optimal demand

equation for capital that is related negatively to the user cost of capital and positively to output. The fact that it takes time to plan, decide and install the new capital is introduced into both the flexible accelerator and the neoclassical theories of investment through an *ad hoc* specification of a delivery lag process usually represented by the partial adjustment mechanism, which yields an investment equation.

The neo-classical model addresses the drawback of the accelerator model, which assumes capital-output ratio to be fixed. By this act, it leaves no room for substitution possibilities amongst the factors of production of capital, labour and other inputs. However, Jorgenson's neoclassical model introduces the important theory that the role of input substitution is crucial and is a major factor in the economic theory of cost and production (Erdinc, 1997). The main feature of the neoclassical model of investment is its being explicitly based on the optimization behaviour of the firm that relates desired capital stock to interest rates, capital prices, output and tax policies.

The Cash Flow Model

This model emphasizes that internal cash flow is the most important source of funds for private firms. Availability of external funds is of second degree importance. This model is premised on the axiom that availability of internal funds is positively influenced by the present level of profits. The model builds on this axiom to assume that the optimal capital stock (K), depends on the realized or expected levels of profits rather than on the level of output as the accelerator model postulates.

Tobin's Q Model

The attempts to incorporate the cost of adjustment into the optimization problem of a representative firm gave rise to the q theory of investment which asserts that the profit maximizing firm makes investment decisions by comparing the increase in the *value* of the firm arising from the installation of a marginal unit of capital to its replacement *cost* (Erden, 2002). This model was developed by Tobin (1969). Tobin argued that an important determinant of investment is the relationship between the market value of a firm and the replacement cost of its physical assets, which is known as q.

Post-Keynesian Investment Model

The post-Keynesian investment theories (or rather Kaleckians) on the other hand, do largely build on the Cash-flow hypothesis by postulating that profitability is important in generating internal funds for investment and that external sources of finance would be more willing to lend to firms that already have some retained profits since retained funds would be an indication of how profitable the firm's investment projects can be. In which case, past profitability of a firm is equally important than just the expected profits as emphasized by the neoclassical theorists.

Theoretical Framework

The study adopts the post-Keynesian investment theory which hinges on the Cash-flow hypothesis by postulating that profitability is important in generating internal funds for investment and that external sources of finance would be more willing to lend to firms that already have some retained profits since retained funds would be an indication of how profitable the firm's investment projects can be. In which case, past profitability of a

firm is equally important than just the expected profits as emphasised by the neoclassical theorists. The Post-Keynesians is of the view that new investments can only come when the firm no longer has excess capacity otherwise firms will just make use of the excess capacity unless the output demand projections are beyond the available productive capacity.

Research Methodology

Method of data collection

The reliable data were sourced from the Central bank of Nigeria (CBN) Statistical Bulletin and the National Bureau of Statistics (NBS) covering 1980-2015. This model evaluated the impact of fiscal strategy on private investment in Nigeria. Private Investment (proxied by PINV) is the dependent variable while Tax income, Government expenditure, Employment rate, Consumption rate and Capital stock are independent variables.

Sample size

This study employed annual data on the tax income, government expenditure, employment rate, consumption rate and capital stock for Nigeria over the period 1980 to 2015.

Data Analysis Techniques

In order to measure the relationship between a dependent variable and independent variables in the short run regression analysis technique was employed to assess the long run effect of fiscal strategy on tax income, government expenditure, employment rate, consumption rate and capital stock in Nigeria. The paper uses a time series technique which is more appropriate for testing the temporal or lead-lag relationship between variables. In addition, time series technique addresses the problem of the stationarity of the variables which is not peculiar to the classical OLS regression technique.

Augmented Dickey-Fuller (ADF) test was also employed to test the non-stationarity of the variables. After examining the unit-root tests and the order of the VAR, the Johansen cointegration test which uses two tests to determine the number of cointegration vectors, namely, the Maximum Eigenvalue test and the Trace test were also applied. The Maximum Eigenvalue statistic tests confirms the null hypothesis of r cointegrating relations against the alternative of $r+1$ cointegrating relations. If the cointegration has been detected between series, we know that there exists a long-run equilibrium relationship between them. The Vector Error Correction Model (VECM) evaluates the direction of Granger causality both in the short and long run respectively.

Model Specification

$$PINV = f(T, GEX, EMPL, CONSM, K, U_t)$$

..... (1.0)

Put in linear form, the above model becomes:

$$PINV = a_0 + a_1T + a_2GEX + a_3EMPL_3 + a_4CONSM_4 + a_5K_5 + U_t.$$

..... (2.0)

Where:

- a_0 = Constant
- $PINV$ = Private investment
- T = Tax income
- GEX = Government expenditure
- $EMPL$ = Employment rate
- $CONSM$ = Consumption rate
- K = Capital stock

According to the Keynesian theory (1936), an increase in tax income will have contractionary effect of private investment, while an increase in government expenditure will have an expansionary effect on private investment. These conditions will in turn create employment opportunity for the citizens of the country and invariably enhance their consumption rates. Also, an increase income (proxied by K) enhances the rate of private investment in the economy.

Presentation and Analysis of Data

The data collected from different reliable sources like CBN Statistical Bulletin 2013 are analyzed below:

Table 1: The Impact of Fiscal Strategy on Private Investment

Dependent variable	Independent variable	Coefficient	Standard Error	T	P>/t/	[95% interval]	Conf.
logPINV	LogTAX	.3115709	.4418607	0.71	0.487	-.5984582 1.2216	
	LogGEX	-.6642058	.4575709	-1.45	0.159	-1.606591 .2781792	
	LogGREV	.813014	.2688193	3.02	0.006	.2593702 1.366658	
	logCONSM	.3988825	.04481849	0.89	0.382	-.5241717 1.321937	
	Constant	-4.846145	2.876332	1.68	0.104	-10.77006 1.077772	
R-square =0.9545		Adjusted R-square=0.9472		Root MSE =.45628		Prob>F =0.0000	F (5, 24) =93.23

Source: Author’s computation, (2016) through STATA 11

The result of the impact of fiscal strategy on private investment in Nigeria shows that 1% increase in TAX increases PINV by .31%; which reveals that there is a positive relationship between PINV and TAX. The result is significant, with (t-statistics = 0.71, P>/t/=0.487). Also, 1% increase in GEX increases PINV by 0.66%; this showed that

there is a positive relationship between GEX and PINV, thus, as GEX increases PINV also reduces. The result is significant (t-statistics = -1.45, $P > |t| = 0.159$). Also, 1% increase in GREV increases PINV by 0.81%; this indicated that there is also a negative effect of GREV on PINV. As GREV increases so do PINV. The result is significant with (t-statistics = 3.02, $P > |t| = 0.006$). 1% increase in CONSM increases PINV by 0.40%; this showed that there is a positive relationship between CONSM and PINV. The result is significant. As CONSM increases PINV also increases (t-statistics = 0.89, $P > |t| = 0.389$).

Given the R^2 which is the coefficient of determination as 0.9442 with high value of Adj. R^2 which is 95.72, it connotes therefore, that independent variables incorporated into this model were able to determine the impact of fiscal strategy on private investment to the tune of 95%, significantly confirmed by probability of F which is 0.0000.

Table 2 Error Correction Model

Equation	Parms	RMSE	R-sq	Chi2	P>chi2
PINV	9	1.95973	0.9896	2660.733	0.0000
TAX	9	25.6133	0.9799	1366.979	0.0000
GEX	9	89555	0.9959	6822.864	0.0000
CONSM	9	417.528	0.9972	10056.39	0.0000
Det (Sigma_ml) =9.20e+26		Log likelihood =-725.5245	AIC =54.39461	HQIC =54.91824	SBIC =56.10744

Source: Author's computation, (2016) through STATA 11

The result contains information about the sample, the fit of each equation, and overall model fit statistics. The first estimation table contains the estimates of the short-run parameters, along with their standard errors, z statistics, and confidence intervals. The three coefficients on L. cel1 are the parameters in the adjustment matrix _ for this model. The second estimation table contains the estimated parameters of the Cointegrating vector for this model, along with their standard errors, z statistics, and confidence intervals.

According to Johansen normalization restriction imposed table, 1% increase in TAX increases PINV by 98% in the long run; this indicated that there is positive relationship between TAX and PINV. Similarly, 1% increase in GEX, increases CONSM by .99% in the long run, this revealed that there is a positive relationship between GEX and CONSM in the long run. Coefficient is statistically significant confirmed by $P > |z|$ which was 0.000. Overall, the output indicates that the model fitted well. The coefficient on CONSM in the cointegrating equation is statistically significant.

Table 3: Johansen Cointegration Test

Rank	Eigen value	Parms	LL	Trace statistic	5% critical value	1% critical value
0	-	36	-699.31055	118.4772	47.21	54.46
1	0.92411	43	-664.50068	48.8574	29.68	35.65
2	0.73770	48	-646.43404	48.8574	15.41	20.04
3	0.21604	51	-643.14818	12.7242	3.76	6.65
4	0.20377	52	-640.07196	6.1524*1*5	-	-

Source: Author's computation, (2016) through STATA 11

The result in the table above shows information about the sample, the trend specification, and the number of lags included in the model. The main table contains a separate row for each possible value of r , the number of cointegrating equations. When $r = 3$, all three variables in this model were non-stationary. In this study, because the trace statistic at $r = 0$ of 699.31055 exceeded its critical value of 47.46, the null hypothesis of no cointegrating equations are rejected. Similarly, because the trace statistic at $r = 1$ of 664.50068 exceeded its critical value of 48.8574, the null hypothesis that there is one or fewer cointegrating equation is also rejected.

In contrast, because the trace statistic at $r = 2$ of 646.43404 was less than its critical value of 48.8574, the null hypothesis that there are two or fewer cointegrating equations cannot be rejected. Because Johansen's method for estimating r is to accept as r^{\wedge} the first r for which the null hypothesis is not rejected, the study accepted $r = 2$ as the estimate of the number of cointegrating equations between these three variables. The "*" by the trace statistic at $r = 2$ indicates that this is the value of r selected by Johansen's multiple-trace test procedure. The Eigen value shown in the last line of output computed the trace statistic in the preceding line.

Table 4: Granger Causality Wald Test

Equation Excluded	Chi2 Prob>chi2	Df	Decision
Pinv Tax	1.1182 2	0.572	PINV does not granger-cause TAX
PinvGex	28.951 2	0.000	PINV granger-cause GEX
PinvConsm	7.2895 2	0.026	PINV does not granger-cause CONSM
Pinv ALL	46.97 2	0.000	ALL jointly granger-cause PINV
Tax Pinv	2.3765 2	0.305	TAX does not granger-cause PINV
Tax Gex	13.793 2	0.001	GEX granger-cause TAX
Tax Consm	5.8312 2	0.054	TAX does not granger-cause CONSM
Tax ALL	48.514 6	0.000	ALL jointly granger-cause TAX
GexPinv	6.1133 2	0.047	GEX does not granger-cause PINV
Gex Tax	12.551 2	0.002	GEX granger-cause TAX
GexConsm	35.862 2	0.000	GEX does not granger-cause CONSM
Gex ALL	57.194 6	0.000	ALL jointly granger-cause GDP
ConsmPinv	52.352 2	0.000	CONSM does not granger-cause PINV
Consm Tax	.59348 2	0.743	TAX granger-cause CONSM
ConsmGex	23.018 2	0.000	GEX does not granger-cause CONSM
Consm ALL	105.85 8	0.000	ALL jointly granger-cause CONSM

Source: Author's computation, (2016) through STATA 11

The table above shows the Granger causality Wald Test information about the sample, the trend specification, and the number of lags included in the model. The main table contains a separate row for each possible value of r , the number of cointegrating equations. When $r = 3$, all three variables in this model are non-stationary. In this study, because the trace statistic at $r = 0$ of 699.31055 exceeded its critical value of 47.46, the null hypothesis of no cointegrating equations are rejected. Similarly, because the trace statistic at $r = 1$ of 664.50068 exceeded its critical value of 48.8574, the null hypothesis that there is one or fewer cointegrating equation is also rejected.

In contrast, because the trace statistic at $r = 2$ of 646.43404 is less than its critical value of 48.8574, the null hypothesis that there are two or fewer co-integrating equations cannot be rejected. Because Johansen's method for estimating r was to accept as r^{\wedge} the first r for which the null hypothesis is not rejected, the study accepted $r = 2$ as the estimate of the number of co-integrating equations between these three variables. The "*" by the trace statistic at $r = 2$ indicates that this is the value of r selected by Johansen's multiple-trace test procedure. The Eigen value shown in the last line of output computed the trace statistic in the preceding line.

Testing for the granger causality, the first is a Wald test that the coefficients on the two lags of PINV that appeared in the equation for TAX are jointly zero. The null hypothesis that PINV does not granger-cause TAX cannot be rejected because $\text{Prob} > \chi^2$ is 0.572 which is less than 0.1 significant level, therefore PINV does not granger-cause TAX. Contrarily, the null hypothesis that the coefficients on the two lags of GEX in the equation for PINV are jointly zero cannot be accepted because $\text{Prob} > \chi^2$ is 0.305 which is greater than 0.1 significant level. So, the hypothesis that PINV does not granger cause TAX cannot be accepted, therefore PINV granger caused TAX.

Similarly, the null hypothesis that CONSM does not granger-cause GEX cannot be rejected because $\text{Prob} > \chi^2$ is 0.000 which is less than 0.1 significant level; therefore, CONSM does not granger-cause GEX. The null hypothesis that CONSM does not granger-cause GEX cannot be rejected because $\text{Prob} > \chi^2$ is 0.000 which is less than 0.1 significant level; therefore, CONSM does not granger-cause GEX. The last test is in respect to the null hypothesis that the coefficients on the two lags of all the other endogenous variables were jointly zero cannot be accepted in the sense that $\text{Prob} > \chi^2$ is 0.000 is less than 0.1 level significant level, therefore, CONSM, TAX, and GEX were jointly granger-caused PINV.

Similarly, the results of the impact of fiscal strategy on private investment indicated that 1% increase in TAX increases PINV by 0.31%; this showed that there is a positive relationship between PINV and TAX. The result is significant, as TAX increases PINV also increases with (t-statistics = 0.71, $P > /t = 0.487$). Also, 1% increase in GEX reduces PINV by 0.66%; this showed that there is a negative relationship between GEX and PINV, thus, as GEX increases PINV also reduces. The result is insignificant (t-statistics = -1.45, $P > /t = 0.159$). Also, 1% increase in GREV increases PINV by 0.81%; this indicated that there is also a positive relationship between GDP and GREV. As GREV increases so does PINV. The result is significant with (t-statistics = 3.02, $P > /t = 0.006$). 1% increase in CONSM increases PINV by 0.40%; this shows that there is a positive relationship between CONSM and PINV. The result is significant. As CONSM increases PINV also increases (t-statistics = 0.89, $P > /t = 0.389$).

The results of the Granger Causality showed that the coefficients on the two lags of PINV that appeared in the equation for TAX are jointly zero. The null hypothesis that PINV does not granger-cause TAX and cannot be rejected because $\text{Prob} > \chi^2$ is 0.572 which is less than 0.1 significant level, therefore PINV does not granger-cause TAX. Similarly, the null hypothesis that the coefficients on the two lags of GEX in the equation for PINV are jointly zero cannot be accepted because $\text{Prob} > \chi^2$ is 0.305 which is greater than 0.1 significant level. So the hypothesis that PINV does not granger cause TAX cannot be accepted, therefore PINV granger caused TAX.

Conversely, the null hypothesis that CONSM does not granger-cause GEX cannot be rejected because $\text{Prob} > \chi^2$ is 0.000 which is less than 0.1 significant level; therefore, CONSM does not granger-cause GEX. The null hypothesis that CONSM does not granger-cause GEX cannot be rejected because $\text{Prob} > \chi^2$ is 0.000 which is less than 0.1 significant level; therefore, CONSM does not granger-cause GEX. The last test is in respect to the null hypothesis that the coefficients on the two lags of all the other endogenous variables are jointly zero cannot be accepted in the sense that $\text{Prob} > \chi^2$ is 0.000 is less than 0.1 level significant level, therefore, CONSM, TAX, and GEX are jointly granger-caused PINV.

Recommendations

Based on the research findings and conclusion, the paper presents the following recommendations: that the Nigeria government should formulate and implement viable fiscal strategy that will stabilize the economy through the practice of true fiscal federalism and that the government should be consistency in macro-economic policies implementation in the non-oil sectors of the economy by providing incentives to foreigners (especially tax holidays) wishing to invest in other sectors of the economy and that the Nigeria government should take supplementary reforms that will improve the country's poor investment climate, (for instance: poor infrastructural facilities like power shortage, poor transport and telecommunication connectivity of business locations), which promotes private sector development, in supportive of entrepreneurial endeavor and with a bias towards expansion of business activities.

Summary and Conclusion

This study examined the effects of fiscal strategy on private investment in Nigeria. It also looked at the direction of causality among tax, government expenditure and consumption with the use of the Johansen Cointegration model and the Granger Causality tests using data spanning the period 35 years (1980-2015). Findings also showed 1% increase in TAX increases PINV by 0.31%; this indicated that there is a positive relationship between PINV and TAX. The result is significant, with (t-statistics = 0.71, $P > /t = 0.487$). Also, 1% increase in GEX increases PINV by 0.66%; this showed that there is a positive relationship between GEX and PINV, thus, as GEX increases PINV also reduces. The result is significant (t-statistics = -1.45, $P > /t = 0.159$). Also, 1% increase in GREV increases PINV by 0.81%; this indicated that there is also a positive relationship between GDP and GREV. As GREV increases so do PINV. The result is significant with (t-statistics = 3.02, $P > /t = 0.006$). 1% increase in CONSM increases PINV by 0.40%; this showed that there is a positive relationship between CONSM and PINV. The result is significant. As CONSM increases PINV also increases (t-statistics = 0.89, $P > /t = 0.389$).

Premised on the findings of the paper both from the descriptive and econometric results, the paper concludes that a mild long run equilibrium relationship exists between fiscal strategy variables and private investment in Nigeria. The implication of the long run relationship is that fiscal strategy will always be instrumental to stimulate private investment in Nigeria, since a strong private sector is an important engine for stimulating economic growth. Thus, the greater the share of private investment in the Gross Domestic Product of a country, the higher the average growth rate of the economy. This will engender the creation of more employment opportunities, higher output and good standard of living of people. Attainment of higher growth through private investment depends among other factors on the past policy of the country towards the sector. Thus, the fiscal strategy in the country has greater influence on the social welfare of the populace.

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