

Domestic Investment and Economic Growth in Nigeria, 1980-2020

Prof. Nnamocha, P. N.¹, Anyanwu, Austin C. (PhD)²

¹*Professor of Economics, Dept. of Economics, Imo State University, Owerri, Nigeria*

²*Dept of Economics, Imo State University, Owerri, Nigeria*

Abstract: The study examined domestic investment and economic growth in Nigeria for the period 1980 to 2020. The dependent variable was real GDP while the independent variables include corporate domestic private investment (proxied by banking sector lending to private sector), public sector investment (proxied by government capital investment expenditure) and domestic portfolio investment. The data were sourced from the Central Bank of Nigeria Statistical Bulletin and analyzed using the Ordinary Least Square Multiple regression analysis technique. The result showed that corporate domestic private investment had positive and significant effect on Nigeria's economic growth while public sector investment (government capital expenditure) had significantly negative relationship with economic growth in Nigeria and domestic portfolio investment had an insignificant negative relationship with economic growth in Nigeria. The conclusion drawn from that the private sector domestic investment outperformed that of the public sector and that domestic portfolio investment was negative in relation to economic growth. The study recommended that government should intensify its capital expenditure especially to the real sector as this will help to improve domestic investment especially by the public sector. Equally, government should intensify efforts to further encourage the private sector through enacting favorable policies and giving the private sector enough support through public-private partnership programmes in order to enhance their domestic investments.

Key Words: Corporate Domestic Private investment, Economic Growth, Government Capital Expenditure, Public sector investment

I. INTRODUCTION

In recent years, there has been mounting debate about the importance of domestic corporate investment to economic growth and development especially in developing economies. Development in the World economies has shown that a country's economic performance over time is determined to a large extent by its internal/domestic corporate investment policies and resources (i.e. government policies and private sector decision). It is accepted generally that long-term economic growth of a country will lead to a remarkable improvement in the standard of living of its citizens. A reduction in the widespread poverty which is a major feature of the Nigeria economy can be achieved through a sustained increase in domestic corporate investment. A closer watch at the pattern of domestic corporate investment in Nigeria is imperative in order to be able to achieve sustained growth.

Over the years, the Nigerian economy has gone through periods of economic and political instability, which have

hindered domestic corporate investment in the country. The stability of a country's socio-economic and political system reflects the soundness of its level of domestic environment and this is seen as a major factor in decision-making by investors. The role of domestic resources in growth has been a central debate among global policy makers in recent years. The major stumbling block to the implementation of many macroeconomic policies in the developing and low income economies has been the absence of the internal stability and political 'will' inbred within the leadership structure and institutions. The extent to which a country's domestic resources can impact on the socioeconomic environment and productive capacity cannot be underestimated (Globerman & Shapiro, 2002). The concept of domestic environment as used in this study comprises traditions and institutions through which the authority of a country is being exercised (WGI, 2008). This includes the effectiveness of government in providing enabling environment for investors and the critical role of the private sector to key-into the existing socio-economic environment provided by the government with the aim of stimulating growth and development.

These elements of government and the private sector will affect the investment decisions of firms directly and economic growth at large. This study, however, augments the existing literature on the determinants of domestic corporate investment within the context of the Nigerian economy. It investigates the important role of domestic corporate investment/resources in explaining long term economic growth in Nigeria. It has become an acceptable fact that investment is a major factor determining the level of economic activities in an economy. The higher the level of investment the higher the ability of the economy to produce more goods and services (grow), and improve income. Economists over the years have been interested in looking at the relationship between a change in investment and that of output level. For instance Chenery and Sprout (1966) established a positive relationship between investment and economic growth, using investment-income ratios as independent variable. Also Iyoha (1998), using the same parameters and data from 1970-94 found that a 10 percent rise in investment-income ratio will trigger a 3 percent increase in per capita gross national product (GNP) in the short-run. He also found that in the long run, a 10 percent increase in the investment-income ratio will induce a 26 percent increase in per capita GNP. He therefore concludes that per capita GNP is highly investment elastic in Nigeria.

With a population of about 140 million people as at 2006, vast mineral resources, and favourable climatic and vegetation features, Nigeria has the largest domestic market in Sub-Saharan Africa. The domestic market is huge and potentially attractive to foreign investment, as evidenced by over N1.0 trillion portfolio investment inflow into Nigeria Stock Exchange (NSE) in 2003 (CBN 2003). However, the investment outcome has not been encouraging, which was a reflection of the poor operating environment largely due to inappropriate policy initiatives. Except for some years before the introduction of the Structural Adjustment Programme (SAP) in 1986, gross capital formation as a proportion of the GDP was significantly low on annual basis. From CBN statistics it can be observed that aggregate investment expenditure as a share of GDP grew from 16.9 in 1970 to a peak of 29.7m in 1979 before declining to an all-time low of 7.7percent in 1985. Thereafter the highest was 11.75percent of GDP in 1990, before declining to 9.3 recent in 1994.

Beginning from 1995, investment/GDP ratio declined significantly to 5.8 percent and increased marginally to 6.99 percent in 1997 and remained there about till 2001 when 6.95 percent was recorded. On the average, about four-fifth of the Nigeria's national output was consumed annually. In comparison with both slow and fast growing economies, Nigeria's investment ratio lags behind the required minimum level of an average of about 20.0 percent GDP annually that propelled the growth rate of most developed economies (World Bank, 1996). On the aggregate, national savings-investment gap was negative for about eighteen years between 1970 and 2008, indicating foreign capital supplements either in the form of equity, aid-in-grant or debit capital at both private and official levels.

Though growth in an economy cannot be attributed to only domestic resources since foreign capital also play critical role. However, it is necessary to examine the contribution of domestic corporate investment to economic growth since the future and drive of economy rely greatly on the internal environment. Hence the basic questions we intend to address in this study include: what is the level of economic growth in Nigeria? What is the level of public and private sector investments in Nigeria? Is the levels of government capital expenditure and private investment (banking sector lending to the private sector and acquisition of equity/shares in quoted companies) adequate to improve economic growth in Nigeria? These are some of the questions we wish to answer through empirical means in this study. Hence the variables considered in this study are: government capital expenditure, banking sector lending to the private sector, and domestic portfolio investment by Nigerians during the period under review.

Objectives of the Study

The overall objective of this study is to examine the impact of domestic investment on Nigeria's economic growth.

Specifically, the study intends to:

1. Examine the effect of Banking sector lending to private sector on economic growth of Nigeria
2. Ascertain the impact of government capital expenditure on economic growth of Nigeria
3. Assess the impact of domestic portfolio investment (DPI) on economic growth of Nigeria from

II. LITERATURE REVIEW

Conceptual Framework

Government Capital Expenditure

Government expenditures play important roles in the operation of economies of the world. They are expenses incurred by the government to maintain itself and provision of public goods, services and works needed to enhance or promote economic growth and improve the welfare of people in the society. Government (public) expenditures are generally aggregated into expenditures on internal securities, health, administration, education, defense, health, education, foreign affairs, etc and have both capital and recurrent components. Capital expenditure refers to the amount spent in the purchase of fixed (productive) assets that have useful life that extends beyond the accounting or fiscal year, and also expenditure incurred in the improvement of existing fixed assets such as buildings, machine and equipment, lands, roads, etc., as well as intangible assets.

Bhatia (2008) opined that government capital expenditure also known as public expenditure are the expenses which a government incurs for (i) the society and the economy (ii) its own maintenance, and (iii) assisting other countries. Broadly, public expenditure refers to expenditure incurred by local, state and national government agencies as distinct from those of private individuals. It is also made up of payments by the government for the goods and services acquired and for the works carried out in line with their respective laws, social security contributions, general borrowing expenditures, interest payments of domestic and foreign debts, financial and social transfers, payments resulting from the discounted sale of borrowing instruments, economic, donations and grants, and other expenditures. According to Nnamocha (2002), capital expenditure are expenditure incurred in:

- a) The initial starting up of the business
- b) The acquisition of fixed assets required for use in the business and not for resale.
- c) The change or improvement of assets in order to increase their profit earning capacity

Economic Growth

Economic growth is the increase in the market value of the goods and services produced by an economy over time after adjusting for inflation. It is conventionally measured as the percent rate of increase in real gross domestic product, or real GDP, usually in per capita terms (IMF, 2012). Economic growth can also be referred to as an increase in an economy's capacity to generate goods and services, compared from one period of time to another. It is usually measured in nominal or

real terms and the latter is when it has been adjusted for inflation. Put simply, economic growth is increase in aggregate productivity within an economy. Often, but not necessarily, aggregate gains in productivity agree with increased average marginal productivity. This implies that the average laborer in a given economy becomes more productive on the average. It is also possible to achieve aggregate economic growth without an increased average marginal productivity through extra immigration or higher birth rates (Investopedia, 2017).

Economic growth is distinguished from economic development. While economic growth is primarily the study of how countries can advance their economies, economic development is the process of prolonged and sustained increases in the real national income of a country accompanied by positive changes in the economic, technological, political and social structures of the economy; with the result that the real income per capita of the country increases over a long period of time subject to the stipulation that the rate of employment increases, the number of people below the poverty line does not increase and income distribution does not become more unequal and development does not become environmentally less sustainable. Whereas economic growth leads to economic development most often, it is noteworthy that a country's GDP does not include inherent development factors, such as freedom from oppression, environmental quality or leisure time. It then implies that economic growth is a necessary condition that must be attained before economic development can take place (Anyadike, 2016). Thus, capital formation through domestic investment is an important factor in economic growth, since countries that able to accumulate high level of investment tend to achieve faster rates of growth and development.

Economic growth can be generated in only a few ways. The first is the introduction of new or better economic resources. The discovery of gasoline fuel is a good example of this. Before the discovery of the gasoline, the economic value of petroleum was relatively low. After this discovery, gasoline became a better and more productive economic resource.

One other way to generate economic growth is to grow the labor force. All things being equal, more workers produce more economic goods and services. During the 19th century, part of the robust U.S. economic growth was as a result of high influx of cheap, productive immigrant labor.

Creating superior technology or other capital goods is the third way to generate economic growth. The rate of technical and capital growth is highly dependent on the rate of savings and investment, since savings and investment are needed to embark on research and development.

The last method is increased specialization. This means laborers become more skilled at their crafts, raising their productivity through trial and error or simply more practice. Savings, investment and specialization are the easily controlled methods and the most consistent.

Domestic Portfolio Investment

Domestic investment is the investment in your own country rather than abroad. Portfolio investment is defined as cross-national transactions and positions involving equity or debt securities, other than those included in direct investment or reserve assets.

Therefore, domestic portfolio investments are investments in the form of a group (portfolio) of assets, including transactions in equity securities, such as common stock, and debt securities, such as banknotes, bonds, and debentures (World Bank, 2014). Portfolio investments are passive investments, since they do not involve active management or control of the issuing company. Rather, the purpose of the domestic investment is solely financial gain, in contrast to foreign direct investment (FDI), which allows an investor to exercise a certain degree of managerial control over a company. For international transactions, equity investments where the owner holds less than 10% of a company's shares are classified as portfolio investments (IMF, 2014). These transactions are equally called "portfolio flows" and are included in the financial account of the balance of payments of a country.

A portfolio investment is a group of assets such as bonds, stocks, and cash equivalents. They are held directly by an investor or managed by financial professionals. In economics, foreign portfolio investment refers to the recording of funds into a country where foreigners deposit money in a country's bank or make purchases in the country's stock and bond markets, sometimes for speculation (O'Sullivan & Sheffrin, 2003). Domestic portfolio investments typically involve transactions in securities that are highly liquid, i.e. they can be bought and sold very quickly. A portfolio investment is an investment made by an investor who is not involved in the management of a company. This is unlike direct investment, which allows an investor to exercise a certain degree of managerial control over a company. Equity investments where the owner holds less than 10% of a company's shares are classified as portfolio investment. These transactions are equally referred to as "portfolio flows" and are entered in the financial account of the balance of payments of a country. According to the Institute of International Finance, portfolio flows arise through the transfer of ownership of securities from one country to another (O'Sullivan & Sheffrin, 2003).

Domestic Investment

Domestic investment is an investment made by residents or companies that conducts its affairs in its home country. A domestic corporation is usually taxed differently from a foreign corporation, and would be expected to pay duties or fees on the importation of their products. According to Investopedia (2016) a domestic resident or company usually is able to carry out business in other states or other parts of the country where it has filed its articles of incorporation. Foreign corporations are businesses which are incorporated in a different country from which they originate. Furthermore, domestic investment is an investment in the companies and

products of someone's own country rather than in those of foreign countries. The calculator of Domestic Investment computes the difference between National Savings and Net Capital Outflow. In macroeconomics, domestic Investment measures the physical investment used in computing GDP in the measurement of the economic activity of the country.

However, gross private domestic investment is the measure of physical investment used in computing GDP in the measurement of nations' economic activity. This is an important component of GDP because it provides a measure of the future economy's productive capacity and these includes replacement purchases plus net additions to capital assets and investments in inventories. From 2002-2011 it amounted to 14.9% of US GDP, and from 1945-2011 was 15.7% of GDP (BEA, USDC, 2013). Net investment is gross investment minus depreciation and it is by far the least stable of the four categories of GDP (investment, consumption, net exports, and government spending on goods and services).

Problems Confronting the Effective Performance of Domestic Investment in Nigeria

The Nigerian domestic investment market, like the national economy, has been facing many problems. Some of the problems include the following:

- i. Macroeconomic instability has continued to be a hindrance to the development of the domestic investment in Nigeria. Attracting sustainable durable investments in an economy is dependent on good macroeconomic policies that would ensure long term stability. Frequent reversals of policies have continued to hinder local investors from taking long lasting investment in the country and forced most of them to look for conducive investment market in other African countries. Lack of adequate co-ordination and harmonization of official and monetary policies are among the problems that have been hindering the progress of the market.
- ii. Loss of confidence in the banking system arising from distress and high interest rates discourage investors from patronizing the money market thereby passing through the parallel market (Nwankwo, 1980).
- iii. The poor state of public infrastructure, such as power, inadequate information technology, etc., which had to be provided adequately lead to higher operating cost and the high interest rate does not encourage the contract of business through the banking channels.
- iv. The nature of Nigerian economy having import dependent market is not ideal for an economy that aspires to grow. The reliance on oil alone has not allowed other critical sectors to be developed to enhance local investment which will drive economic growth of the economy and enable the market to perform optimally.
- v. Another problem facing the Nigerian domestic investment market is lack of efficient payment system. The too much use of cash in the economy over the

years has reduced the growth of the payment system. Irregular functioning of network gadgets owned by the market operators and hampered the current improvement that has been achieved through cashless policy.

Theoretical Framework

The Real Options Theory of Investment

Using options-based pricing techniques to study the investment decision of firms, the real option theory of investment interprets a firm as consisting of a portfolio of options. As argued by Chen and Funke (2003), investment opportunities can be viewed as "option-rights" such that each investment project can be assimilated, in its nature, into the purchase of a financial call option, where the investor pays a premium price in order to get the right to buy an asset for some title at a predetermined price (exercise price), and eventually different from the spot market price of the asset (strike price). Similarly, in making investment decisions, a firm pays a price (the cost of setting up the project) which gives it the right to use the capital (exercise price), now or in the future, in return for an asset worth a strike price. The key impact of this analysis is that the overall adoption of the rule of the net present value to the expected future cash flows of the firm will give substandard results (Chen and Funke, 2003). To avoid this suboptimal investment decision rule, it is important to consider the following three characteristics of the firm's investment decision: There is uncertainty about future payoffs from the investment; that investment does not entail a now-or-never decision; and that investment is at least partially irreversible.

As argued in the literature, the direct implication of the foregoing characteristics of fixed corporate investment for optimal investment decision making is that the opportunity cost of investment will necessarily include the value of the option to wait that is extinguished when an investment decision is taken (Abel and Eberly, 1994; Abel et al., 1996). Hence, Chen and Funke. (2003) argue that the investment decision is affected by the determinants of the value of the option; consequently, an appropriate identification of the optimal exercise strategies for real options plays an important role in the maximization of the value of the firm. The real options studied in the literature include, among others, operating options (McDonald and Siegel, 1985), the option to wait and undertake an investment later (McDonald and Siegel, 1986), and uncertainty from future interest rates (Ingersoll and Ross, 1992). Other contributions to the literature are Abel and Eberly (1994, 1997) and Abel et al. (1996). The general focus in the literature has been the effect of demand, price and/or exchange rate uncertainty upon investment decisions of firms. On the basis of the objective and focus of this study, we now review the relevant aspects of the real option theory to the macro-policy environment/uncertainty.

Harrod-Domar Growth Model

During The 1940s economists – Roy Harrod and Evsey Domar independently developed an economic growth model based on a fixed – coefficient, constant returns to scale functions (this function assumes that capital and labour are used in a constant ratio to each other to find out total output). The model assumes that labour and capital are always used in a fixed proportion to produce equal amounts of output. The model's equation is $Y = Kkv$ where K is a constant found by dividing $(Y) - v$ is the capital-output ratio. This ratio is mainly a measure of the productivity of capital or investment. The Harrod – Domar model focuses on two critical aspects of the growth process: savings and the efficiency with which capital is utilized in investment. This model provides accurate short-term predictions of growth and has been used extensively in developing countries to determine the “required” level of investment or financing to be covered to achieve a target growth rate. The Harrod-Domar model is easy with relatively small data requirements and the equation is not difficult to use. However, the model only remains in equilibrium with full employment of both labour force and capital stock causing inaccurate longer-term economic predictions and fails to account for technological change and productivity gains that is regarded as important for long-term growth and development.

Neo-classical Growth model

Robert Solow presented a new model of economic growth that addressed limitations in Harrod-Domar model. He replaced the fixed – coefficients production function with a neoclassical production function. This model allowed for substitution between the factors of production so that the “relative endowments of capital and labour could be reflected (rather than the fixed ratios required by the Harrod-Domar model). The neoclassical production function has curved, rather than L shaped isoquants allowing for flexibility in using different combinations of capital and labour. Output can be expanded in one of three ways: (1) increases through fixed and equal portions of labour and capital; (2) increases in capital, or (3) increases in labour. The Solow Growth Model assumes a production function with the property of diminishing returns where each additional increment in capital per worker results in less output. However, change in technology is seen as increasing productivity. The neoclassical production function showed increasing technology or knowledge as labour augmenting and increasing output.

Solow assumes technology increases independent (exogenous) of the model in two forms: mechanical (improved machinery, computers, etc.) and human capital (improved education, health, worker's skills, etc.). Key determinants of growth are population growth and technical change and over time, poor and rich countries, incomes should converge.

Robert Solow also introduced a procedure known as “growth accounting” or sources of growth analysis”, to concentrate directly on the contribution of each term in the production

function. The objective was to determine what proportions of recorded economic growth could be attributed in capital stock, growth in the labour force, and changes in overall efficiency.

Using the formula:

$$Y = AF(K, L) \dots\dots\dots (2.1)$$

where Y is output, K is capital, L is labour, and A is parameter to capture the effects of things other than capital stock and labour supply which might affect growth (increasing technology, education, health institutions, worker skill levels, etc.). “ A ” is generally referred to total factor productivity (TFP). A captures not only efficiency gains as well as the net effect of errors and omissions from economic data. The residual “ A ” is sometimes referred to as a measure of our ignorance about the growth process.

When Solow modeled data for US GNP from 1909 to 1949 of increased output less than one half of the gain could be explained by increased inputs in labour and capital. With more than fifty percent of growth attributable to the residual. Logic would dictate that there must be a significant factor(s) (technical change, increased knowledge, innovation, entrepreneurship, etc.) but the problem lies in actually identifying the factors affecting increased productivity.

Empirical Literature Review

Ewubare and Worlu (2020) investigated the Effect of Domestic Investment on Economic Growth in Nigeria (1990-2017) using ordinary least square technique (OLS) technique. The results from the study revealed that neither domestic investment in the manufacturing sector, domestic investment in the service sector or domestic investment in the agricultural sector impacted significantly on economic growth (indexed by GDP growth rate. The study recommended the government should improve on the ease of doing business in Nigeria so as to increase the volume of investment and make it growth-oriented and also provide a lasting solution to the prevailing farmers'/herdsmen clashes so as to encourage substantial investment in the sector.

Oyedokun and Ajose (2018) using ordinary least square technique (OLS) carried out a study on ‘Domestic Investment and Economy Growth in Nigeria: An Empirical Investigation’ from 1980 to 2016. The study revealed that domestic investment positively influences real gross domestic product and recommends that government should create enabling an environment for domestic investment to rise through the adoption of macroeconomic policies which will enhance investment opportunities in the Nigerian economy. The study of Amanja & Morrissey (2006) examined the determinants of growth in Kenya during the period (1964 – 2002). In the study, growth which was proxied by per capita GDP was the dependent variable while the independent variables are: investment; foreign aid and economic openness level. The results from the study revealed that investment had a strong impact on growth in Kenya, including the impact of openness level. The Study by Mallick (2002) investigated the effects of long term growth in India during the period (1950 – 1995),

and used neo-classical model with endogenous growth. Economic growth is measured in terms of GDP. The findings of this study revealed that there is a direct relationship between real public investment expenditure and growth, while private investment has an indirect effect. Alabdeli (2005) examined the impact of some economic variables (exports, investment) on economic growth in 21 developing countries. The study used time – series during the period (1960 – 2001), and concluded that domestic investment has a positive significant relationship with economic growth.

Adekunle and Aderemi (2012) carried out a study on the relationship between Domestic Investment, Capital Formation and Population Growth in Nigeria. They used secondary data from Central Bank of Nigeria, for capacity utilization, capital expenditure, bank credit and capital formation while growth and investment rates from World Economic Information data base were used. Their result shows that the rate of investment does not assist the rate of growth of per capita GDP in Nigeria. The estimation result confirms the existence of growth but is found to be insignificant. The linear result reveals the importance of government expenditure, capacity utilization and bank credit in increasing the income of Nigerians. The results show also that there is negative relationship between growth rates of the population and capital formation. With the curve estimation method results, investment rate can engender growth in the economy though slowly, on a linear path.

Knoop (1999) using time series data from 1970 to 1995 found that a reduction in the size of the government expenditure would have an adverse impact on economic growth and welfare. Estimate obtained by Folster and Hemrekson (2001) when conducting a panel study on a sample of rich countries over the period 1970-1995 lent support to the notion that large public expenditures affect growth negatively. Ghura (1995) in another empirical study, using pooled time-series and cross-section data for 33 countries in Sub-Saharan Africa for the period 1970-1990 produced evidence that shows that government consumption is negatively related to economic growth. In that study the sample countries were classified into four groups: high-growth countries with growth rates above 2.0%; medium-to-low- growth countries, with growth between 0% and 1.9%; weak-growth countries, with growth between -1.0% and -0.1%; and very-weak-growth countries, with growth below -0.9%. It was revealed in the study that higher growth countries experienced higher investment ratios, higher export volume growth, higher life expectancy at birth, lower inflation rates, and lower standard deviations of inflation did not necessarily mean better terms of trade outcome.

In a cross section study of 98 countries for a period spanning from 1960 to 1985, Barro (1991) using average annual growth rates in real per capita GDP and the ratio of real government consumption to real GDP found a negative and significant relationship between economic growth and government consumption. The study also indicated that there was a positive relationship between growth rates and measures of

political stability and inversely related to a proxy for market distortions. Jong-Wha Lee (1995) also discovered further evidence on the relationship between government consumption and economic growth. Using an endogenous growth model of an open economy, it was revealed that government consumption of economic output was associated with slower growth. Furthermore, the composition of investment and the volume of total capital accumulation were found to significantly affect economic growth.

Gusth (1997) in a study on the effects of government size on the rate of economic growth conducted OLS estimation, using time-series data over the period 1960-1985 for 59 middle-income developing countries. The results revealed that growth in government size has negative effects on economic growth, but the negative effects are three times as great in no democratic socialist systems as in democratic market systems. Also, in a study for the Greek economy, after disaggregating government spending, Alexiou (2007) found evidence that there is a positive relationship between the growth in the components of government spending and GDP growth. Aschauer (1990) also revealed that government spending and the level of output has a positive and significant relationship.

Easterly and Rebelo (1993) found out that public capital expenditure had an inverse, as well as statistically significant relationship with economic growth, transport and communication. In terms of categorization, Gbosi (2005) categorized government expenditure into productive and protective expenditure; the productive expenditure is made up of government spending on economic, social and community services, whereas the protective expenditure is made up of government expenditure on administration and transfers.

Nasiru (2012) investigated the nexus between government expenditure (both capital and recurrent) and economic growth in Nigeria from 1961-2010. The estimation results revealed long-run relationship does not exist between government expenditure and economic growth in Nigeria when real GDP is used only as the dependent variable. Also, the causality results revealed that government capital expenditure granger causes economic growth while there was no causal relationship between government recurrent expenditure and economic growth. Thus, the policy implication of this result is that any decrease in capital expenditure would have negative effects on economic growth in Nigeria.

Nenbee and Medee (2011) used the arcane approach of vector auto regression and error correction model in their study and discovered that the response of GDP to standard improvements in federal government expenditure (FGE) in Nigeria is negative in the short-run. This means that FGE does not affect the GDP in the long-run. Taiwo and Abayomi (2011) using the Ordinary Least Square (OLS) technique carried out a study on the trends and impact of government spending on growth rates of real GDP in Nigeria from 1970-2008. The results showed that a direct relationship existed between real GDP, recurrent and capital expenditure of government. They recommended that government should

encourage efficient distribution of development resources by emphasizing on private sector participation as well as commercialization privatization.

Orji (2012) examined the effect of bank savings and bank credits on Nigeria’s economic growth from 1970- 2006 using two models: Distributed Lag-Error Correction Model (DL-ECM) and Distributed Model. The result showed that a direct relationship exists between the lagged values of total private savings, private sector credit, public sector credit, and economic growth. Thus, he recommended among others, that government’s effort should be directed towards increasing income per capita by decreasing the rate of unemployment in the country in an attempt to increase growth through improved savings and private investment.

Ghazali (2010) discovered that a causal relationship existed between private domestic investment and economic growth (GDP) in Pakistan over the period 1981 to 2008. His study revealed the following: That a bi-directional causality relationship existed between private domestic investment and economic growth; increased economic growth encourages huge private domestic investment, and vice versa. The cointegration results from his study show that there is a long run relationship between private domestic investment and economic growth. From the result, it is evident that private domestic investment in Pakistan increases economic growth.

III. METHODOLOGY

The methodology adopted in this study is the *ex-post-facto* design. The study used the econometric method of Ordinary Least Square regression (OLS) in analyzing the secondary data. The Ordinary Least Square regression seeks to understand and explain economic process by identifying possible relationship between variables. By way of modification of the specification of Ghazali (2010), we adopt real gross domestic product as a proxy for measuring economic growth and include government capital expenditure in addition to banking sector lending to the private sector (as proxy for domestic corporate domestic private investment) and domestic portfolio investment as the explanatory variables. Based on the theoretical relationship between the dependent and explanatory variables, the study specifies an economic growth model that incorporate the following variables:

$$RGDP = f(BLPS, GCE, DPI) \dots\dots\dots(i)$$

Thus, to solve the problem of instability and multicollinearity, the study assumed a linear growth model. This is because, the model will help to give a uniform scale and reduce the problems associated with time series data stated above.

Mathematically, we transform the Model thus:

$$Log RGDP = a_0 + a_1Log (BLPS) + a_2 Log (GCE) + a_3log (DPI) \dots\dots (ii)$$

We include the stochastic variable and transform the model into an econometric model as follow:

$$RGDP = a_0 + a_1BLPS + a_2GCE + a_3DPI + U_t \dots\dots\dots(iii)$$

Where:

- RGDP = Real Gross Domestic Product, proxy for economic growth (dependent variable)
- BLPs = Corporate domestic private investment (proxy by banking sector lending to private sector).
- GCE = Public sector investment (proxy by government capital investment expenditure).
- DPI = Domestic Portfolio Investment
- a₀ = autonomous component of economic growth
- a₁ = coefficient of Corporate Domestic Private Investment
- a₂ = coefficient of Public Sector Investment
- a₃ = coefficient of Domestic Portfolio Investment
- U_t = Error term

IV. DATA ANALYSIS

Unit Root Test – Since the variables are time series, we test for the presence of unit root in order to ascertain the order of stationarity of the variables and whether the statistical properties of the data are stable over the time period studied (Egbulonu, 2005). The test is summarized below:

Table 1: Summary of the Unit Root Test (p-values in parenthesis)

Variables	ADF test statistics @		Decision Rule	Order of integration
	Level	1 st difference		
Ln RGDP	-0.1396 (0.9377)	-3.5063 (0.0130)	Stationary at First Difference	I(1)
Ln BLPS	-0.8502 (0.7935)	-4.2240 (0.0019)	Stationary at First Difference	I(1)
Ln GCE	-0.4875 (0.8832)	-6.4571 (0.0000)	Stationary at First Difference	I(1)
Ln DPI	-1.0848 (0.7125)	-8.2707 (0.0000)	Stationary at First Difference	I(1)
Critical Values	1%	-3.6105		
	5%	-2.9389		
	10%	-2.6079		

Source: Extracted from Eviews Output

The unit root test was conducted for each of the variables as summarized in the Table 1 above. The probability values are shown in parenthesis and we can observe that all the variables became stationary after first differencing. The *p-values* at first difference are all less than the 0.05 critical value. Therefore, we conclude that real GDP (RGDP), bank loans to public sector (BLPS), government capital expenditure (GCE) and domestic portfolio investment (DPI) are all stationary at first difference and are said to be integrated of order one i.e. I(1). This justifies the test for long run relationship using the Johansen cointegration test.

Cointegration Test – The Johansen cointegration test uses both the Trace statistic and the maximum eigen statistic to

ascertain the long run properties of the variables. In the maximum eigenvalue test, the null hypothesis of $r = 0$ is tested against the alternate hypothesis of $r > 0$ and if the null is rejected, it implies that there is at least one cointegrating vector; otherwise, there is no cointegration in the system. The same rule applies in the Trace statistic. The test is summarized below:

Table 2: Summary of the Johansen Cointegration Test

Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None	0.481443	43.58264	47.85613	0.1190
At most 1	0.274404	17.97113	29.79707	0.5682
At most 2	0.107125	5.461428	15.49471	0.7580
At most 3	0.026374	1.042382	3.841466	0.3073
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None	0.481443	25.61151	27.58434	0.0875
At most 1	0.274404	12.50970	21.13162	0.4982
At most 2	0.107125	4.419046	14.26460	0.8127
At most 3	0.026374	1.042382	3.841466	0.3073
Trace test and Max-eigenvalue test indicate no cointegration at the 0.05 level				

Source: Extracted from Eviews Output (See Appendix)

The Table 2 above summarizes the Johansen cointegration test which was used to determine the long run relationship amongst the variables. The test indicates that there are no cointegrating equations at 5% level. Egbulonu (2018) asserts that for variables that are I (1) integrated but not cointegrated, it is most appropriate to estimate the model parameters in first difference using the Ordinary Least Square regression technique. The Maximum eigen test shows that we accept the null hypothesis of $r = 0$ and reject the alternate of $r > 1$.

Estimation of the OLS Model – The OLS model estimates are summarized in the Table 4 below:

Table 4: Summary of the Ordinary Least Square Regression Estimates

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	9.241340	0.141803	65.17050	0.0000
LNBLPS	0.305580	0.018946	16.12864	0.0000
LNGCE	-0.111793	0.033796	-3.307913	0.0021
LNDPI	-0.031078	0.028188	-1.102558	0.2773
R-squared	0.977521	Mean dependent var		10.29908
Adjusted R-squared	0.975698	S.D. dependent var		0.584226
F-statistic	53.63155	Akaike info criterion		-1.861783
Prob(F-statistic)	0.000000	Durbin-Watson stat		1.604639

Source: Extracted from Eviews Output (See Appendix)

The Table 4 above reveals that bank lending to the private sector increased Nigeria’s real GDP by 0.3056 units for the period studied. This shows that for every unit increase in bank lending to the private sector, the Nigerian economy grows by 0.3056 units annually. The probability value of 0.0000 shows that the increase was significant.

However, government capital expenditure (GCE) and domestic portfolio investment (DPI) both decreased Nigeria’s real GDP by 0.1118 and 0.0311 units respectively. This is an inverse relationship and it entails that for every unit change in government capital expenditure and domestic portfolio investment, the Nigerian economy shrinks by 0.1118 and 0.0311 units respectively. The probability values of 0.0021 and 0.2772 is an indication that the decrease in real GDP occasioned by change in capital expenditure was very significant while domestic portfolio investment was not significant.

The intercept value of 9.2413 means that holding the explanatory variables constant at zero, the Nigerian economy (represented by RGDP) grows by 9.2413 units, all things being equal.

Furthermore, the adjusted R-square gauges the robustness of the model and explains the degree of fitness of the model. It is estimated at 0.9757 meaning that the domestic investment variables explains up to 97.57 of the changes in real GDP over the period studied. This is a very good fit and confirms the predictive quality of our model.

As a way of checking for possible violations of the economic classical assumptions, we confirm the presence or absence of Autocorrelation by checking the Durbin Watson (DW) Statistic. The value is 1.605 which means that there is negative Autocorrelation in the model. This is based on the rule of thumb which states that if the DW value tends towards 2 than to 0, then we conclude that there is negative autocorrelation.

Looking at the F-statistic (53.63), we can confirm that the domestic investment variables (bank loans to private sector, government capital expenditure and domestic portfolio investment) have significant joint effect on the growth of the Nigerian economy. The *p-value* of 0.0000 confirms the joint significant effect of the variables.

4.1 Discussion of Findings

The study set out to achieve the main objective of determining the effect of domestic investment on the growth of the Nigerian economy. The domestic investment variables used in the model were corporate domestic private investment (proxied by bank loans to private sector), public sector investment (proxied by government capital expenditure) and domestic portfolio investment. These variables were regressed on real gross domestic product as a measure of growth in the economy.

The findings revealed that corporate domestic private investment grew Nigeria’s economy significantly by 0.3056.

The implication of this is that the private sector has grown the economy more through the various investments engaged by the sector within the local economy. Domestic investment which can be carried out by either the public or private sector is seen here to be tilted towards the private sector. For the public sector investments (proxied by government capital expenditure), the coefficient is negative decreasing RGDP significantly by 0.1118. This very interesting finding shows that the private sector domestic investments have significantly grown the economy more than the public sector.

The negative effect of public investment on growth supports the finding of Ewubare and Worlu (2020) where they posited that neither domestic investment in the manufacturing sector, domestic investment in the service sector or domestic investment in the agricultural sector impacted significantly on economic growth. However, Oyedokun and Ajose (2018) found positive effect of domestic investment on growth. Another study by Adekunle and Aderemi (2012) and Nenbee and Medee (2011) found that the rate of investment does not assist the rate of growth of per capita GDP in Nigeria. One major significant feature of the previous studies is their preference for public domestic investment. Our finding corroborates most of the previous findings that domestic investment retards growth while private investment grows the economy.

Domestic portfolio investment significantly decreased growth by 0.0311 units meaning that Nigeria's RGDP shrinks by 0.0311 units for every unit change in domestic portfolio investment. This may be adduced to the low rate of investment in domestic portfolios. The study found a joint significant effect of the variables on economic growth accounting for up to 97.57% of the changes witnessed in the economy.

V. CONCLUSION AND RECOMMENDATIONS

Evidently, domestic investment is aimed at growing the economy. Both the private and public sector play key roles in this aspect. Having made very insightful findings, the study concludes that domestic investment has significantly improved the Nigerian economy. Specifically, corporate domestic private investment has shown to have more significant effect on Nigeria's economic growth than public domestic investment. Both government capital expenditure and domestic portfolio investment had significantly negative relationship with economic growth in Nigeria. The study therefore recommends that:

- Efforts should be made by the government to intensify its capital expenditure especially to the real sector as this will help to improve domestic investment especially by the public sector.
- As a follow up to the above recommendation, capital expenditure should be traced and appropriately disbursed and utilized to avoid a scenario where data evidence shows huge capital investment but the effect is not being felt.

- Domestic portfolio investment should be encouraged by easing the many restrictions on trade in the Nigerian capital market. Also, foreign portfolio investors should be given every opportunity to make seamless transactions from any part of the world.
- Since corporate domestic private investment increases growth, government should intensify efforts to further encourage the private sector through enacting favorable policies and giving the private sector enough support through public-private partnership programmes in order to enhance their domestic investments.

5.1 Contribution to Knowledge

This study has further widened the scope of the nexus between domestic investment and economic growth in Nigeria through the modeling of OLS relationship between Real GDP, domestic corporate investment and domestic portfolio investment. Therefore, future researchers can utilize the findings made here as a theoretical basis in their research. Again, the inclusion of bank lending to the private sector as proxy for domestic corporate investment in model is a positive contribution to knowledge as previous studies utilized just domestic investment in the manufacturing sector, service sector, agricultural sector, etc. in their analysis of domestic investment-economic-growth nexus. Also, there is a time lag in the study of domestic investment and economic growth as the previous studies reviewed stopped at 2018 thereby requiring an update. This article extended the scope to 2020 to reflect the present-day domestic investment profile of Nigeria.

5.2 Suggestions for Further Studies

Future researchers should disaggregate domestic investment into corporate domestic investment and private domestic investment to explore their nexus with economic growth Nigeria. Furthermore, the researchers can also explore on the relationship between domestic investment and economic growth in some sub-Saharan Africa to confirm its contribution to economic growth in the sub region.

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