

## **Foreign Direct Investment (FDI) Flows in Nigeria: Pro or Economic Growth Averse?**

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**Abstract:** *This study investigates the empirical relationship between Foreign Direct Investment and economic growth in Nigeria. The work covered a period of 1981-2009 using an annual data from Central Bank of Nigeria statistical bulletin. A growth model via the Ordinary Least Square method was used to ascertain the relationship between FDI and economic growth in Nigeria. The study also added Gross Fixed Capital Formation with a view to capture the effect of domestic investment on the growth of the economy for the period under review. Interest Rate and exchange rate were also added as control variables in the model. Granger causality test was also employed to determine the direction of causality between FDI and economic growth in Nigeria. The result of the OLS techniques indicates that FDI has a positive and insignificant impact on the growth of Nigerian economy for the period under study. GFCF which was used as a proxy for domestic investment has a positive and significant impact on economic growth. Interest rate was found to be positive and insignificant while exchange rate positively and significantly affects the growth of Nigeria economy. Therefore, government should provide an enabling environment that will encourage foreign investors to invest in Nigeria economy by addressing the security challenges in the country, providing investment friendly environment by improved regulatory framework as well as encourage domestic investment.*

**Keywords:** *Causality, Challenges, Economic growth, Foreign Direct Investment, Prospects.*

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### **I. Introduction**

The underdeveloped nature of the Nigerian economy that essentially hindered the pace of her economic development has necessitated the demand for Foreign Direct Investment into the country. Aremu (1997), noted that Nigeria as one of the developing countries of the world, has adopted a number of measures aimed at accelerating growth and development in the domestic economy, one of which is attracting foreign direct investment (FDI) into the country. According to World Bank (1996), FDI is an investment made to acquire a lasting management interest (normally 10% of voting stock) in a firm or an enterprise operating in a country other than that of the investor defined according to residency. However, Foreign Direct Investment (FDI) is often seen as an important catalyst for economic growth in the developing countries because it affects the economic growth by stimulating domestic investment, increase in capital formation and also, facilitating the technology transfer in the host countries, (Falki, 2009). Khan (2007) asserts that Foreign Direct Investment (FDI) has emerged as the most important source of external resource flows to developing countries over the years and has become a significant part of capital formation in these countries, though their share in the global distribution of FDI continued to remain small or even declining. The role of Foreign Direct Investment (FDI) has been widely recognized as a growth-enhancing factor in the developing countries.

Falki (2009), speaking on the effects and advantages of FDI to the host economy, noted that the effects of FDI on the host economy are normally believed to be: increase in employment, augmenting the productivity, boost in exports and amplified pace of transfer of technology. The potential advantages of the FDI to the host economy are: it facilitates the utilization and exploitation of local raw materials, introduces modern techniques of management and marketing, eases the access to new technologies, foreign inflows can be used for financing current account deficits, finance inflows from FDI do not generate repayment of principal or interests (as opposed to external debt) and increases the stock of human capital via on-the-job training. The realization of the importance of FDI had informed the radical and pragmatic economic reforms introduced since the mid-1980s by the Nigerian government. Thereforms were designed to increase the attractiveness of Nigeria's investment opportunities and foster the growing confidence in the economy so as to encourage foreign investors to invest in the economy (Ojo, 1998).

According to Umah (2007), the reforms resulted in the adoption of liberal and market-oriented economic policies, the stimulation of increased private sector participation and elimination of bureaucratic obstacles which hinders private sector investments and long-term profitable business operations in Nigeria. This, for instance, is to encourage the existence of foreign Multinational and other private investors in some strategic sectors of the Nigeria economy like the oil industry, banking industry, communication industry, and others. Reacting to this, Shiro (2009) noted that since the enthronement of democracy in 1999, the government of

Nigeria has taken a number of measures necessary to woo foreign investors into Nigeria. These measures, he noted, include the repeal of laws that are inimical to foreign investment growth, promulgation of investment laws, various over sea trips for image laundry by the President among others. Continuing on this, Umah (2007) asserts that the Nigerian government has instituted various institutions, policies and laws aimed at encouraging foreign direct investment. For instance, in 1995, the Nigeria Investment Promotion Commission (NIPC) was established through Decree No 16 of 1995. The Law provides for a foreign investor to setup a business with 100% ownership which must be registered with the Corporate Affairs Commission (CAC) in accordance with the provisions of the Companies and Allied Matters Decree of 1990. The registration is finalized with the NIPC. To ensure adequate protection, the NIPC Decree guarantees foreign investments against Nationalization and expropriation by the government. The NIPC Decree repealed the Industrial Development Coordination Committee (IDCC) Decree No 36 of 1988 and the Nigeria Enterprise Promotion Decree (NEPD) of 1972 as amended in 1977 and 1989 which, hitherto, reserved for Nigerians the ownership of certain business. The operation of the Autonomous Foreign Exchange Market (AFEM) as provided for in the decree liberalized the FEM operation. The Decree replaced the Exchange control Act No 16 of 1962 in its entirety. Dunning (1994), however, noted that FDI is attracted to serve as a means of augmenting Nigeria's domestic resources in order to effectively carryout her development programmes and raise the standard of living of her people.

According to Bello (2003), privatization was also adopted, among other measures, to encourage foreign investments in Nigeria. This involved transfer of state-owned enterprise (manufacturing, agricultural production, public utility services such as telecommunication, transportation, electricity and water supply) companies that are completely or partly owned by or managed by private individuals or companies. Qualified foreign firms were given open arms to take over most of these establishments to enhance efficiency. This is because such foreign firms are reported to possess the managerial acumen and technical prowess needed to resuscitate and sustain the weak industries in Nigeria (Umah, 2007).

## **II. Review of Related Literature**

Foreign direct investment could come to the capital-importing country as a subsidiary of a foreign firm. It could also come by means of formation of a company in which a firm in the investing country has equity holding or the creation of fixed assets in the other country by the nationals of the investing country (Obadan 2004:65). In such investment, the foreign firm exercises de facto or de jure control over the assets they have created. The objective of the investors is to acquire a lasting interest and effective control in the management of the enterprise in which direct investment takes place. They may not necessarily have major shareholding, but having an effective voice in the management means that the foreign investor has the potential to influence or participate in the management of an enterprise. Thus, it is the element of influence and control that distinguishes direct investment from portfolio investment (OECD 1983). Foreign direct investment poses a lesser risk than external debt for the borrowing country, although the latter promises higher return. Indeed, FDI has the advantage that it does not add to a country's contractual debt service obligation. If an investment financed by external borrowing turns out badly, the country faces the same external climate as if the investment had turned out well. But if the FDI proves unprofitable, the recipient country shares the same loss with the investor. In the same way, if the investment financed by FDI is successful, the country will have to share some of that good fortune with the foreign investor (Obadan, 2004:65).

A number of studies have analyzed the relationship between FDI inflows and economic growth, but the issue is far from settled in view of the mixed findings reached. The center-piece of the neo-liberal School otherwise known as the Pro-Foreign Investment School is that FDI can provide crucial help in modernizing the industrial order for the developing countries. They also believed that Trans-national Corporations (TNCs), through their FDI, could provide much of the 'motor' needed for economic growth in developing countries (Penrose, 1961 and Chenery and Stout, 1966). As opposed to the claim of the dependency theorists that FDI leads to transfer of economic control and wealth to foreign powers ultimately leading to economic marginalization of the FDI host countries, neo-liberals argue that FDI provides vast benefits to recipient firm and host economies of TNCs affiliates (Matzner, 1996).

Firstly, they believe that FDI brings crucial western knowledge and value in the form of superior Western management qualities, business ethics, entrepreneurial attitudes, better labour/capital ratio, and production techniques. Secondly, FDI makes possible industrial grading by tying firms of developing countries hosting TNCs affiliates into global research and development (R&D) networks, and thus resulting in technology transfer as well as providing a greater deal of investment fund (Fisher and Gelb 1991). Thirdly, FDI leads to the growth of enterprises by providing access to Western markets. This growth in turn provides a source of new jobs and stimulates demand for input from domestic suppliers. And so, FDI introduces new market entrant beyond the domestic economies hosting TNCs affiliates (Apter, 1965). In contrast to this submission by the pro-foreign investment school, the dependency theory advocates see FDI as the advanced guard for a new diplomacy of

economic imperialism (Bailey, 1995; Inziet, 1994; Aslund, 1995; Ake, 1996; Landsburg, 1979; Hejdra, 2002). To them, foreign investors'

Penetration into a host economy would result in 'disarticulated development'. They also believe that the integration of developing countries' economy into the world of capitalist system result in their underdevelopment in a sort of what Wolf (1974), referred to as "dependence causes underdevelopment".

According to Aremu (2005), dependency theory maintains that, developing countries are poor because they have been systematically exploited through: imperial neglect; overdependence upon primary products as exports to developed countries; foreign investors' malpractices, particularly through transfer of price mechanics; foreign firm control of key economic sectors with crowding-out effect of domestic firms; implantation of inappropriate technology in developing countries; introduction of international division of labour to the disadvantage of developing countries; prevention of independent development strategy fashioned around domestic technology and indigenous investors; distortion of the domestic labour force through discriminatory remuneration; and reliance on foreign capital in form of aid that usually aggravated corruption and dependency syndrome (Amin, 1976).

In the same vein, the dependency theorists have also focused on how FDI of multinational corporations distort developing nation economy. In the view of these scholars, distortions include the crowding out of national firms, rising unemployment related to the use of capital-intensive technology, and a marked loss of political sovereignty (Umah: 2007). It is also argued that FDIs are exploitative and imperialistic in nature, thus ensuring that the host country absolutely depends on the home country and her capital. (Anyanwu: 1993). From the forgoing, dependency

Theories believe that the participation of developed countries into developing nations via their FDI or any other means cannot be expected to produce beneficial result on the developing economies. Economic models of endogenous growth have been applied to examine the effects of FDI on economic growth through the diffusion of technology (Barro, 1991; Barro and Sala-i-Martin, 1997). FDI also promotes economic growth through creation of dynamic comparative advantages that lead to technological progress (Balasubramanyam et al. 1996; Borensztein et al., 1998). Romer (1990) and Grossman and Helpman (1991) have calibrated Romer's (1986) model and assumed that endogenous technological progress is the main engine of economic growth. Romer (1990)

Argues that FDI accelerates economic growth through strengthening human capital, the most essential factor in R&D effort; while Grossman and Helpman (1991) emphasize that an increase in competition and innovation will result in technological progress and increase productivity and, thus, promote economic growth in the long-run.

In contrast to all these positive conclusions, Reis (2001) formulated a model that investigates the effects of FDI on economic growth when investment returns may be repatriated. She states that after the opening up to FDI, domestic firms will be replaced by foreign firms in the R&D sector. This may decrease domestic welfare due to the transfer of capital returns to foreign firms. In this model, the effects of FDI on economic growth depend on the relative strength of the interest rate effects. If the world interest rate is higher than domestic interest rate, FDI has a negative effect on growth, while if the world interest rate is lower than domestic interest rate, FDI has a positive effect on growth. Furthermore, Firebaugh (1992) lists several additional reasons why FDI inflows may be less profitable than domestic investment and may even be detrimental. The country may gain less from FDI inflows than domestic investment because multinationals are less likely to contribute to government revenue; FDI is less likely to encourage local

Entrepreneurship; multinationals are less likely to reinvest profits; they are less likely to develop linkages with domestic firms; and are more likely to use inappropriately capital-intensive techniques.

FDI may be detrimental if it crowds out domestic businesses and stimulates inappropriate consumption pattern. FDI has empirically been found to stimulate economic growth by a number of researchers (Borensztein et al, 1998; Glass and Saggi, 1999). Dees (1998) submits that FDI has been important in explaining China's economic growth, while De Mello (1997) presents a positive correlation for selected Latin American countries. Inflows of foreign capital are assumed to boost investment levels. Blomstrom et al. (1994) report that FDI exerts a positive effect on economic growth, but that there seems to be a threshold level of income above which FDI has positive effect on economic growth and below which it does not. The explanation was that only those countries that have reached a certain income level can absorb new technologies and benefit from technology diffusion, and thus reap the extra advantages that FDI can offer. Previous works suggest human capital as one of the reasons for the differential response to FDI at different levels of income. This is because it takes a well-educated population to understand and spread the benefits of new innovations to the whole economy.

Borensztein et al. (1998) also found that the interaction of FDI and human capital had important effect on economic growth, and suggest that the differences in the technological absorptive ability may explain the variation in growth effects of FDI across countries. They suggest further that countries may need a minimum threshold stock of human capital in order to experience positive effects of FDI. Balasubramanyan et al. (1996)

report positive interaction between human capital and FDI. They had earlier found significant results supporting the assumption that FDI is more important for economic growth in export-promoting than import-substituting countries. This implies that the impact of FDI varies across countries and that trade policy can affect the role of FDI in economic growth. UNCTAD (1999) submits that FDI has either a positive or negative impact on output, depending on the variables that are entered alongside with it in the test equation. These variables include the initial per capita GDP, education attainment, domestic investment ratio, political instability, terms of trade, black market exchange rate premiums, and the state of financial development.

Examining other variables that could explain the interaction between FDI and growth, Olofsdotter (1998) submits that the beneficiary effects of FDI are stronger in those countries with a higher level of institutional capability. He therefore, emphasized the importance of bureaucratic efficiency in enabling FDI effects. De Gregorio, (2003) did a panel data analysis of 12 Latin American countries in the period 1950-1985 and his results suggest a positive and significant impact of FDI on economic growth. In addition, the study shows that the productivity of FDI is higher than the productivity of domestic investment. Fry, (1992) examined the role of FDI in promoting growth by using the framework of a macro-model for a pooled time series cross section data of 16 developing countries for 1966 to 1988 period. The countries included in the sample were Argentina, Brazil, Chile, Egypt, India, Mexico, Nigeria, Pakistan, Sri Lanka, Turkey, Venezuela, and 5 Pacific basin countries, viz., Indonesia, Korea, Malaysia, Philippines and Thailand. For his sample as a whole, he did not find FDI to exert a significantly different effect from domestically financed investment on the rate of economic growth, as the coefficient of FDI after controlling for gross investment rate, was not significantly different from zero in statistical terms.

FDI had a significant negative effect on domestic investment suggesting that it crowds-out domestic investment. However, this effect varies across countries as in the Pacific basin countries FDI seems to have crowded-in domestic investment. FDI inflows had a significant positive effect on the average growth rate of per capita income for a sample of 78 developing and 23 developed countries as found by (Blomstrom et al., 1994). However, when the sample of developing countries was split between two groups based on level of per capita income, the effect of FDI on growth of lower income developing countries was not statistically significant although still with a positive sign. They argue that least developed countries learn very little from Multinational Enterprises (MNEs) because domestic enterprises are too far behind in their technological levels to be either imitators of or, suppliers to MNEs. In this regard, another study was conducted by Borensztein, et al., (1998). They included 69 developing countries in their sample. The study found that the effect of FDI on host country growth is dependent on stock of human capital. They infer from it that flow of advanced technology brought along by FDI can increase the growth rate only by interacting with a country's absorptive capability. They also find FDI to be stimulating total fixed investment more than proportionately. In other words, FDI crowds-in domestic investment. However, the results are not robust across specifications. Export-oriented strategy and the effect of FDI on average growth rate for the period 1970-1985 for the cross-section of 46 countries as well as the sub-sample of countries that are deemed to pursue export oriented strategy was found to be positive and significant but not significant and, sometimes, negative for the sub-set of countries pursuing inward-oriented strategy (Balasubramanyam et al. 1996).

## **2.1 Impact of FDI on Economic Growth in Nigeria**

Nigeria as a country, given her natural resource base and large market size, qualifies to be a major recipient of FDI in Africa and indeed is one of the top three leading African countries that consistently received FDI in the past decade. However, the level of FDI attracted by Nigeria is mediocre (Asiedu, 2003) compared with the resource base and potential need. There have been some studies on investment and growth in Nigeria with varying results and submissions. For example, Odozi (1995) reports on the factors affecting FDI flow into Nigeria in both the pre and post structural adjustment programme (SAP) eras and found that the macro policies in place before the SAP were discouraging foreign investors. This policy environment led to the proliferation and growth of parallel markets and sustained capital flight. Aluko (1961) reports positive linkages between FDI and economic growth in Nigeria. Endozi (1968) discusses the linkage effects of FDI on the Nigerian economy and submits that these have not been considerable and that the broad linkage effects were lower than the Chenery–Watanabe average (Mojekwu and Ogege 1991, Henery and Watanabe, 1958) found that FDI is positively associated with GDP, concluding that greater inflow of FDI will spell a better economic performance for the country. Ariyo (1998) studied the investment trend and its impact on Nigeria's economic growth over the years. He found that only private domestic investment consistently contributed to raising GDP growth rates during the period considered (1970–1995).

Furthermore, there is no reliable evidence that all the investment variables included in his analysis have any perceptible influence on economic growth. He therefore suggests the need for an institutional rearrangement that recognizes and protects the interest of major partners in the development of the economy. Examining the contributions of foreign capital to the prosperity or poverty of LDCs, Endozi (1968) conceptualized foreign

capital to include foreign loans, direct foreign investments and export earnings. Using Chenery and Stout's two-gap model (Chenery and Stout, 1966), he concluded that FDI has a negative effect on economic development in Nigeria. Further, on the basis of time series data, Ekpo (1995) reports that political regime, real income per capita, rate of inflation, world interest rate, credit rating and debt service were the key factors explaining the variability of FDI into Nigeria. Adelegan (2000) explored the seemingly unrelated regression model to examine the impact of FDI on economic growth in Nigeria and found out that FDI is proconsumption and pro-import and negatively related to gross domestic investment. Akinlo (2004) found that foreign capital has a small and not statistically significant effect on economic growth in Nigeria. However, these studies did not control for the fact that most of the FDI was concentrated in the extractive industry. In other words, it could be put that these works assessed the impact of investment in extractive industry (oil and natural resources) on Nigeria's economic growth.

On firm level productivity spillover, Ayanwale and Bamire (2001) assess the influence of FDI on firm level productivity in Nigeria and report a positive spillover of foreign firms on domestic firm's productivity. Much of the other empirical work on FDI in Nigeria centred on examination of its nature, determinants and potentials.

For example, Odozi (1995) notes that foreign investment in Nigeria was made up of mostly "Greenfield" investment, that is, it is mostly utilized for the establishment of new enterprises and some through the existing enterprises. Aremu (1997) categorized the various types of foreign investment in Nigeria into five: wholly foreign owned; joint ventures; special contract arrangements; technology management and marketing arrangements; and subcontract co-production and specialization. In his study of the determinants of FDI in Nigeria, Anyanwu (1998) identified change in domestic output or market size, indigenization policy, and change in openness of the economy as major determinants of FDI. He further noted that the abrogation of the indigenization policy in 1995 encouraged FDI inflow into Nigeria and that effort must be made to raise the nation's economic growth so as to be able to attract more FDI. Aremu, (1997) assessed the magnitude, direction and prospects of FDI in Nigeria. They noted that while the FDI regime in Nigeria was generally improving, some serious deficiencies remain. These deficiencies are mainly in the area of the corporate environment (such as corporate law, bankruptcy, labour law, etc.) and institutional uncertainty, as well as the rule of law. The establishment and the activities of the Economic and Financial Crimes Commission, the Independent Corrupt Practices Commission, and the Nigerian Investment Promotion Commission are efforts to improve the corporate environment and uphold the rule of law. Has there been any discernible change in the relationship between FDI and economic growth in Nigeria in spite of these policy interventions

### III. Model Specification

In order to achieve the objectives of this work, a multi-regression model was formulated and the Granger causality tests were conducted on the formulated model. The value of GDP was also adjusted to take into consideration the effect of inflation. The model is stated as follows:

$$GDP = f(FDI, GFCF, INTR, EXR) \dots \dots \dots (1)$$

This equation can be transformed into an econometric function thus:

$$GDP_t = b_0 + b_1 INTR_t + b_2 FDI_t + b_3 GFCF_t + b_4 EXR_t + U_t \dots \dots \dots (2)$$

Theoretically, the coefficients of equation (2) are expected to take these signs:

$$b_1 < 0, b_2 > 0, b_3 > 0, b_4 > 0$$

Where:

GDP = Gross Domestic Product, GFCF = Gross Fixed Capital Formation, FDI = Foreign Direct Investment, EXR = Exchange Rate, INTR = Interest Rate,  $b_0$  = the constant,  $b_1$ -  $b_4$  = the coefficients of the explanatory variables,  $U_t$  = Error term

Meanwhile, the study introduced natural logarithm in the equation to establish the growth rate of GDP.

$$\ln GDP_t = b_0 + b_1 INTR_t + b_2 FDI_t + b_3 GFCF_t + b_4 EXR_t + U_t \dots \dots \dots (3)$$

#### 3.1 Justification of the Variables used in the Study

A unique way of conceptualizing the impacts of FDI on the economic growth in Nigeria especially in the era of globalizations is to analyze the impacts of FDI on certain macroeconomic variables. There is therefore the need to briefly elucidate herein the analytical framework underlying the macroeconomic variables that are determinants of growth in a developing country like Nigeria.

##### 3.1.1 Real Gross Domestic Product

The meaning of growth is fairly unambiguous namely, a rise in money income deflated by an index of prices. Economic growth simply refers to an increase in the income of a nation over a period of time. The main springs of growth is well known; increase in the quantity and quality of resources of all kinds. Countries are poor because they lack resources or the willingness and ability to bring them into use. Economic growth

measures the material well-being in an economy. Growth is ordinarily an important and necessary element of development. Without growth, development cannot take place. Economic development means a lot more than growth.

### 3.1.2 Gross Fixed Capital Formation

This captures all the real-value-added to the economy in real-asset-terms which will lead to further enhancement of savings, investment and generation of more wealth in future. It is defined as an addition to stock of capital assets set aside for future productive endeavours in real sector which will lead to more growth in physical capital assets of the country. Gross Capital Formation is measured by the total value of a producers acquisitions, less disposals of fixed assets during the accounting period plus certain additions to the value of non-produced assets (such as subsoil assets or major improvement in the quantity, quality or productivity of land) or realized by the productive activity of institutional units. It has a positive impact on private savings accumulation in the sense that increase in capital formation will lead to more savings. When savings accumulate it will lead to an increase in gross domestic investment (GDI) and income generated as a result of the investment projects made will, in turn, led to GDP growth (Anyanwu,1998).

### 3.1.3 Inflation rate

We included the inflation rate as a measure of overall economic stability of the country. Inflation can simply be said to mean a general and continuous increase in the prices of goods and services. The maintenance of price stability is one of the principal objectives of macroeconomic management. In inflationary economy, it is difficult for money to act as a medium of exchange and store of value without adverse effects on output, employment and real income (CBN,1998). Inflation can simply be said to mean a general and continuous increase in the prices of goods and services.

For the purpose of this study the relationship between economic growth and inflation and causes shall be examined under the contending views of monetarists and structuralists. The structuralists explain the long run inflationary trend in developing countries in terms of structural rigidities: market imperfection and social tensions (relative inelasticity of food supply foreign exchange constraints, protective measures, rise in demand for food, import substitution, industrialization, political instability e.t.c). Besides, they also concluded that moderate inflation is one of the indexes of economic growth.

## 3.2 Techniques of Data Analysis

This work used OLS multiple regressions to determine the effect of the independent variable on the dependent variable. And so, to improve on the linearity of the model we introduced log in the model. The choice of OLS is mainly because it minimizes the error sum of squares and has a number of advantages such as unbiasedness, consistency, minimum variance and efficiency; it is widely used based on its property of BLUE (Best, Linear, Unbiased, Estimate), simple and easy to understand (Koutsoyannis, 1971 and Gujarati, 2004). The E-view econometric software 3.0 was used for this analysis. The statistical test of parameter estimates was conducted using their standard error, t-test, F-test, R, and R2. The economic criteria showed whether the coefficients of the variable conform to the economic a priori expectation, while the statistical criteria test was used to assess the significance of the overall regression.

## 3.3 The Granger Causality Test

To determine whether there is granger causality between FDI and economic growth in Nigeria which will help us achieve the third objective, the following Granger causality test was conducted. This model is in line with Adeolu, (2007), Engle and Granger (1987), Khan, (2007) and Egbo (2010).

$$GDP_t = C_1 + \sum a_i GDP_{t-1} + \sum \beta_i FDI_{t-1} + \sum \epsilon_{1t} \dots \dots \dots (4)$$

$$FDI_t = C_2 + \sum \delta_i FDI_{t-1} + \sum \gamma_i GDP_{t-1} + \sum \epsilon_{2t} \dots \dots \dots (5)$$

Where,  $C_1$  and  $C_2$  are constants,  $\sum \epsilon_{1t}$  and  $\sum \epsilon_{2t}$  the stochastic term.

A Wald F-Test was used to test the following hypotheses:

Ho<sub>1</sub>: FDI does not Granger cause GDP

Ho<sub>2</sub>: GDP does not Granger cause FDI.

#### IV. Results And Discussion

The result of the findings indicates that FDI positively but insignificantly impact on economic growth in Nigeria.

**Table 4.1:** OLS Regression

Dependent Variable: LOG(GDP)				
Method: Least Squares				
Sample: 1981 2010				
Variable	Coefficient			
		Std. Error	t-Statistic	Prob.
C	10.03200	0.307125	32.66424	0.0000
LOG(INTR)	0.041584	0.064386	0.645849	0.5245
LOG(FDI)	0.024233	0.028237	0.858210	0.3993
LOG(GFCF)	0.182327	0.039868	4.573325	0.0001
LOG(EXR)	0.045537	0.007929	5.742906	0.0000
R-squared	0.972493	F-statistic	212.1293	
Adjusted R-squared	0.967909	Prob(F-statistic)	0.000000	
Durbin-Watson stat	0.974633			

**Source:** Authors' Computation

Estimated Function:

$$\text{Log(GDP)} = 10.03200 + 0.041584\text{log(INTR)} + 0.024233\text{log(FDI)} + 0.182327\text{log(GFCF)} + 0.045537\text{log(EXR)}$$

In the estimated regression line above, the value of  $b_0$  (the constant term) is 10.03200, which means that holding the value of FDI and all other variables used in this regression constant, the value of GDP will be about N10032.00 billion. The regression coefficient of FDI in the estimated regression line is 0.024233 which implies that 2.42% of the increase in GDP within the period under study was attributed to the inflow of FDI. The calculated t-statistics for the parameter estimates of foreign direct investment is 0.858210 which is less than the value of the tabulated t-statistics (2.13) indicates that the relationship between GDP and FDI is positive and not statistically significant for the period under review. The regression coefficient of exchange rate in the estimated regression lines is 0.045537, which implies that 4.55% of the increase in GDP within the period under study was accounted for by changes in exchange rate. The calculated t-statistics for exchange rate is 5.742906 which is greater than the value of the tabulated t-statistics (2.13) indicates that the relationship between GDP and exchange rate is positive and statistically significant. In the estimated regression line above, the regression coefficient of GFCF is 0.182327 which implies that 18.23% of the increase in GDP within the period under study was accounted for by the GFCF. The calculated t-statistics for GFCF is 4.573325 which is greater than the value of the tabulated t-statistics (2.13) implies that the relationship between Gross domestic product and GFCF is positive and statistically significant. The coefficient of determination ( $R^2$ ) is 0.972493 which shows that 97% of variation in GDP (our proxy for economic growth) is caused by variations in the explanatory variables (foreign direct investment, exchange rate and GFCF). It also means that less than 3% of the variation in the model is captured by the error term. And this shows that the line of best fit is highly fitted. The Durbin-Watson statistics is 0.974633 which shows the likely presence of autocorrelation in the regression equation. The value of the probability of F-stat is 0.0000 which is less than 0.05 implies that the overall regression is statistically significant at 5% level of significance.

The result of the analysis however, shows that FDI positively and insignificantly impact on GDP in Nigeria for the period under review. This contradicts the conclusion of some existing studies reported in our literature. The work of Borenztein et al. (1998), Oyaide (1977), Eke et al. (2003), and Egbo (2010), however, shows a positive and significant relationship between FDI and economic growth. The reason for the non-conformity with some study could be as a result of unfavourable macroeconomic environment in Nigeria, like the general price level, interest rate, exchange rate etc. It may also be as a result of the data employed. The previous works reported in our study did not adjust the figures of GDP to take care of inflationary influence, but our study did. From the result of the Granger causality test, it was discovered that there is a unidirectional causality between FDI and GDP such that causality runs from GDP to FDI. Looking at this result, we conclude that it is the growth in the domestic economy that attracted the inflow of FDI into the Nigeria economy for the period under consideration. This is based on the understanding that an economy with a potential for providing higher return on investment will attract more foreign investors as they (foreign investors) prefer to invest in an area that promises higher returns on investment.

## V. Conclusion

In conclusion, the empirical results show that there is positive relationship between economic growth (GDP) and FDI. The result was positive but statistically insignificant contrary to some findings. This insignificant relationship could be as a result of insufficient FDI fund invested into the Nigerian economy which has not been able to significantly impact on the economic growth. The result of our study also portrays that domestic investment was also responsible for the growth witnessed in Nigeria's economy over the period under review. This provides an understanding that domestic investment is a major factor that contributes to the growth of the Nigerian economy. And so, more emphasis should be geared towards encouraging domestic investment to drive the economy to the desired level of growth. Despite the insignificant relationship between GDP and FDI, it is important to note that FDI contributes positively to economic growth in Nigeria. The government and the monetary authorities should design policies and programs that will encourage investors to invest in Nigeria. The problem of insecurity in this country should be addressed squarely by the government and other stakeholders if Nigeria will continue to compete favourably in the global fund market. More so, an investment friendly environment: Enhancing foreign investor legal protection, Streamlining procedures for business visas and entry of foreign workers, Reforming land policy and administration, Speeding up and deepening tax reforms, should be created by the government so as to increase the inflow of FDI into the economy.

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