The Impact of Foreign Direct Investment on Economic Growth in Nigeria

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ABSTRACT
The study investigates the effect of foreign direct investment (FDI) on economic growth in Nigeria. The empirical literatures reviewed showed divergent views as regards the impact of FDI on economic growth. To this end, this study employed a simple regression analysis of the OLS to test the effect of FDI on economic growth measured by the GDP. Secondary data were collected from the CBN Statistical Bulletin for a period of 15 years (2001-2015). The result of the regression analysis showed that FDI largely promotes economic growth. A positive relationship was also found between economic growth (GDP) and exchange rate. It was suggested that the authorities and the policy makers should evolve appropriate and conducive policies as well as necessary incentives to encourage FDI. A suitable exchange rate regime that is conducive for attracting foreign investors should also be looked into. All these, among others enable a country to effectively attract foreign direct investment with all its implications for rapid and sustainable economic growth.

Keywords: Foreign Direct Investment, Economic Growth, Gross Domestic Product, Capital Flows, Investors

1.0 INTRODUCTION
Foreign Direct Investment serves as a major catalyst for economic growth in a country as it solves the problems of shortages of financial resources, technology, and skills. This has made it the center of attention for policy makers in developing countries.

According to Ayanwale (2007), FDI is an investment made to acquire a lasting management interest (normally 10% of voting stock) in a business enterprise operating in a country other than that of the investor defined according to residency (World Bank, 1996). Such investments may take the form of either “Greenfield” investment (also called “mortar and brick” investment) or merger and acquisition (M&A), which entails the acquisition of existing interest rather than new investment.

In corporate governance, ownership of at least 10% of the ordinary shares or voting stock is the criterion for the existence of a direct investment relationship. Ownership of less than 10% is recorded as portfolio investment. FDI comprises not only merger and acquisition and new investment, but also reinvested earnings and loans and similar capital transfer between parent companies and their affiliates.

Countries could be both host to FDI projects in their own country and a participant in investment projects in other countries. A country’s inward FDI position is made up of the hosted FDI projects, while outward FDI comprises those investment projects owned abroad.

The most strategic factor influencing economic growth in any country is investment. It is characterized as the main key to increased level of productivity. A strong correlation between investment and economic growth has been revealed by both theoretical and empirical studies by development economists in both developing and developed economics of the world. With the
knowledge of the required rates of income growth needed to overcome underdevelopment as well as an Assumed Incremental Capital Output Ratio (ICOR), economist at regular interval calculate the required investment ratio needed to achieve the target growth.

Consequently, for any country, like Nigeria with investment gap, to achieve a desired rate of economic growth, FDI has to be given due consideration. This is because FDI provides funds from other parts of the world to bridge the investment gap.

According to Olayiwola and Okodua (date), FDI is one of the most important strategies for the promotion of economic growth and development in poor developing countries. FDI can serve as an engine of growth and development for developing countries by increasing the opportunity for their integration into global financial and capital flows, expand employment and exports base, generate technological capability-building and efficiency spillovers to local firms, as well as establish investment arrangements that increase the potential of host countries for economic growth.

The performance of the Nigerian non-oil export sector, has however been relatively impressive in recent times. For example, the International Monetary Fund (IMF) 2008 is of the view that the robust non-oil sector growth in the 2007 fiscal year had offset the drag from a decline in oil production in the Niger Delta, thus boosting growth in the Nigerian economy.

2.0 LITERATURE REVIEW

There are vast literatures on the relationship between FDI and growth. It is often claimed that FDI is an important source of capital, that it complements domestic investment, creates new job opportunities and is in most cases related to the enhancement of technology transfer, which of course boosts economic growth.

Three main channels are identified through which FDI can bring about economic growth. The first is that foreign direct investment augments domestic savings in the process of capital accumulation. Second, FDI is the main conduit through which technology transfer takes place. The transfer of technology and technological spillovers leads to an increase in factor productivity and efficiency in the utilization of resources which leads to growth. Third, FDI leads to increases in exports as a result of increased capacity and competitiveness in domestic production. Empirical analysis of the positive relationship is often said to depend on another factor, called “absorptive capacity”, which includes the level of human capital development, type of trade regimes and the degree of openness (Borensztein et al., 1995, 1998).

Literature on FDI identifies a number of reasons for firms investing across national boundaries. It is difficult in reality in many countries to isolate the different motives, as one motive may overlap into another. The major motives often identified that have particular relevance to Africa, according to (Basu and Srinivasan, 2002) are:

• Natural-resource seeking investment, which aims to exploit the natural resource endowments of countries. Companies extracting oil (in Nigeria), gold (in Ghana) and diamond (in Botswana) belong to this category.
• Market-seeking investment, which aims to access new markets that are attractive as a result of their size and growth.
• Efficiency-seeking investments, which aim to take advantage of special features in a certain area such as the costs of labour, the skills of the labour force, and the quality and efficiency of infrastructure.

Olokoyo, (2012) stated that Foreign investment inflow, particularly foreign direct investment (FDI) is perceived to have a positive impact on economic growth of a host country through various direct and indirect channels. It augments domestic investment, which is crucial to the attainment of sustained growth and development. Governments have been trying to lift the country out of the economic crisis without achieving success as desired. Each of these governments has not focused much attention on investment especially foreign direct investment which will not only guarantee employment but will also impact positively on economic growth and development.

Saibu and Keke (2014) examined the importance of FDI on growth for several periods and its effects on the economy. Literature shows a direct positive link between export growth and the domestic or foreign investment growth of an economy.
Major Determinants of FDI

According to Ajayi (2006), in making decisions to invest abroad, firms are influenced by a wide constellation of economic, political, geographic, social and cultural issues. It is important to note that while the list of factors is fairly long, not all determinants are equally important to every investor in every location at all times. It is also true that some determinants may be more important to a given investor at a given time than to another investor. For instance, Campos and Kinoshita (2003), pointed out that market-seeking investors, for example, will be attracted to a country that has a large fast growing market, while resource-seeking investors will search for a country with abundant natural resources.

Ajayi (2006), noted that the factors influencing the flow of FDI thus range from the size of markets to the quality of labour, infrastructure and institutions, to the availability of resources etc as discussed below:

- **The size of the market and growth.** Market size and growth have proved to be the most prominent determinants of FDI, particularly for those FDI flows that are market seeking. In countries with large markets, the stock of FDI is expected to be large since market size is a measure of market demand in the country. This is particularly true when the host country allows the exploitation of economies of scale for import-substituting investment.

- **The costs and skills of labour.** The cost of labour is important in location considerations, especially when investment is export oriented. Lower cost of labour reduces the cost of production, all other factors remaining unchanged. Sometimes, the availability of cheap labour justifies the relocation of a part of the production process in foreign countries. Thus, the investing firm is also concerned about the quality of the labour force. It is generally believed that highly educated personnel are able to learn and adopt new technology faster, and the cost of retraining is also less.

- **Availability of good infrastructure.** It is often stated that good infrastructure increases the productivity of investment and therefore stimulates FDI flows (Asiedu, 2002). A study by Wheeler and Mody (1992) found infrastructure to be very important and dominant for developing countries. In talking about infrastructure, it should be noted that this is not limited to roads alone, but includes telecommunications. Availability and efficiency of telephones, for example, is necessary to facilitate communication between the host and home countries.

- **Financial infrastructure is important for FDI inflow.** A well-developed financial market is known from available evidence to enable a country to tap the full benefits of FDI. Alfaro et al. (2001), using cross-section data, find that poorly developed financial infrastructure can adversely affect an economy’s ability to take advantage of the potential benefits of FDI. In a study by Bhinda, Griffith-Jones and Martin (1999), it was found that problems related to funds mobilization were on the priority list of the factors discouraging investors in Uganda, Tanzania and Zambia.

- **Country risk is very important to FDI.** Several studies have found FDI in developing countries to be affected negatively by economic and political uncertainty. There is abundant evidence to show the negative relationship between FDI and political and economic stability.

- **Openness of an economy** is also known to foster the inflows of FDI. The more open an economy is, the more likely it is that it would follow appropriate trade and exchange rate regimes and the more it would attract FDI.

- **The institutional environment** is an important factor because it directly affects business operations. In this category is a wide array of factors that can promote or deter investment. The first of is corruption which deters the inflow of FDI because it is an additional cost and because wherever it exists, it creates uncertainty, which inhibits the flow of FDI. The second is the level of bureaucracy involved in establishing a business in a country. Complex and time-consuming procedures deter investment. The third factor is the existence of incentives in the form of fiscal and financial attractions. There is also the institution of the judiciary, which is key to protecting property rights and law enforcement regulations. It is expected that countries with better legal infrastructure will be able to attract more FDI.

- **The availability of natural resources** is a critical factor in attracting FDI. This is particularly so in Africa where a large share of FDI has been in countries with abundant natural resources. In some cases, the abundance of natural resources has been combined with a large domestic market. African countries that have been able to attract most FDI have been those with natural and mineral resources as
well as large domestic markets. Traditionally about 60% of Africa’s FDI is allocated to oil and natural resources (UNCTAD, 1999a/b). The Africa region possesses large reserves of oil, gold, diamonds and copper, etc.

- \textit{concentration of other foreign investors}. Foreign investors may be attracted to countries with an existing concentration of other foreign investors. In this case, the investment decision by others is seen as a good signal of favourable conditions. The clustering of investors leads to positive externalities such as technological spillovers which can be shared among foreign investors; they can also draw on a shared pool of skilled labour and specialized input suppliers; users and suppliers of inputs cluster near each other because of the greater demand for a good and the supply of inputs as a result of large market.

- \textit{Return of investment}. FDI will go to countries that pay a higher return on capital. For developing countries, testing the rate of return on capital is difficult because most developing countries do not have a well functioning capital market (Asiedu, 2002). What is often done is to use the inverse of real GDP per capita to measure the return on capital. The implication of this is that all things being equal, investments in countries with higher per capita income should yield lower return and therefore real GDP per capita should be inversely related to FDI (Asiedu, 2002).

- \textit{Macroeconomic policies}. Macroeconomic policy errors resulting in exchange rate misalignment and the lack of convertible currencies constrain FDI flows. In cases where policies are not sustainable, FDI flows are hindered.

2.3 Review of Empirical Studies

The studies on FDI on economic growth in Nigeria have diverse results. Dinda (2009) revealed that the endowment of natural resources, openness, macroeconomic risk factors like inflation and exchange rates are significant determinants of FDI inflow to Nigeria. Asiedu (2006) found natural resources, large market size, lower inflation, good infrastructure, an educated population, openness to FDI, less corruption, political stability and a reliable legal system as major determinants of FDI flows. Adelegan (2000) find out that FDI is pro-consumption 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.

Onu (2012) investigates the impact of foreign direct investment (FDI) on Economic Growth in Nigeria within the period 1986-2007. The paper employed multiple regression models to determine the impact of some external or macro variables on the gross domestic product (GDP) proxy for economic growth in Nigeria. The study found that FDI has the potential to positively impact upon the economy though its contribution to GDP was very low within the period under review. The multiple regression results also revealed that FDI, government tax revenue (GTR) and savings exerted positive but not significant impact, except savings, on GDP during the study period. However, foreign exchange and public expenditure on education (PEE) had inverse relationship with GDP. The study concluded that FDI induces the inflow of capital, technical know-how and managerial capacity which can stimulate domestic investment and accelerate the pace of economic growth.

Jerome and Ogunkola (2004) 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.

Ayanwale (2007) investigated the empirical relationship between non-extractive FDI and economic growth in Nigeria. Using OLS estimates, he found that FDI has a positive link with economic growth but cautioned that the overall effect of FDI on economic growth may not be significant. Herzer et al. (2006) using a bivariate VAR modeling technique, found evidence of a positive FDI-led growth for Nigeria, Sri Lanka, Tunisia, and Egypt; and based on weak exogeneity tests, a long-run causality between FDI and economic growth running in both directions was found for the same set of countries. A slight difference from this result is observed in Okodua (2009) who examined the sustainability of the FDI-growth relationship in Nigeria. Using the Johansen cointegration framework and a multivariate VAR within a vector error correction model,
found evidence of a long-run equilibrium relationship between economic growth and FDI inflows. The study also revealed a unidirectional causality from FDI to economic growth. Adigwe, Ezeagba and Francis (2015) examine the relationship between foreign direct investment, exchange rate and gross domestic product. Using time series data, data for the study were collected from CBN Statistical Bulletin from 2008 to 2013. Pearson Correlation was used to test the hypothesis with aids of SPSS version 20.0. Their findings revealed that there is a significant relationship between FDI, EXR and GDP, indicates that economic growth in Nigeria is directly related to foreign direct investment and exchange rate. Okonkwo, Egbunike and Udeh,(2015) empirically investigate the effect of foreign direct investment on Nigeria’s economic growth over the period 1990 to 2012. The study made use of ordinary least squares (OLS) estimation techniques in analyzing the secondary data. The secondary data were mainly sourced from Central Bank of Nigeria statistical bulletin (CBN), Annual report and Statement of accounts. The result shows that Export assumes a positive sign which implies that there is a positive relationship between Economic growth and Export; in conclusion FDI has led to increase in Export in Nigeria.

3.0 METHODOLOGY
3.1 Model specification
The models for this study were specified in line with Ayanwale (2007). The dependent variable used is the GDP, while the independent variables are the FDI and exchange rate (EX-RATE). The data for these were obtained from the statistical bulletin of the Central Bank of Nigeria. The period under consideration is from 2001–2015. The empirical models of FDI on Nigeria’s economic growth can thus be specified as:

i. GDP = F(FDI)………….. ..................(3.1)
ii. GDP = F(EX-RATE) ……….. …………..(3.2)

3.2 Method of analysis: The study adopted an analytical tool of the ordinary least square simple regression analysis to test the effect of FDI on economic growth in Nigeria. The regression equations are specified as:

\[ GDP = b_0 + b_1 FDI + U_1 \] \hspace{1cm} (3.3)
\[ GDP = b_0 + b_1 EX\text{-}RAT\text{E} + U_2 \] \hspace{1cm} (3.4)

Where

\[ GDP = \text{Gross Domestic Product} \]
\[ FDI = \text{Foreign Direct Investment} \]
\[ EX\text{-}RAT\text{E} = \text{Exchange rate} \]
\[ U = \text{Stochastic error term} \]

RESULTS AND DISCUSSION
Model I
\[ GDP = 29323.290 + 20.109FDI \]
\[ \quad (4.090) \quad (2.237) \]
\[ R = 0.527, \text{ R square} = 0.278, \text{ F test} = 5.006 \]

Model II
\[ GDP = -10999.972 + 377.832EX\text{RAT} \text{E} \]
\[ \quad (-3.86) \quad (1.902) \]
\[ R = 0.467, \text{ R square} = 0.218; \text{ F test} = 3.618 \]

In model one, the analysis of data shows that there is positive and significant relationship between economic growth (GDP) and FDI. It thus implies that an increase in FDI will result in increase in GDP (economic growth). Hence, more efforts should be made towards attracting more FDI so as to translate...
to further economic growth through multiplier effect. The coefficient of multiple determination (R2) shows that FDI can explain 52.7% of variations in the behaviour of GDP while the remaining (47.3%) variations explained by other factors outside the model. This implies that FDI largely influences the economic growth of the country. Most of the FDIs are in the oil sector which serves as the mainstay of the economy.

F-test revealed that the model as a whole is statistically significant at 95 confidence level, 1 degree of freedom, as the value of F calculated of 5.006 is greater than its table value of 4.67. However, the model is not statistically significant at 99 confidence level, 1 degree of freedom, because the F-calculated value of 5.006 is less than its table value of 9.07.

Also, t-test revealed that FDI is statistically significant at 95 confidence level as the t-calculated value of 2.237 is greater than critical t-value of 2.160. However, the t-test is not statistically significant at 99 confidence level as the critical t-value of 3.012. The test revealed that FDI is a major determinant of growth in the economy.

In model two, a positive relationship was found between economic growth (GDP) and exchange rate. Hence, more efforts should be made towards promoting economic growth through a favourable exchange rate regime. The coefficient of multiple determination (R2) shows that 21.8% of variations in the behaviour of GDP is explained by exchange rate while the remaining (78.2%) variation is explained by other factors outside the model.

The statistical tests conducted revealed that the model is not statistically significant at both 95% and 99% confidence levels.

CONCLUSION AND RECOMMENDATION

As can be deduced from the analyses above, FDI and exchange rate are major drivers of any economy as it significantly promotes economic growth. Most of the developed as well as the emerging economies of the world encourage FDI as the major catalyst to their rapid economic growth. Hence, Nigerian government and the various policy makers should evolve enabling and suitable policies towards attracting FDI both in oil and non-oil sectors of the economy. Necessary incentives should be given to the foreign investors as well. A suitable exchange rate regime that is conducive for attracting foreign investors should also be looked into. The importance of all these, among others cannot be over-emphasized for Nigeria and of course other African countries to effectively attract foreign direct investment with all its implications for rapid and sustainable economic growth.

REFERENCES


IMF (2008): World Economic Outlook. International Monetary Fund, April


### Appendix


<table>
<thead>
<tr>
<th>YEAR</th>
<th>GDP('billion)</th>
<th>FDI('billion)</th>
<th>EX. RATE (N/USD)</th>
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<td>0.1324</td>
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<td>59,929.89</td>
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<td>63,218.72</td>
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<td>2015</td>
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### Regression Result of FDI on GDP

**Model Summary**

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<th>Adjusted R Square</th>
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a. Predictors: (Constant), FDI

**Anova**

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a. Dependent Variable: GDP

b. Predictors: (Constant), FDI
Regression Result of EX-RATE on GDP

### Model Summary

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<td>F Change</td>
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*a. Predictors: (Constant), EXRATE*

### ANOVA

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*b. Dependent Variable: GDP*

**Coefficients**

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*a. Dependent Variable: GDP*