AN APPRAISAL OF THE DETERMINANTS AND EFFECT OF FOREIGN DIRECT INVESTMENT ON THE NIGERIAN ECONOMY.

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Abstract
This study investigated the determinant effect of foreign direct investment on the Nigerian economy. The model used is estimated, using foreign direct investment, Exchange rate, inflation investment, and total export as the independent variables in against growth rate of gross domestic product as the dependent variable. Secondary data covering the period of 1980 – 2010 were extracted from CBN statistical bulletin. Data collected were analyzed using multiple regression analysis at 0.05 level of significance. Empirical findings also showed that investment impacted positively and significantly on economic growth in Nigeria. In addition, the result gathered indicated that a strong exportation of good and services as well as investment inflow in Nigeria promoted FDI . We found out that the export, exchange rate and investment enhanced the economic growth of the country while FDI and inflation rate, though with a positive relationship with growth, have a significant impact on growth in Nigeria. The study then suggested that adequate efforts be made to mobilize desired gross national savings which would be big enough to attract direct foreign investment that will complement domestic savings towards raising capital formation to a level needed for industrial growth and development that will accelerate GDP growth in Nigeria.

Keywords: Foreign Direct Investment, Economic Growth and Macroeconomic Policy; Lead and Corresponding Author
Introduction
According to Obida and Abu (2010), the role of foreign direct investment in the development of the Nigerian economy cannot be over emphasized. Foreign direct investment (FDI) not only provides developing countries (including Nigeria) with the much needed capital for investment, it also enhances job creation, managerial skills, as well as transfer of technology. All of these contribute to economic growth and development.

To this end, Nigerian authorities have been trying to attract FDI via various reforms. The reforms are the deregulation of the economy, the new industrial policy of 1989, the establishment of the Nigeria Investment Promotion Commission (NIPC) in early 1990s, and the signing of Bilateral Investment Treaties (BITs) in the late 1990s. Others were the establishment of the Economic and Financial Crime Commission (EFCC) and the Independent Corrupt Practices Commission (ICPC). However, FDI inflows to Nigeria have remained low compared to other developing countries. For instance, FDI inflows increased from N786.40 million in 1980 to N2, 193.40 million in 1982, but soon dropped to N1, 423.50 million in 1985. The value of FDI rose from N6, 236.70 million in 1988 to N10, 450.0 million and N55, 999.30million in 1990 and 1995, respectively. However, the value of FDI fell drastically to N5, 672.90 million in 1996 and further to N4, 035.50million in 1999. The inflows of FDI has continued to rise since the year 2001, moving from N4,937.0million to N13,531.20million in 2003 and N20,064.40million in 2004. The FDI inflows stood at N5272.280 million in 2009 (CBN, 2010).

In terms of growth rate, FDI inflows dropped from 95.6 percent in 1971 to -31.20 percent and -17.23 percent in 1976 and 1984, respectively. Although the growth of FDI increased by 182.68 percent in 1986, the value soon fell by -24.76 percent in 1989 and further to -89.87 percent in 1996. Since the year 2000 the growth of FDI has remained positive except in 2001 when the value was -70.00 percent. The recent surge in FDI inflows to the country is attributable to the reduction in the nation’s debt profile (through debt arrangements with London club and Paris club) and the renewed confidence of foreign investors in the Nigerian economy (CBN, 2010).

The challenge to attract more inflows for investment in development projects has become acute in the developing nations, where only a small proportion of new inflows have gone. It is to be noted the needs of developing countries particularly those in Africa have sharply increased in recent years due to the accelerating
process of globalization. According to Weitz and Liiane (1998): “opening up a country requires investment for connecting the necessary infrastructure – roads, telecommunication, power plants, financial system.” Given the low incomes and low savings in many African countries, the investment-savings gap has widen and there is little hope of closing it without the active involvement of the private sector – both domestic and foreign. Thus, increasingly, in order to finance the investment gap, it is becoming increasingly imperative to attract foreign investment.

There is an emerging consensus that a conducive macroeconomic policy environment is not only a consideration but is in fact a sine qua non for attracting substantial amounts of foreign investment inflow in a liberalizing and globalizing world economy. Nigeria needs a massive inflow of foreign investment in order to transform its economy, upgrade dilapidated infrastructure and plug on to the electronic age of computers and the Internet. An absolute prerequisite for success is the design and implementation of policies and measures that would make the policy environment investment friendly. To this end, this study is set to examine the determinants and effects of foreign direct investment on Nigerian economy and also make policy recommendations based on findings.

Literature Review
Foreign Direct Investment (FDI) is expected to supplement the domestic resources available in a nation which according to the dual-gap analysis are not sufficient for sustainable economic growth. This has prompted research into the resultant effect of FDI and factors that influence it in an economy. Anyanwu (1998) figured out change in domestic output or market size, indigenization policy, and change in openness of the economy as major determinants of foreign direct investment. Ekpo (1997) observed that public investment directly influences private investment and as such the government should invest in infrastructure which give an enabling environment for private investors; consequently it will help in attracting foreign direct investment to Nigeria. Okpara (2012) investigated the impact of foreign direct investment on some selected macro-economic variables such as real GDP, gross fixed capital formation and unemployment. Using Co-integration and Error Correction Model, it was revealed that although FDI impacted gross fixed capital formation and the real GDP, it has not made any significant positive impact on the reduction of unemployment in Nigeria.

De Gregorio and Lee (1992) argued that by increasing capital stock, FDI can increase country’s output and productivity through a more efficient use of existing resources and by absorbing unemployed resources. Asiedu (2006) identified 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 in flows. Dinda (2009) empirically investigated the determinants of FDI to Nigeria during 1970-2006. The study revealed that the endowment of natural resources, openness, macroeconomic risk factors like inflation and exchange rates are significant determinants of FDI inflow to Nigeria. The findings also suggested that in the long run, market size is not a significant factor for attracting FDI to Nigeria.

Seetanah and Khadaroo (2005) investigated the impact of foreign direct investment (FDI) on economic growth for a panel of 39 Sub-Saharan African Countries for the period 1980-2000. The study employed both static and dynamic panel data estimates, results from the analysis suggested that FDI is an important element in explaining economic performance of Sub-Saharan African Countries. Onu and Njifti (2010) examined the causal relationship between foreign direct investment and economic growth in Nigeria between the period 1986-2007. Employing Granger causality test, the study found that a unidirectional relationship exist between GDP and FDI. They concluded that GDP caused FDI and not otherwise.

Wang (2002) used data from 12 Asian economies over the period of 1987-1997 and found that FDI in manufacturing sector has a significant and positive effect on economic growth in the host economies while FDI in non-manufacturing sectors did not play a significant role in enhancing economic growth. Akinlo (2004) investigated the impact of FDI on economic growth in Nigeria using data for the period 1970 to 2001. The Error Correction Model (ECM) showed that both private capital and lagged foreign capital have little and insignificant impact on economic growth.

Jerome and Ogunkola (2004) assessed the magnitude, direction and prospects of Foreign Direct Investment (FDI) in Nigeria. They noted that while the foreign direct Investment (FDI) regime in Nigeria was generally improving, some serious deficiencies remained. These deficiencies are mainly in the area of the corporate environment (such as corporate law, bankruptcy, labour law etc.), and institutional uncertainly, as well as the rule of law. The establishment and the activities of the Economic and Financial Crimes Commission (EFCC), the Independent Corrupt Practices Commission, and the Nigerian Investment Promotion Commission are efforts to improve the corporate environment and uphold the rule of law.

Ayadi (2009) examined the relationship between FDI and economic growth in Nigeria. He applied the rho’s rank correlation and causality test in exploring the possible links between FDI and economic growth in Nigeria. He concluded that
the link between FDI and economic growth in Nigeria is very weak. However, FDI is found to be related to export growth while human capacity building is found to be related to FDI flow. Ilemona (2010), in his study examined the impact of Foreign Direct Investment on economic growth in Nigeria using foreign direct investment, exchange rate and total domestic savings as the explanatory variables and employed the OLS regression technique, the result showed that FDI has significant impact on economic growth in Nigeria. Orji and Mba (2010) studied the relationship between foreign private investment (FPI), capital formation and economic growth in Nigeria. Using the two-stage least squares (2SLS), they found that FPI has a negative impact on capital formation and economic growth is significantly determined by FPI and capital formation, in addition to other factors. Also, it was revealed that the long-run impact of capital formation and FDI on economic growth is larger than their short-run impact.

Saibu, Nwosa and Agbeluyi (2011) examined the effects of financial development and foreign direct investment on economic growth in Nigeria. Using time series from 1970 to 2009, the study tested for the time series properties of the variable and adopted the Autoregressive Distributed Lag (ARDL) technique to estimate the model. The result showed that financial development and foreign direct investment had negative effects on economic growth in Nigeria. Adeniyi, Omisakin, Egwaikhide and Oyinlola (2011) examined the causal linkage between foreign direct investment (FDI) and economic growth - in Cote’ d’Ivoire, Gambia, Ghana, Nigeria and Sierra Leone - with financial development accounted for over the period 1970-2005 within a tri-variate framework which applies Granger causality tests in a Vector Error Correction (VEC) setting. Three alternative measures of financial sector development - total liquid liabilities, total banking sector credit and credit to the private sector - were employed to capture different ramifications of financial intermediation. Their results supported the view that the extent of financial sophistication matters for the benefits of foreign direct investment to register on economic growth in Ghana, Gambia and Sierra Leone depending on the financial indicator used. Nigeria, on the other hand, displayed no evidence of any short- or long-run causal flow from FDI to growth with financial deepening accompanying.

**Theoretical framework**

Theories play an important role in shaping legal attitudes both nationally and internationally. Theories of FDI asserted that the basis for such investment lies in the transaction costs of transferring technical and other knowledge. Renewed research interest in FDI stemmed from the change of perspectives among policy
makers from “hostility” to “conscious encouragement,” especially among developing countries like Nigeria. FDI had, until recently, been seen as “parasitic” and retarding the development of domestic industries for export promotion. However, Bende-Nabende and Ford (1998) submitted that the wide externalities in respect of technology transfer, the development of human capital and the opening up of the economy to international forces, among other factors, have served to change the former image. Caves (1996) observed that the rationale for increase efforts to attract more FDI stemmed from the belief that FDI has several positive effects. Among these are productivity gain, technology transfers, introduction of new processes, managerial skills and know-how in the domestic market, others are employee training, international production networks, and access to markets. Carkovic and Levine (2002) noted that the economic rationale for offering special incentives to attract FDI frequently derives from the belief that foreign investment produces externalities in the form of technology transfers and spill-over. According to Althukorala (2003), FDI provides much needed resources to developing countries such as capital, technology, managerial skills, entrepreneurial ability, brand and access to markets which are essential for developing countries to industrialize, develop, create jobs and attack the poverty situation in their countries. Dauda (2007) argued that FDI is generally believed to propel economic growth in developing countries as it makes significant contributions to the host country’s development process especially through easing of the constraints of low levels of domestic savings and investment as well as foreign exchange shortages. He further argued that FDI increases the GDP and generates a stream of real incomes in the host country. The increased productivity benefits local income groups through higher wages and expanded employment, lower product prices paid by consumers, rent to local resource owners, and high tax revenue or royalties to the government.

**Research Methodology**

This paper made use of the econometric procedure in estimating the relationship between foreign direct investment and economic growth in Nigeria. The ordinary Least Square (OLS) technique was employed in obtaining the numerical estimates of the coefficients in different equations. The OLS method is chosen because it possesses some optimal properties; its computational procedure is fairly simple and it is also an essential component of estimation techniques. The estimation period covered 1980 to 2010. The study covered this period because the country embraced trade liberalization during the period. The data for this study were obtained mainly from secondary sources, particularly from Central Bank of Nigeria (CBN) publications of various issues.
Model specification
The model used in this research work was a modification from the work of Balasubramanyam (1996) which in the work, model used included variables such as inflation, foreign debt, exchange rate, a political dummy. The model was later adjusted by Chete (1998) by looking at the effect of some other independent variables like (Foreign direct investment, exchange rate, inflation, investment and total export) on economy growth. The model took a lead from Solow’s Production function framework, which has been used extensively to analyse the determinants of growth in developing countries. The testing of the hypotheses that involves the estimation of a function, which relates growth of aggregate output to growth of factor inputs, and to a variable representing growth of total factor productivity. The equation estimated is derived from the following basic neoclassical growth equation, which can be extended to any number of inputs (Chenery and Strout, 1966). However, Chete (1998) viewed the variable representing external influence on FDI as also depending on the real growth of gross domestic Product (GDP) such that a simultaneous counterpart model to equation posited by Balasubramanyam (1996) which earlier included inflation, foreign dept and political dummy can be written as:

$$GDPg = b0 + b1FDI + b2EXR + b3INF + b4INV + b5EXP + U2t$$

Chete (1998) model was therefore adapted for this study.

Where:
- GDPg = Real growth rate of GDP
- EXP = Total Exports
- FDI = Foreign Direct Investment
- INF = Inflation rate
- EXR = Exchange rate
- INV = Total Investment

Result Of Analysis

Trend Analysis
The chart below shows the trend of real GDP, FDI, investment, inflation rate and exchange rate. A close range look at the data for total export shows a continuous upward trend over the years, this also applies to exchange rate which likewise moves upward over the years. Data for FDI show up and down trend. Unstable data over the years, show that foreign investment in the country has not been stable but has been increasing and decreasing. The trend displayed by the data for inflation rate also shows the unstable nature of price level in the country, while the data for investment and real GDP show how these two variable have maintained a continuous increment over the years.
Presentation of Ordinary Least Square Result

Table 1: Regression Result

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>206345.8</td>
<td>10437.59</td>
<td>19.76950</td>
<td>0.0000</td>
</tr>
<tr>
<td>EXPO</td>
<td>0.018167</td>
<td>0.005943</td>
<td>3.057020</td>
<td>0.0056</td>
</tr>
<tr>
<td>EXR</td>
<td>972.5147</td>
<td>160.4431</td>
<td>6.061432</td>
<td>0.0000</td>
</tr>
<tr>
<td>FDI</td>
<td>0.064059</td>
<td>0.493181</td>
<td>0.129889</td>
<td>0.8978</td>
</tr>
<tr>
<td>INF</td>
<td>469.1081</td>
<td>360.4556</td>
<td>1.301431</td>
<td>0.2060</td>
</tr>
<tr>
<td>INV</td>
<td>0.083270</td>
<td>0.026786</td>
<td>3.108726</td>
<td>0.0049</td>
</tr>
</tbody>
</table>

R-squared: 0.978390
Adjusted R-squared: 0.973692
S.E. of regression: 25929.79
F-statistic: 208.2669
Prob(F-statistic): 0.000000

Mean dependent var: 344929.6
S.D. dependent var: 159867.1
Akaike info criterion: 23.34616
Durbin-Watson stat: 0.796977

Interpretation of Regression Result
The above results will be further analyzed sequentially as follows:

A Priori Expectation: It is expected that from this research, FDI, Investment, total export and exchange rate will have a positive relationship with real GDP, while inflation rate will impact negatively on growth.

i.e \( \alpha_1, \alpha_2, \alpha_3, \alpha_4 > 0 \) and \( \alpha_5 < 0 \),

The result of the regression output above however shows that the coefficients of FDI, EXPORT, Exchange rate (EXC) and Investment (INV) are rightly signed and they follow the positive sign a priori expectation, while the coefficient of inflation rate (INF) is wrongly signed.

T-statistics: the table below shows the analysis of the decision rule for acceptance or rejection of the null hypothesis that each of the parameter estimates differs significantly from zero.
Testing for significance in table 2 above, the coefficient of export, exchange rate and investment (INV) show a p-value of 0.0056, 0.0000 and 0.0049 respectively, indicating the significance of each of these variables at 5% level of significance. While the p-values of FDI and inflation rate (INF) show a p-value of 0.8978 and 0.2060 respectively, implying that the estimates of the coefficients of FDI and INF are insignificant at 5% critical value.

Coefficients of Explanatory Variables: From the table above, the coefficient of the parameter estimate of Total export (EXPO) shows a value of 0.018167, value that indicates a positive relationship with growth as expected and significant at a p-value of 0.0056. Therefore, a change in the level of export increases the income level in the economy by 0.018 percent. Also, the coefficient of Exchange rate (EXR) is significant at a p-value of 0.0000; this gives a positive value of 972.5147 as expected. Hence a change in the naira to dollar rate increases the value of Nigeria GDP to the level of 972.51 percent. The coefficient FDI gives a value of 0.064059 showing that FDI has a positive relationship with growth in Nigeria. This relationship is however not significant as indicated by the p-value of 0.8978, hence FDI is said to have a positive but not significant impact on growth in Nigeria. In similar vein, inflation rate (INF) shows a positive coefficient value of 469.108, this does not follow apriori expectation, the p-value of 0.2060 further confirms its insignificance. Finally, investment (INV) is positively related with growth, with a coefficient value of 0.083270, this is significant at a p-value of 0.0049 and follows apriori expectation. Hence investment is said to be positively related to growth in Nigeria.

Coefficient of Determination (R-Square) And the Adjusted R-Square: The R2 Is 0.97 in the model showing that the explanatory variables explain about 97 percent of changes in the dependent variable. It remains strong even after adjusting
for the degree of freedom and stands at 0.97. To be precise, the adjusted R2 is 97 percent. By implication, this shows that over 90 percent of the variations in Real GDP can be explained by the explanatory variables taken together. The remaining 3 percent variations can be attributed to other forces outside the model. These results show a goodness of fit of the regression.

**F- Statistic:** The F-statistic which measures the overall statistical significance of the model and explanatory variables in explaining the dependent variable was found to be statistically significant at 1% level. This shows that the model employed is of high reliability. The F-statistic value of 208.3 and its corresponding p-value of 0.0000, when compared with F-statistic (tabulated) at 1% level of significance which gives a value of 4.22 which is less. This indicates that the null hypothesis (Ho) should be rejected.

**The Durbin-Watson Statistical Test:** The Durbin-Watson statistic of 0.79 rules out the absence of auto-correlation hence, we accept the null hypothesis for the presence of autocorrelation among the disturbance terms in the model.

**Summary of Findings**
Following the result of the regression estimate of this research, it indicates that total export is positively and significantly related to growth in Nigeria. Exchange rate impacts positively and significantly on growth in Nigeria. Investment impacts positively and significantly on growth. Inflation rate does not have a significant impact on growth in Nigeria, while FDI though has a positive relationship does not have a significant impact on growth in the economy. The findings above are in line with that of Obida and Abu (2010), who asserted that the role of foreign direct investment in the development of Nigerian economy cannot be over emphasized. They further stressed that Foreign direct investment provides capital for investment, it enhances job creation and managerial skills, and possibly technology transfer. Foreign direct investment (FDI) not only provides developing countries (including Nigeria) with the much needed capital for investment, it also enhances job creation, managerial skills as well as transfer of technology. All of these contribute to economic growth and development.

Findings also show that investment impacts positively and significantly on economic growth in Nigeria. This implies that investment regulatory environment in Nigeria is favourable to business both foreign and domestic ones.
Conclusion

Since the regression results show that the export, exchange rate and investment enhance the economic growth of the country while FDI and inflation rate, though with a positive relationship with growth, do not have a significant impact on growth in Nigeria. This can be attributed to the fact that with current increased in-flow of foreign capital, Sub-Saharan African (SSA) countries including Nigeria are still characterized by low per-capita income, high unemployment rates and low and falling growth rates of GDP.

Based on the above, it can be deduced that though the experience of other developing countries give contradicting reports on the determinant effect of Foreign Direct Investment, the Nigerian case is a bit different in that Foreign Direct Investment has a positive but insignificant effect on GDP growth rate of Nigeria. By implication issues on foreign direct investment should not be ignored in policy decisions aimed at promoting the economic development of Nigerian. Consequently, steps to attract more foreign direct investment should be undertaken by the Nigerian government as one of the ways of boosting the Nigerian economy. Nigeria government should strive to reduce exchange rate distortions and or misalignment, increase export of locally manufactured goods and raw materials in a bid to raise value of the local currency, the naira; earn more foreign exchange and allow market forces to properly fix exchange rate. And adequate efforts should be made to mobilise desired gross national savings which would be big enough to attract direct foreign investment that will complement domestic savings towards rising capital formation to a level needed for industrial growth and development that will raise GDP growth in Nigeria.
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