A COST-BENEFIT ANALYSIS OF FOREIGN DIRECT INVESTMENT INFLOWS INTO NIGERIA

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ABSTRACT
This paper is focused on the benefits and costs of foreign direct investment (FDI) in Nigeria. The effects of FDI on economic growth and development for the period 1970-2009 were analyzed using the annual series data of manufacturing firms sourced from Central Bank of Nigeria and National Bureau of Statistics (NBS). We employed ordinary least squares (OLS) regressions in estimating the parameters of the models used, and the empirical analysis was conducted using unit root analysis by using Augmented Dickey-Fuller test. The time series properties of the variables considered were also investigated using pair wise Granger causality test. It was found out that FDI has a positive and significant relationship with the real gross domestic product. We therefore concluded that FDI creates no significant problems for Nigerian economy.

Keywords: Foreign Direct Investment, Economic Growth, Manufacturing firms, Stationarity

INTRODUCTION

Foreign Direct Investment (FDI) occurs when an investor based in one country (the home country) acquires an asset in another country (the host country) with the intent of managing the asset. The purchase of the asset occurs in a way that allows the foreign investor to control the means of production, distribution or other activities associated with goods or services in the host country (Moosa, 2002). FDI is defined by the World Bank as “an investment made to acquire a lasting management in an enterprise operating in a country investment other than that of the investor. In general, investment which includes at least 10% ownership of an enterprise is considered as FDI. As globalization of production process by transnational corporations gained greater momentum in

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In the 1990s, a lot of developing countries were motivated to liberalize their economies as well as removing other impediments to FDI flows. This is obvious, because of external debt overhanging on majority of them which constitutes a serious obstacle to their development efforts. Debt service obligations in many of these countries take up substantial part of scarce budgetary resources that could have been directed towards the productive and social sectors of the economies. What is required apart from debt forgiveness is the flow of extend capital that is non-debt prone into the productive sectors of the economies. In this scenario, FDI option is expected to provide the only alternative. This is because a part from being non-debt creating investment, FDIs are simultaneous packaged with managerial and technological expertise. Many schools of thought argue that FDI may have positive effects on a host country’s development efforts (Markusen, 1999).

In addition to the direct capital financing it supplies, FDI is a source of valuable technology and know-how while fostering linkages with local firms, which can help jump start an economy. Based on this argument, industrialized and developing countries have incentives to encourage foreign direct investment in their economies. However, the special merits of FDI and in particular, the kinds of incentives offered to foreign firms in practice have begun to be questioned. This is anchored on the empirical evidence of FDI generating positive spillover for host countries which is ambiguous at micro and macro levels (See Kokko, 1994; Haddad and Harrison, 1993; Aitken and Harrison, 1999). There is abound literature which revealed the deleterious impacts of foreign investment on development efforts of host countries (Adelegan, 2000; Greenaway and Georg, 2002; Aseidu, 2002; Akinlo, 2004 and, Jerome and Ogunkola, 2004).

The empirical linkage between FDI and its related benefits in Nigeria is yet unclear, despite numerous studies that have examined the influence of FDI on Nigerian economic growth. In addition to this, the benefits of FDI on the economy is more contentious in empirical than theoretical studies, hence the need to examine the relationship between FDI and growth in different economic dispensations. For example, Adeolu (2006) showed a positive relationship between FDI and economic growth. Eke, (2003) concluded that FDI determines real development in Nigeria and that foreign capital inflow is growth path-dependent. Similarly, Adofu (2010) found that about 28% increase in GDP is explained by FDI inflow. This study is basically concerned with the analysis of the benefits and cost of FDI in Nigeria between 1970 and 2009 with focus on FDI in manufacturing sector of Nigerian economy. This is quite a deviation from previous studies which focused mainly on the benefits of FDI.

**LITERATURE REVIEW**

Foreign direct investment brings benefits and costs to both home and host countries. These impacts may be economic, political socio-cultural. It also contributes to economic growth in recipient countries by adding to the existing capital stock in the host country and stimulating technical
progress or by creating new jobs. Studies carried out by Lipsey, (2000) confirmed that FDI inflows into Canada increased capital formation. For other countries, there was no significant effect of FDI for either inflows or outflows on capital formation. Borensztein et al. (1998) ruled out the possibility that FDI inflows contribute to economic growth by increased capital stock in the country. In their view, FDI crowds out domestic investment based on empirical investigation carried out using 69 LCDs data. There are also empirical investigations confirming that FDI is instrumental to economic growth by means of stimulating technological progress. Borensztein et al. (1998) found a positive impact of FDI on growth through technology spillover that is labor-augmenting. This spillover effects hinge on the presence of a threshold level of educated labor force in recipient countries. Obadan, (2004) discovered a positive relationship between economic growth and FDI inflow. The influence of FDI on firm level productivity in Nigeria and a positive spillover effect of foreign firm on domestic firm’s productivity was also assessed by Ayanwale and Banire, (2004). Ruxanda and Muranu, (2010) studied the relationship between FDI and economic growth in Romanian economy using simultaneous equation models and concluded that incoming FDI stimulates economic growth and in its turn, a higher GDP attracts FDI.

Investigating the relationship between FDI and economic growth based on a panel of 84 countries using single and simultaneous equations, Li and Liu (2005) discovered that FDI affects growth indirectly via its effects on human capital. Durham, (2004) suggested that the effects of FDI are contingent with absorptive capability of host counties, but failed to establish a positive relationship between FDI and growth. Adeolu, (2006) confirmed from the findings of his work that FDI contributes positively to Nigerian economy but FDI in the manufacturing sector had a negative relationship with the economic growth. This suggested that the business climate was not healthy enough for the manufacturing sector to thrive and contribute to the positive economic growth of Nigeria. Prominent among the empirical contributors to FDI argument is Ogbokor, (2005) who examined the role of exports and FDI on the growth of Namibian economy for the period 1991–2001. He employed a combination of bivariate and multivariate models and concluded that FDI and exports promote economic growth potentials. The view that the developing countries should draw on FDI to create economic development was criticized by Nunnenkamp and Spatz, (2003). They opined that the growth impacts of FDI are ambiguous due to highly aggregated FDI data. In his empirical examination of the impact of FDI on growth, Otepola (2002) concluded that FDI contributes significantly to growth especially through exports. He recommended a mixture of practical government policies to attract FDI to the priority sectors of the economy.

**EFFECTS OF FDI ON ECONOMIC GROWTH**

The effects of FDI on economic growth and its attendant potential costs are prominent in the literature. FDI creates employment opportunities in the host countries through direct employment for operations in the domestic economy, backward and forward linkage (enterprises that are supply
subcontractors or service providers), and growth in the economy that leads to further employment generation in the economy (Baldwin, 1995 and Pugel, 1985). FDI can be a vehicle to generate growth and hence bring about poverty reduction. For this to happen, there must be significant growth need that should be sustained over a reasonable period of time (Dollar and Kraay, 2000 and Kakwani, 2000). There are often some doubts about the catalyst role of FDI in the growth process. It is true that FDI brings both costs and benefits that must be properly evaluated at the point of decision making on the best policy approach that must be adopted. The evaluation will inevitably be country specific FDI is not without its negative impacts. While positive aspects of FDI have been explored, it does not mean that it cannot lead to undesirable outcomes. In some cases, these negative trends are not avoidable. They are results of distortions and inefficiencies in the domestic economy which can be avoided through appropriate policy tools and a sound regulatory framework (Sun, 2002). It is often said that foreign investors take away investment opportunities for the local investors. The major employer of labor (SMEs) in Nigeria will have to be shut down because of the keen competition with which they may not keep pace. Thus, unemployment is one of the crowding out effects of FDI (Ajayi, 2003 and Ekpo, 2001).

Theoretical Framework
The positive correlation between FDI and economic and development is situated in growth theory that emphasized the role of improved technology, efficiency and productivity in promoting growth and development (Lim, 2001). FDI is seen as a way of filling in the gaps between domestically available capital stock and the planned or desired levels of capital stock necessary to achieve growth and development targets. Thus, the effects of FDI on economic growth and development are analyzed in the standard growth accounting framework. We assume that the capital stock consists of domestic and foreign owned capital stock. It is written as following:

\[ K_t = k_{dt} + k_{ft} \] (Solow, 1956)

(1)

However, the two components are specified separately in Cobb-Douglas production function as following:

\[ Y_t = f(A_t, K_{dt}^{\alpha}, K_{ft}^{\lambda}, L_t^{\beta}, H_t^{\theta}) \]

(2)

Where \( Y_t \) is the flow output, \( K_{dt} \), \( K_{ft} \) represent the domestic and foreign owned capital stocks respectively. \( L \) is the labor, \( H \) is the human skill capital stock and \( A \) is the total factor productivity which explains the output growth that is not accounted for by the growth in the factors of production specified. Taking the logs and differentiating equation (2) with respect to time. We have the growth equation:

\[ Y_t = a_t + \alpha k_{dt} + \lambda k_{ft} + \beta L_t + \theta H_t \]

(3)
where the lower case letters represent the growth rates of output, domestic capital stock, foreign capital stock, labor and human capital. Their respective elasticity coefficients are denoted by $\alpha$, $\lambda$, $\beta$ and $\theta$. Following the established practice in the literature, $kd$ and $kt$ are proxies by domestic investment to GDP ratio and FDI to GDP ratio respectively in view of the problem associated with the measurement of capital stock. The empirical form of equation (3) as given below:

$$Y_t = a_t + \alpha k_{dt} + k_{ft} + \beta_{lt} + \theta_{ht} + \mu_t$$  \hspace{1cm} (4)

where $\mu_t$ is an error term

**DATA AND METHODOLOGY**

The annual series data required for this study include real gross domestic product, foreign direct investment, exchange rate, inflation rate, import, unemployment level, balance of trade. The data were sourced from Central Bank of Nigeria (CBN) and National Bureau of Statistics (NBS) statistical bulletins for the period 1970–2009. Multiple regression analysis was employed in the study just as the estimates of the models were obtained by employing ordinary least square (OLS) after necessary test on reliability of the data were conducted. Correlation analysis was used to determine the nature and strength of the relationship between the dependent and independent variables. While t and F statistics were used to carry out statistical significance at 95% confidence level, coefficient of determination ($R^2$) were used to judge the strength of the estimated regression equation. Durbin Watson statistic was also employed to test for the presence of serial correlation. In order to prevent spurious results, stationarity of the data used was checked for unit root using Augmented Dickey-Fuller (ADF) test. Pair-wise Granger causality test was also carried out to determine whether change in one variable is caused by another along with co-integration test using Johansen, (1988) technique.

**Model Specification**


**Model I: (Benefits of FDI)**

$$\ln \text{RGDP} = f(\ln \text{FDI}, \ln \text{Inf}, \text{Exr}, \ln \text{Infrac}, \text{BOT})$$  \hspace{1cm} (5)

where $\ln \text{RGDP} = \log$ form of real Gross Domestic Product.
Inf = Inflation Rate
ln FDI = log form of FDI
Exr = Naira Exchange Rate to the US Dollar
lnInfrac = log form of infrastructural development (total electricity consumption)
BOT = Balance of Trade

Specifically, the postulated model is as following:

\[
\ln \text{RGDP} = \beta_0 + \beta_1 \ln \text{FDI} + \beta_2 \text{Inf} + \beta_3 \text{Exr} + \beta_4 \ln \text{Infrac} + \beta_5 \text{BOT} + \mu
\]  (6)

where \(\ln \text{RGDP}\) is the dependent variable, \(\ln \text{FDI}, \text{Inf}, \text{Exr}, \ln \text{Infrac}, \text{BOT}\) are independent variables, \(\mu\) is the error term and \(\beta_i\)'s are parameters to be estimated. The dependency school of thought insists that there is deleterious long term impact of FDI on growth. The adverse effects include inflation, unemployment profit repatriation, and balance of payment disequilibrium. In this study, our analysis is focused on inflation and unemployment. This suggests that a general empirical model of the costs of FDI on Nigerian economy can be formulated.

**MODEL 2: (Cost of FDI)**
Following Obadan (2004), the model below was adopted:

\[
\ln \text{Unemp} = f(\ln \text{FDI}, \text{Inf}, \ln \text{Infrac}, \text{Import})
\]  (7)

Specifically, the model becomes as following:

\[
\ln \text{Unemp} = \alpha_0 + \alpha_1 \ln \text{FDI} + \alpha_2 \text{Inf} + \alpha_3 \ln \text{Infrac} + \alpha_4 \text{Import} + \mu
\]  (8)

Where \(\ln \text{Unemp}\) = Unemployment level in log form
\(\ln \text{FDI}\) = log form of FDI
\(\ln \text{Infrac}\) = Infrastructural Development (in log form)
\(\text{Inf}\) = Inflation rate
\(\alpha_i\)'s are parameters estimated through Ordinary Least Square technique.

**Model 3: (Cost of FDI)**
This empirical equation of monetary policy and inflation in Nigeria is modeled as following:

\[
\text{Inf} = f (\ln \text{FDI}, \text{Exr}, \ln \text{Unemp}, \ln \text{Govt}, \ln \text{M}_2, \text{Intr})
\]  (9)

Specifically,
\[ \text{Inf} = \lambda_0 + \lambda_1 \ln\text{FDI} + \lambda_2 \ln\text{Exr} + \lambda_3 \ln\text{Import} + \lambda_4 \ln\text{Unemp} + \lambda_5 \ln\text{Govt} + \lambda_6 \ln\text{M}_2 + \lambda_7 \ln\text{Intr} + \mu \]  
\hspace{2cm} (10)

where  \( \text{Inf} \) = inflation rate is a dependent variable  
\( \ln\text{FDI} \) = log form of FDI  
\( \ln\text{Govt} \) = log form of Govt. expenditure  
\( \ln\text{M}_2 \) = Broad Money Supply (in log form)  
\( \ln\text{Intr} \) = Interest Rate  
\( \mu \) = Error term

**EMPIRICAL ANALYSIS AND RESULTS**

In order to make the impact of FDI on GDP growth to be sustained, we checked the time series properties of the variables. The data was tested for unit root by using Augmented Dickey-Fuller and pair-wise Granger causality tests.

![Table-1](image)

<table>
<thead>
<tr>
<th>Variables</th>
<th>ADF statistics</th>
<th>Critical value 1%</th>
<th>Critical value 5%</th>
<th>Critical value 10%</th>
<th>Order of Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>RGDP</td>
<td>0.9716</td>
<td>-3.6228</td>
<td>-2.9446</td>
<td>-2.615</td>
<td>I(0)</td>
</tr>
<tr>
<td>FDI</td>
<td>3.2742</td>
<td>-4.2324</td>
<td>-3.5386</td>
<td>3.2009</td>
<td>I(0)</td>
</tr>
<tr>
<td>M2</td>
<td>2.1035</td>
<td>-4.2324</td>
<td>-3.5386</td>
<td>-3.5386</td>
<td>I(0)</td>
</tr>
<tr>
<td>EXCR</td>
<td>0.1182</td>
<td>-3.6228</td>
<td>-2.9446</td>
<td>-2.610</td>
<td>I(0)</td>
</tr>
<tr>
<td>INFRACT</td>
<td>-1.7510</td>
<td>-4.2324</td>
<td>-3.5386</td>
<td>-3.2009</td>
<td>I(1)</td>
</tr>
<tr>
<td>BOT</td>
<td>-1.9404</td>
<td>-4.2324</td>
<td>-3.5386</td>
<td>-3.2009</td>
<td>I(1)</td>
</tr>
<tr>
<td>EXPORT</td>
<td>1.8412</td>
<td>-3.6228</td>
<td>-2.9446</td>
<td>-2.6105</td>
<td>I(0)</td>
</tr>
</tbody>
</table>

From table 4.1, almost all the variables are stationary except INFRAC and BOT but are stationary at first difference (Gujarati, 2004).

In Table-2, Granger causality test shows that \( \ln\text{RGDP} \) Granger causes \( \ln\text{FDI} \) while \( \ln\text{FDI} \) does not Granger cause \( \ln\text{RGDP} \). This is unidirectional causality from \( \ln\text{RGDP} \) to \( \ln\text{FDI} \). The second hypothesis shows that \( \ln\text{FDI} \) Granger causes Inf, showing a unidirectional causality between \( \ln\text{FDI} \) and inflation. Bilateral causality is shown by the third hypothesis while the fourth hypothesis shows unidirectional causality. This is based on the relationship between the estimate F and the critical value of 10%.

![Table-2](image)

<table>
<thead>
<tr>
<th>Null Hypothesis</th>
<th>Observations</th>
<th>F-Statistic</th>
<th>Prob.</th>
<th>Decision</th>
<th>Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \ln\text{FDI} ) does not granger cause ( \ln\text{RGDP} )</td>
<td>37</td>
<td>0.7672</td>
<td>6.473</td>
<td>Accept</td>
<td>No causality</td>
</tr>
<tr>
<td>( \ln\text{RGDP} ) does not granger cause ( \ln\text{FDI} )</td>
<td>37</td>
<td>3.2390</td>
<td>0.053</td>
<td>Reject</td>
<td>Causality</td>
</tr>
<tr>
<td>( \ln\text{RGDP} ) does not granger cause Inf.</td>
<td>37</td>
<td>1.9129</td>
<td>0.164</td>
<td>Reject</td>
<td>Causality</td>
</tr>
<tr>
<td>Inf does not granger cause</td>
<td>37</td>
<td>0.8857</td>
<td>0.423</td>
<td>Accept</td>
<td>No causality</td>
</tr>
</tbody>
</table>
\[ \text{InFDI does not granger cause InUnemp} \quad 37 \quad 4.6876 \quad 0.016 \quad \text{Reject} \quad \text{Causality} \]

\[ \text{InUnemp does not granger cause InFDI} \quad 37 \quad 3.5393 \quad 0.04 \quad \text{Reject} \quad \text{Causality} \]

\[ \text{Exchr does not granger cause InRGDP} \quad 37 \quad 2.9599 \quad 0.067 \quad \text{Reject} \quad \text{Causality} \]

\[ \text{InRGDP does not granger cause Exchr} \quad 0.7015 \quad 0.503 \quad \text{Accept} \quad \text{No causality} \]

**Source:** Authors’ Computation

**Co – Integration Test**

Differencing of variables to achieve stationarity leads to loss of long run properties. The concept of co-integration implies that if there is a long run relationship between two or more non-stationary variables, deviation from this long run path implies stationarity. To establish this, Johansen (1988) technique was employed to obtain these results reported in Table-3.

**Table-3. Co-Integration Test Result for Model 1**

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Trace Test Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>122.85</td>
</tr>
<tr>
<td>At most 1</td>
<td>81.74</td>
</tr>
<tr>
<td>At most 2</td>
<td>51.32</td>
</tr>
<tr>
<td>At most 3</td>
<td>29.21</td>
</tr>
<tr>
<td>At most 4</td>
<td>11.14</td>
</tr>
<tr>
<td>At most 5</td>
<td>0.012</td>
</tr>
</tbody>
</table>

**Source:** Authors’ Computation

**Table-4. Co-Integration Test Result for Model 2**

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Trace Test Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>101.2</td>
</tr>
<tr>
<td>At most 1</td>
<td>45.88</td>
</tr>
<tr>
<td>At most 2</td>
<td>17.14</td>
</tr>
<tr>
<td>At most 3</td>
<td>4.66</td>
</tr>
<tr>
<td>At most 5</td>
<td>0.05</td>
</tr>
</tbody>
</table>

**Source:** Authors’ Computation

**Table-5. Co-Integration Test Result for Model 3**

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Trace Test Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>161.77</td>
</tr>
<tr>
<td>At most 1</td>
<td>90.62</td>
</tr>
<tr>
<td>At most 2</td>
<td>50.83</td>
</tr>
<tr>
<td>At most 3</td>
<td>27.38</td>
</tr>
<tr>
<td>At most 4</td>
<td>10.78</td>
</tr>
<tr>
<td>At most 5</td>
<td>0.206</td>
</tr>
</tbody>
</table>

**Source:** Authors’ Computation
Table-6. Regression Result for Model 1

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>t-statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>lnFDI</td>
<td>0.237</td>
<td>0.134</td>
<td>1.777</td>
<td>0.086</td>
</tr>
<tr>
<td>Inf</td>
<td>-0.002</td>
<td>0.002</td>
<td>-0.709</td>
<td>0.086</td>
</tr>
<tr>
<td>Excr</td>
<td>-0.003</td>
<td>0.002</td>
<td>-1.942</td>
<td>0.060</td>
</tr>
<tr>
<td>lnInfrac</td>
<td>-0.884</td>
<td>0.1333</td>
<td>-6.638</td>
<td>0.000</td>
</tr>
<tr>
<td>BOT</td>
<td>-0.022</td>
<td>0.026</td>
<td>-0.821</td>
<td>0.417</td>
</tr>
<tr>
<td>Intercept</td>
<td>-1.556</td>
<td>0.603</td>
<td>-2.582</td>
<td>0.014</td>
</tr>
</tbody>
</table>

$R^2 = 0.877$ Adjusted $R^2 = 0.8591$, F-Statistic = 48.57, Durbin Watson statistic = 2.55

Table-7. Regression Result for Model 2

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>t-statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>lnFDI</td>
<td>0.210</td>
<td>0.2885</td>
<td>0.728</td>
<td>0.4718</td>
</tr>
<tr>
<td>Inf</td>
<td>-0.0007</td>
<td>0.006</td>
<td>-0.121</td>
<td>0.9045</td>
</tr>
<tr>
<td>lnInfrac</td>
<td>1.020</td>
<td>0.349</td>
<td>2.925</td>
<td>0.0064</td>
</tr>
<tr>
<td>Import</td>
<td>-0.054</td>
<td>0.036</td>
<td>-1.482</td>
<td>0.1465</td>
</tr>
<tr>
<td>Intercept</td>
<td>3.7817</td>
<td>1.365</td>
<td>2.7697</td>
<td>0.0094</td>
</tr>
</tbody>
</table>

$R^2 = 0.6339$, Adjusted $R^2 = 0.5867$, F-Statistic = 13.42, Durbin Watson statistic = 2.79

Table-8. Regression Result for Model 3

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>t-statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>lnFDI</td>
<td>-13.80</td>
<td>22.82</td>
<td>-0.605</td>
<td>0.550</td>
</tr>
<tr>
<td>Excr</td>
<td>-0.2412</td>
<td>0.124</td>
<td>-1.939</td>
<td>0.063</td>
</tr>
<tr>
<td>Import</td>
<td>-0.3241</td>
<td>1.117</td>
<td>-0.290</td>
<td>0.774</td>
</tr>
<tr>
<td>lnUnemp</td>
<td>-7.289</td>
<td>6.39</td>
<td>-1.14</td>
<td>0.2634</td>
</tr>
<tr>
<td>lnGovt</td>
<td>-9.319</td>
<td>11.90</td>
<td>-0.783</td>
<td>0.440</td>
</tr>
<tr>
<td>lnM2</td>
<td>18.44</td>
<td>13.78</td>
<td>1.339</td>
<td>0.1914</td>
</tr>
<tr>
<td>Intr.</td>
<td>0.982</td>
<td>0.653</td>
<td>1.504</td>
<td>0.144</td>
</tr>
<tr>
<td>Intercept</td>
<td>52.44</td>
<td>55.09</td>
<td>0.9518</td>
<td>0.3493</td>
</tr>
</tbody>
</table>

$R^2 = 0.5288$, Adjusted $R^2 = 0.4610$, F-Statistic = 19.59, Durbin Watson statistic = 2.58

Table-3 shows the result of the Johansen co integration test. In model 1, the value of trace statistic is more than the critical of value at 5% in three out of the five hypotheses indicating three co integrating equations. The model-2 shows one integrating equation at 5% level, while model-3 indicates three co integrating equations at 5% level in Table-4 and 5 respectively. Since the variables are co integrating, then there would be no loss of information. This implies that there exists a long run relationship between RGDP and FDI, Unemployment and FDI, inflation and FDI.

**Interpretation of Results**

The result reported in Table-6 show that the model is well behaved because the level of explanation of variation in RGDP by FDI, INF, EXCR, INFRAC and BOT is very high as represented by the high value of $R^2$. The adjusted $R^2$ also indicates that the model has good fit (85.91%) variation in
RGDP. The F-statistic in Table-7 of model-2 is highly significant at 1% level of significance. This shows that the model is statistically significant and all the estimates are significantly different from zero. The implication is that all the explanatory variables are good determinants of RGDP in Nigeria. Also, based on prior and statistical criteria from model-1, FDI of manufacturing firms has a positive and significant relationship with RGDP. This shows how beneficial and growth inducing FDI of manufacturing firms is to Nigerian economy ($t_{computed} = 1.777 > t_{tabulated} = 1.697$). From the lower values of Akaike and Schwartz criteria, it is obvious that model-1 is fit for forecasting.

The model-2 results show that the model is also well behaved since $R^2 = 63.39\%$. This implies that 64\% variations in unemployment is explained by the regression line. That means that FDI is one of the factors that affect the level of unemployment in Nigeria. The model is also statistically significant and all the estimates are significantly different from zero. That implies that all the explanatory variables are good determinants of the level of unemployment in Nigeria. The level of unemployment and inflation rate in model-2 are negatively related which conforms to the trade-off relationship between unemployment and inflation rate. Importation has a negative relationship with unemployment level, while infrastructural development has a positive relationship with unemployment level, both of which are theoretically in line. The Akaike and Schwartz criteria low values of model-2 conclude that the model is also fit for forecasting. The results of model-3 show a negative but insignificant relationship between FDI and inflation rate. Contrary to expectation that FDI inflow creates inflation in Nigeria, the result shows otherwise. This implies that inflation is not positively and significantly related to FDI inflow in Nigeria. However, interest rate and money supply have positive and significant effect on inflation rate in Nigeria. Nevertheless, other explanatory variables have negative relationship with inflation rate. The coefficient of determination $R^2$ shows that only 52.8\% variation in inflation rate is explained by the estimated regression line.

The evaluation of the adjusted $R^2$ in Table-8 of model-3 shows the explanatory power of the regression equation is low i.e. 46.1\%. The implication of this is that the FDI inflow, exchange rate and other independent variables did not significantly explain changes in inflation rate in Nigeria. From the summary of the analysis of this study, the so called negative impacts of FDI (inflation and increase in unemployment) are not significantly caused by FDI.

**CONCLUSION AND POLICY RECOMMENDATIONS**

Foreign direct investment as a development tool has its benefits and risks, and will only lead to economic growth in the host country under certain conditions. It is the responsibility of Nigerian government to make sure that certain conditions are in place so that FDI can contribute to development goals rather than just generating profiles for the foreign investors. Manufacturing FDI in Nigeria contributes positively and significantly to RGDP. FDI inflows should be channeled to
the non oil sector because the non-oil FDI (manufacturing FDI) has the potentials to improve our GDP. The negative relationship between inflation and RGDP suggests that the macroeconomic policies in place encourage growth. We had expected that ability to control inflation should reduce investment risks and enhance FDI and growth. We therefore assert that FDI does not lead to inflation, does not significantly lead to increase in unemployment and does not create significant problems in Nigerian economy as claimed by some school of thoughts. Increase in RGDP, technology transfer, sources of revenue (through taxation), employment generation, production of varieties of goods and essential services are some of the enormous benefits that FDI could bring to Nigerian economy. Hence, we can easily conclude that the benefits of FDI to Nigerian economy are more visible and they should be fully optimized, while the potential draw backs i.e. unemployment should be adequately reduced.

Foreign direct investment for manufacturing firms has a positive and significant relationship with real gross domestic product (RGDP). This confirms the fact that FDI for manufacturing firms has the potentials to encourage the growth of Nigerian economy if the potentials can be optimally explored. Since the FDI for manufacturing firm has a positive relationship with RGDP, it is expected that FDI will encourage increase in national products and income and reduction in poverty. This implies that attracting FDI is a viable strategy for promoting growth and poverty alleviation. From the cost analysis of the FDI, the FDI inflow is not inflationary. This is due to the fact that most of the FDI inflows in the manufacturing sector in Nigeria are not in form of creating new capital stock, but acquiring a minimum share of already existing companies through privatization. We also suggest that the tendency of FDI inflow leading to increase in unemployment level should be checkmated through efficient employment policy guides such as local content rules and regulations. Nigerian government should at the macro level encourage the inflow of FDI since it comes along with some positive effects on the economy. One way to improve business environment is by conscious provision of necessary infrastructures like power generation and distribution which will lower the cost of doing business in Nigeria. This will enable the manufacturing FDI to contribute more significantly to the economy. Finally, Nigerian government should improve on its efforts to attract FDI, especially into the manufacturing sector. This will improve our GDP, competition in industries and foreign exchange earnings.

REFERENCES


