Fiscal Policy and Foreign Direct Investment Inflow in a Developing Economy: The Nigeria Experience

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Abstract: This study analyzed the impact of fiscal approach on Foreign Direct Investment in Nigeria. The objectives of the study were to; examine the impact of government capital expenditure on foreign direct investment in Nigeria; examine the impact of corporate tax on foreign direct investment in Nigeria; and examine the impact of government debt on foreign direct investment in Nigeria. Based on the stated objectives; secondary data were collected from CBN statistical bulletin and empirical model was estimated using Augmented Dickey Fuller unit root test, co-integration test and complemented with ECM test. The results of the unit root test showed that all the variables were stationary at order one. Also there exist three co-integrating equations amongst the variables in the model. Similarly, the ECM results indicated that the speed of adjustment is 169.6%. Also, the R² of 63% showed that the model is a good fit. The coefficient of government total debt variable is positively related to FDI. The coefficient of corporate tax is negatively related with Foreign Direct Investment and the coefficient of government capital expenditure is positively related with Foreign Direct Investment. Thus, it could be concluded that a well-articulated and coordinated fiscal policy to attract foreign investment in Nigeria became essential for optimum growth and development of the economy. Therefore, it is recommended that Nigeria government must create enabling environment for foreign investment to thrive. Also, government should increase her capital expenditure and ensure a well combination and coordination of both fiscal and other policies to increase foreign direct investment in Nigeria.

Key Words: Fiscal Policy, Corporate Tax, Capital Expenditure, Government Debt and FDI

I. INTRODUCTION

In any economy structure, there is dependably the requirement for government to attempt exceptionally valuable actions aimed at shaping various developmental aspirations. One of such actions is fiscal policy. The relationship between fiscal policy, macroeconomic factors (such as inflation, growth, among others) and investment represents one of the most widely debated topics among economists and policy makers in both developed and developing countries (Saleh, 2003). This relationship can either be negative, positive or uncertain relationship. In this way, fiscal arrangement is intended to extend venture both in the private and open segment of the economy. It is also designed to diverse resources that are less socially desirable to those investments that have social desirability. The differences on the nature of the relationship between fiscal policy measures and these macroeconomic variables as well as investment as found in economic literatures could be explained by the methodology the country and the nature of the data used by the different researchers (Obayori, 2016).

There is no gain saying in the fact that the primary goal of fiscal policy is to achieve a reduction in unemployment level and spur growth. But an uncoordinated fiscal policy vis-à-vis favourable tax and government capital expenditure in infrastructural development could hinder foreign investment in an economy. This is because; investors would always want to associate themselves with an economy with favourable tax policy and availability of social amenities such as electricity, good road etc. Thus, appropriate fiscal policy such as government capital expenditure, favourable value added tax and company’s tax as well as debt to address macroeconomic problem as well as encourage foreign investment in any economy become necessary given that a poorly designed fiscal policy is an indicator of underdeveloped economy.

Svensson (1994) opined that fiscal approach such as tax incentive influence the area choice of organizations within regional economic groupings, for example, the EU, NAFTA, or ASEAN. The area choice of foreign companies within the US has also retained the attention of several researchers. Additionally, Morisset and Pirnia, (2000) opined that a home country’s taxation rules affect the effectiveness of tax incentives in the host country. Most FDI surges begin from OECD nations, with various administrations on how they impose the exercises of their multinationals abroad. For instance, the foreign tax paid by US companies can be claimed as a tax credit on the US tax liabilities (up to a rate of 35%).

Hines (1999) found that in the United States of America it is attractive for US firms to use debt to finance foreign investment in high tax countries (compared to the US) and equity in low tax countries. The contention is that the debt generates interest deductions for the subsidiary and so reduces its taxable income in the host country. Thus, the importance of the home country tax system can also be illustrated by the efforts of tax authorities to prevent the transfer of multinationals’ headquarters or other specific activities (such as R&D) to other countries.

Meanwhile, several growing nations now see attracting Foreign Direct Investment as an important element in their
plan for financial advancement. This is most probably because FDI is seen as amalgamation of capital, technology, marketing and management. This implies that for increased and sustainable economic growth and development to be achieved in these countries, there is need for increased levels of investment inflow and capital formation, arising from the activities of both domestic and foreign investors.

According to Cooley, Otto and Adeneye (2014), in order to attract foreign investment in Nigeria, the federal government granted amnesty to the Niger-Delta Militant in order to create conducive environment for the investors to thrive. Also, a wide range of incentives including reduction in bureaucracy in obtaining visa entry to Nigeria by foreign investor was announced, sending top government officials to abroad to campaign for FDI into Nigeria and establishing Nigeria Business Mission abroad entrusted with the task of selling the economic investment climate back at home. Similarly, in the year 2012, Nigeria made concerted effort to attract FDI. Precisely, late, in the year 2012, President Goodluck and his economic team embarked on business campaign abroad soliciting for foreign investors for the country. To boost his effort, he attempted to break the monopoly of the power sector which is one of the major challenges to investment drives. But all these are yet to yield appreciable results.

Moreover, in spite of government efforts at devising measures at overcoming inept fiscal policy in-term of favourable company tax, productive spending in infrastructures in order to attract foreign investors, reverse has always be the case in the Nation’s economy which its adverse effect is being perceived on key macro-economic variables. This make the effort of less developed nations, borrowing from international financial institutions and Central Bank to finance sizeable portion of the deficits contribute to liquidity and inflation. This is because rather than spending the borrowed money on capital expenditure such as building roads and expansion of electricity megawatt among others, to boost production and improve the standard of living of the people, which in turn, improve the country’s economic growth, this borrowed money has been used for recurrent expenditure.

To critically examined the impact of fiscal policy on FDI in Nigeria. The following questions were addressed:What is the impact of fiscal policy on Foreign Direct Investment in Nigeria?Does a fiscal policy tool such as government tax, debt and expenditure lead to increase in inflow of Foreign Direct Investment in Nigeria? It is the answers to these pertinent questions that fuelled this research work. The remaining parts of the paper examined literature review, methodology, result and discussion as well as conclusion.

II. LITERATURE REVIEW

Theoretical Literature: The Neoclassical Theory

The neoclassical market analysis theory forms the basis of the study. This is because; the neoclassical market analysts contend that FDI influences economic growth by expanding the measure of capital per individual. Moreover, the theory contends that the influence of fiscal policy measures such as government spending will help to attract the inflow of FDI in an economy.

Development in neoclassical hypothesis is realized by increments in the amount of variables of creation and in the proficiency of their designation. In a straightforward world of two components (labourand capital), it is regularly assumed that low-salary nations have bounteous work however rare capital (Bengos and Sanchez-Robles (2003)).

Economics hypothesis recommends that in free market economies capital will move from nations where it is copious to nations where it is scarce. This example of development will be informed by the profits on new investment opportunities, which are considered higher in a situation where capital is constrained. The resultant capital migration will boost investment in the beneficiary nation and, as summer (2000) recommends, brings tremendous social advantages. Underlying this theory is the premise that returns on capital decreases as more machinery is installed and new structures are built, although, practically speaking this is not generally or even by large true. Albeit economics hypothesis and experimental examinations have much to say in regards to where FDI may flow, both the hypothesis and the proof are less authoritative about the effect of such flows. Like trade, FDI is viewed as a two-path flow, with most of the major providers also being the major recipient. FDI is supposed at least theoretically, to be a positive sum game.

Foreign direct investments are mostly part considered as vehicle through which external infusion of innovation and capital finds their routes into creating nations of the world. This is typically embraced by the foreign multinational organizations or trans-national organizations as the case may be. According to World Bank and international monetary fund report (2012), FDI can be considered as the "net inflows of investment to acquire a lasting management premium (10 percent or a greater amount of voting stock) in a commission working in an economy other than that of the investor. It is the whole of value capital, reinvestment of earning, other longand short terms capital as appeared in a balance of payments".

Saleh (2003) disclosed that though FDI has been related with higher growth in a few nations, it has additionally been related with a higher incidence of predicaments. This striking revelation poses a lot of difficulties to how much is known already of FDI. One of these difficulties is the need to revisit the empirical framework underpinnings the basis of Foreign Direct Investment.

Empirical Literature

Empirical studies on the nexus between fiscal and FDI will be examined. For instance, Magdalena and Elena (2014) in their article on the effect of the fiscal and money related policies in appealing foreign direct investments in Romania in light of monthly time series between 2000–2010. They opined that
financial variables (essentially direct tax) appear to play a less critical role in the long run. In this way, Romania ought to likewise concentrate on enhancing the other non-money related factor that impact on the investment environment such as infrastructure, legal and political stability framework. Only then can the fiscal be effective in boosting in FDI and supporting the financial development.

Mihaela and Paula (2012) empirically examined fiscal policy and foreign direct investment from some Emerging European Union Economies Using a pooled data set comprising of yearly data over the period 2000-Latvia, Lithuania, Poland and Romania. Their outcomes recommended that financial competition between governments for FDI is not really a corporate tax competition, but rather a business domain one, which is determined essentially by fiscal arrangement.

Ateyah, Torki and George (2015) studied the effect of fiscal and the quantitative money related approach on the domestic and foreign direct investment in Jordan between the period of 2000 and 2011. The review found that there is a negative relationship between the re-discount rate and the domestic investment. While there is a positive correlation with cash reserve and domestic investment, because of the excess cash reserves at banks in Jordan. The review likewise demonstrated a negative relationship amongst assessments and local speculation, and a positive relationship between legislative capital spending and the domestic investment. The second sample demonstrates the impact of the fiscal policy and the quantitative monetary on Foreign Direct Investment. The study showed that there a negative and significant relationship between the re-discount rate and Foreign Direct Investment, while a positive relationship exist between taxes and Foreign Direct Investment. This is because government grants tax exemptions to encourage Foreign Direct Investment.

Niti (2010) examined the impact of fiscal policy on foreign direct investment inflows in India and selected Asian economies. The study used estimated panel equation with the Least Squared Dummy Variables approach. The study attempted to bridge the gap in literature by examining the impact of both the revenue and expenditure side of fiscal policy on FDI inflows in India and other select economies of the Asian region. The study identifies the determinants of FDI flows with special reference to fiscal policy variables, namely tax treaties and developmental expenditure of the government. The determinants which have emerged as significant are FDI openness and infrastructure.

Sury (2003) examines the possible effects of domestic taxes and rates of return on FDI in India. Using the econometric models given by Hartman (1984) for a sixteen-year sample period, i.e., 1985-2000, the effects of taxes on FDI in India are found to be quite strong. In general, the results show that an increase in the specific after-tax rate of return realized by foreign investors in India leads to an increase in foreign investment. Further, it has been found that an increase in the overall after-tax rate of return on capital in India leads to a fall in FDI. The results also indicate that a decline in the tax rate faced by an Indian investor relative to the tax rate faced by a foreign investor tends to cause a significant decrease in the level of foreign investment.

Kolawole and Odunbunmi (2015) analyzed government capital spending, FDI and economic growth in Nigeria from 1980 to 2012. The investigation was done by utilizing some econometric methods which included Ordinary Least Square (OLS), cointegration and Granger causality. Discoveries from the investigation showed that both of government capital spending and economic development granger causes each other, as a unidirectional causality was set up amongst economic development and FDI. Be that as it may, a Granger no-causality relationship existed between government capital spending and FDI. It was further discovered that government capital spending positively and significantly affected economic development.

Obida and Abu (2010) examined the determinants of foreign direct investment in Nigeria with the use of ECM method. The outcomes revealed that the market size of the host nation, deregulation, political instability, and exchange rate devaluation are the primary determinants of foreign direct investment in Nigeria.

III. METHODOLOGY

This study mainly employed secondary data relating to the dependent and independent variables, from 1980 to 2014. The data was sourced from: Central Bank of Nigeria statistical bulletin. Others sources include librarian and publications from the federal office of statistics.

Model Specification

In general term, the functional and econometrics specification of the model is provided in the equations below:

\[ FDI = F(GCX, GTX, GDT) \]  
\[ FDI = \theta_0 + \theta_1 GCX_t + \theta_2 GTX_t + \theta_3 GDT_t + U_t \]  
\[ \log FDI = \log \theta_0 + \log \theta_1 GCX_t + \log \theta_2 GTX_t + \log \theta_3 GDT_t + U_t \]

Where; FDI= Foreign Direct Investment, GCX= Government Capital Expenditure, GTX= Company Tax, GDT= Government Debt, U = Error Term, t= Time/Period

Techniques of Data Analysis

Unit Root Test

The unit root test includes testing the stationarity of combination of the individual data under thought. The unit root test utilized in this study is the Augmented Dickey-Fuller (ADF). Augmented Dickey-Fuller test depends on dismissing an invalid speculation of unit root (the arrangement are non-stationary) for the option theories of stationarity. The tests are directed with and without a deterministic pattern (t) for each
of the arrangement. The general type of ADF is evaluated by the accompanying equation is:

$$\Delta FDI_t = \theta + \theta_1 FDI_{t-1} + \delta + e_t \quad (4)$$

Where: FDI is a time series, t is a linear time trend, $\Delta$ is the first difference operator, $\theta_1$ is a constant, t-1 is the optimum number of lags in the independent variables and e is random error term.

**Johansen Co-integration Analysis Test**

The essence of co-integration is to ascertain the long run relationship of the dependent and independent variables of the study. Therefore, an absence of co-integration proposed that such variables lack long-run relationship. Co-integration is conducted in light of the test proposed by Johansen (1998). Johansen’s strategy takes its beginning stage in the vector auto regression (VAR) of order P given by

$$FDI_t = b + \Delta FDI_{t-1} + \ldots + \Delta P FDI_{t-p} + e_{1t} \quad (5)$$

Where: FDI is an nx1 vector of variables that are integrated of order commonly denoted (1) and e is an nx1 vector of innovations.

This VAR can be rewritten as

$$\Delta FDI_t = b + \eta_{Q_{t-1}, t} + \pi_{\Delta FDI_{t-1}, t} + e_{1t} \quad (6)$$

To decide the quantity of co-integration vectors, Johansen (1998) recommended two measurement tests, which are the trace test and the Max-Eigen test. It tests the null hypothesis that the number of distinct co-integrating vector is less than or equal to q against a general unrestricted alternatives $\pi = q$.

The test calculated as follows:

$$\pi_{\text{trace}} (q) = -T \ln \left(1 - \pi_q^T \right) \quad (7)$$

$$\pi_{\text{Max-Eigen}} (q) = -T \ln \left(1 - \pi_q^T \right) \quad (8)$$

Where: T is the number of usable observations, and the $\pi_1, s$ are the estimated eigenvalue.

**Error Correction Model**

In the event that cointegration is demonstrated to exist, then the third step requires the development of Error Correction Mechanism (ECM) to model element relationship. The motivation behind the ECM is to demonstrate the speed of conformity from the short-run balance to the long-run balance state. The greater the coefficient of the parameter, the higher the speed of conformity of the model from the short-run to the long-run equilibrium state. Thus, equation below represents an error correction form that allows for inclusion of long-run information thus, the ECM can be formulated as follows:

$$FDI_t = \theta + \sum_0 \Delta \text{GCX} + \sum_0 \Delta \text{GTD} + \Delta \text{GTX} + \Delta \text{ECM} + e_{1t} \quad (9)$$

**IV. RESULT AND DISCUSSION**

<table>
<thead>
<tr>
<th>Variables</th>
<th>ADF Test</th>
<th>Critical Value</th>
<th>Order of integration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1% critical value</td>
<td>5% critical value</td>
</tr>
<tr>
<td>FDI</td>
<td>-7.3576</td>
<td>-3.646342</td>
<td>-2.954021</td>
</tr>
<tr>
<td>GCX</td>
<td>-6.3673</td>
<td>-3.737853</td>
<td>-2.991878</td>
</tr>
<tr>
<td>GTX</td>
<td>-3.6544</td>
<td>-3.646342</td>
<td>-2.954021</td>
</tr>
<tr>
<td>GTD</td>
<td>-5.1337</td>
<td>-3.639407</td>
<td>-2.951125</td>
</tr>
</tbody>
</table>

**Source: Authors’ Computation**

The unit root test in Table 1 showed that at various levels of significance (1%, 5% and 10%), the time series were stationary. Thus, government capital expenditure (GCX), government’s total debt (GTD), Foreign Direct Investment (FDI) and corporate tax (GTX) were integrated of order one. Therefore all the time series in this study are stationary because their respective ADF values were found to be greater than their critical values at 1%, 5% and 10%.

<table>
<thead>
<tr>
<th>(Trace Statistics)</th>
<th>Critical Values (5%)</th>
<th>Prob</th>
<th>(Max-Eigen Statistics)</th>
<th>Critical Values (5%)</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>103.1841</td>
<td>47.85613</td>
<td>0.0000</td>
<td>58.28612</td>
<td>27.58434</td>
<td>0.0000</td>
</tr>
<tr>
<td>44.89794</td>
<td>29.79707</td>
<td>0.0005</td>
<td>27.78510</td>
<td>21.13162</td>
<td>0.0050</td>
</tr>
<tr>
<td>17.11284</td>
<td>15.49471</td>
<td>0.0283</td>
<td>17.04386</td>
<td>14.26460</td>
<td>0.0177</td>
</tr>
<tr>
<td>0.068988</td>
<td>3.841466</td>
<td>0.7928</td>
<td>0.068988</td>
<td>3.841466</td>
<td>0.7928</td>
</tr>
</tbody>
</table>

**Source: Authors Computation**
The Johansen co-integration test presented in Table 2 showed that there are three co-integrating equations at 5% level of significance. This is because only three equations trace statistic and max-Eigen values were greater than the critical value at 5%. Thus, there is a long run relationship amongst the variables used for the analysis. Given the existence of co-integrating equations, the requirement for fitting in an error correction model is satisfied.

Table 3: Error Correction Model Result

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>T-Statistics</th>
<th>T-Table</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.225690</td>
<td>0.470505</td>
<td>2.034</td>
<td>0.6424</td>
</tr>
<tr>
<td>DLOG(FDI(-1))</td>
<td>0.502338</td>
<td>1.338436</td>
<td>2.034</td>
<td>0.1939</td>
</tr>
<tr>
<td>DLOG(FDI(-2))</td>
<td>0.346986</td>
<td>1.208579</td>
<td>2.034</td>
<td>0.2391</td>
</tr>
<tr>
<td>DLOG(FDI(-3))</td>
<td>0.066530</td>
<td>0.355998</td>
<td>2.034</td>
<td>0.7251</td>
</tr>
<tr>
<td>DLOG(GCX)</td>
<td>0.377908</td>
<td>0.922983</td>
<td>2.034</td>
<td>0.3656</td>
</tr>
<tr>
<td>DLOG(GTX)</td>
<td>-1.386567</td>
<td>-0.820100</td>
<td>2.034</td>
<td>0.4206</td>
</tr>
<tr>
<td>ECM(-1)</td>
<td>-1.695777</td>
<td>-3.700780</td>
<td>2.034</td>
<td>0.0012</td>
</tr>
<tr>
<td>R²=0.628348</td>
<td>DW-Stat= 1.945837</td>
<td>F-Stat=5.555127</td>
<td>F-tab=3.340</td>
<td>F-prob=0.0008</td>
</tr>
</tbody>
</table>

Source: Researcher’s Computation from E-view 8.0 (Appendix V)

The estimated parsimonious error correction result as shown in Table 3 shows that the overall model is satisfactory with an R² of 0.628, thus 63 percent of the systematic variation in government capital expenditure (GCX), government total debt (GTD) and corporate tax (GTX) explained by the ECM is 63%. The coefficient (-1.695777) of the ECM is negatively signed and is statistically significant at the 5% level. Thus, the parsimonious error correction model will correct the deviation from the short run to long-run equilibrium by 169.6%. Also, the Durbin Watson value of 1.94 which is not too far from 2.0, suggested that serial autocorrelation is not a problem in the estimated model. The F-statistic of 5.555 with the probability of 0.0014 is significant at the 5% level, meaning that the three independent variables are significant in explaining the level of FDI in Nigeria. Moreover, the coefficient of government capital expenditure showed that a percentage increase in government capital expenditure will positively influence foreign direct investment to Nigeria by 0.377908%. Meanwhile, the variable was not statistically significant. The policy implication of the finding is that a well utilized government borrowing such as frequent energy supply will influence foreign direct investment to Nigeria.

V. CONCLUSION

This study examined fiscal policy and Foreign Direct Investment in Nigeria. Fiscal policy in form of government capital expenditure, favourable corporate tax and well utilized debt play significant role in attracting foreign investment to an economy particularly developing economy. Thus, the need for a well-articulated and coordinated fiscal policy to attract FDI in Nigeria. Secondary data on FDI, government capital expenditure, corporate tax and government debt used were obtained from the CBN statistical bulletin and National Bureau of Statistics various issues. The econometrics methods of unit root test, cointegration test and of Error Correction Mechanism were used. The results of the unit root test showed that all the variables (FDI, government capital expenditure, corporate tax and government debt) were stationary. Also there exists co-integration amongst the variables in the model. The ECM results indicated that with R² of 63%, the model is a good fit. The coefficient of government total debt (GTD) variable is positively related to Foreign Direct Investment (FDI). The coefficient of corporate tax (GTX) is negatively related with Foreign Direct Investment and the coefficient of government capital expenditure (GCX) is positively related with Foreign Direct Investment.

Thus, it could be concluded that a well-articulated and coordinated fiscal policy to attract foreign investment in Nigeria became essential for optimum growth and development of the economy. Therefore, the government of Nigeria must create enabling environment through favourable tax policy, improved capital expenditure on power supply and
security of lives and properties for foreign investment to thrive. Feasibility studies should be carried out before either external debt is obtained to ascertain the economic advantage/disadvantage of such loans.

REFERENCES


