Foreign Direct Investment Inflows And Economic Performance In A Developing Economy: Nigerian Evidence

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ABSTRACT

Motivated by the need for a classified and comparative analysis of the effects of oil related and non-oil related foreign direct investments on Nigeria's economic growth, this study evaluates secondary data obtained from Central Bank of Nigeria's Statistical Bulletin over the period 1981 to 2016 (36 years). Statistical techniques, which include Stationarity, Multiple Regression, Johansen's Co-integration, Error Correction Estimations and Granger Causality tests, were employed to evaluate the prevailing inter-relationships as well as the extent to which these classified foreign direct investment inflows do promote, and/or support Nigeria's economic growth. On the whole, the results of this study show that irrespective of the prevalence of significant long run relationship among the study variables, both the short and long run estimations as indicated by the multiple regression and error correction estimates, provide compelling evidences of significant sensitivities of Nigeria's economy to only variations in non-oil related FDI inflows. However, the Granger Causality test results indicate significant prevalence of two unidirectional causalities between Nigeria's GDP and both oil and non-oil related FDI inflows with Causality flowing from oil and non-oil related FDI to the GDP in both cases. Because of the greater sensitivity of Nigeria's GDP to non-oil related FDI inflows compared to oil related FDI inflows, the study concludes that non-oil related FDI inflows are more beneficial to Nigeria's economy compared to oil related FDI inflows. Consequently, it is recommended that both Nigeria's private sector entrepreneurs and the government should make further efforts to market and attract more foreign direct investors in the non-oil related sector of the Nigerian economy in order to maximize business opportunities in the non-oil sector of Nigeria's economy as well as aid diversification in Nigeria's economy.

Keyword: Oil Related FDI Inflows, Non-Oil Related FDI Inflows, Economic Performance.

1. INTRODUCTION

The quantity and quality of economic output, as well as the rate of growth of same according to Ashamu and Abiola (2014), constitute significant barometers for assessment of the level of any country's economic growth. They also, provide fertile grounds for evaluation of the implied economic development indicators. In this perspective, Timsina (2014) observes that enhanced economic output in a nation invariably, elevates her living standards and to that extent, constitutes a direct effect of capital formation, which in developing economies, emanate partly from foreign direct investment (FDI) inflows. Further, Gbosi (2002) acknowledges Nigeria's efforts towards balance of payment maintenance, employment promotion and output growth through attraction of foreign direct investments.

However, Chimobi and Igwe (2010) remark that a nation's capacity to accomplish these noble objectives is significantly a function of the quantum of investible resources available, as well as their productive efficiencies. In the absence of this, low productivity, limited foreign exchange earnings, significant and disturbing level of abject poverty and low standard of living would continue to prevail. In this light Imoughele *et al.,* (2014) remark that given the low level of capital formation as well as technological development in less developed economies, they inevitably resort to investment policies that would principally, promote the rapid inflow of foreign financing avenues in order to bridge the gaps prevailing in their national investment promotion plans and strategies.

Within the purview of this study, foreign direct investments are classified into oil and non-oil related inflows in order to reflect the present structure of Nigeria's economy and further, demonstrate the empirical relevance if any, of Central Bank of Nigeria's part-report on same. In all, FDI inflow is conceived as an officially permitted inflow of foreign owned investable financial and capital resources into the Nigerian investment and productive environment under the direct management and supervision of the foreign owners of such capital, subject to satisfaction of all regulatory conditions for such investment. To this extent, foreign direct investment according to Olayiwola and Okodua (2007) as well as Okeke et al., (2014) can serve as a potential catalyst for economic growth by contributing to employment generation, export base expansion, capacity building, technological

transfers as well as externalities to existing local and indigenous firms. In this sense, Olayiwola and Okodua (2007) further observe that foreign direct investments have the capacity to integrate developing economies into global financial network as well as capital flows. In this light, Gbosi (2002) further observes that the potential relevance attached to FDI inflows by nations invariably, informs the establishment of international economic relations department in all Nigerian missions abroad whose primary responsibility it is to inform all potential foreign investors about investment opportunities and prevailing incentives for any foreign direct investor in Nigeria. Locomonitor.com (2006) observes that the quantum of foreign direct investment inflows into Nigeria rose from equivalent of ₦334.7 billion in 1981 and peaked at ₦1,360,307.9 billion in 2011. It however, declined to ₦602,067.80 billion in 2015, but rose again to ₦1,124,149.0 billion by the end of the year 2016.

Although studies on FDI range from cross country to country-specific cases, the central issue remains the obvious fact that there have prevailed over the years, a wide range of both conflicting and diversified opinions regarding the empirical influences of the inflows and operations of foreign direct investments on the economic growths of both developed and developing nations. This is irrespective of whether the analyses were executed on aggregated, disaggregated, sectoral and/or growth basis as evidenced by the studies of Otepola (2002), Oyejide (2005), Akinlo (2004) and Haruna-Danja (2012). It is also, vital to observe that several and conflicting opinions prevail as to the resulting benefits and effects of FDI inflows, investments and operational activities on several economies especially, the developing economies. Often, these opinions range from social, political, economic and financial to cultural dimensions with valuable ramifications. In this wise, while Ajayi (2003) remarks that FDI inflows have potentials to address positively, the problems of savings gap, deficiency in skills acquisition and technological transfers in nations including Nigeria, Rodney (1976) as well as Abbas (2006) view FDI as agents of dependency and neo-colonialism. To that extent, the studies view FDI operations as at best, ambiguous with potentially significant negative consequences on the economy.

On the other hand, while Ahmad (2014) acknowledges the capacity of FDI, operations to substantially improve the balance of payment positions of host economies in the LDCs as well as the exchange rates of their currencies, Dike (2008) views FDI operations and investments as key motivators of corruption, especially in the less developed economies. Irrespective of all these conflicting positions, current studies are relatively sparse in Nigeria, as to the empirical estimations of the influences of FDI inflows and operations in Nigeria especially on sectoral basis following Central Bank of Nigeria's classifications of FDI operations in Nigeria. The necessity to contribute to this growing body of literature, especially as they relate specifically to current data in Nigeria constitutes therefore, the key problem of this study and consequently informs its objectives.

2. THEORETICAL FRAMEWORK AND REVIEW OF PREVIOUS STUDIES:

2.1 Theoretical foundations:

This study anchors on selected class of theories on foreign direct investment flows as they relate to national economic growth. To this extent, it becomes imperative to review generally, those selected theories as they partly, contribute towards a provision of appreciable linkage between foreign direct investment flows and economic growth of nations.

Of first consideration is the **Traditional Theory** which hinges on the premise that savings emanating from foreign economies, especially developed countries, can be exported to other economies and employed for the purpose of improved output production, employment generation, skills acquisition, productivity and technical efficiency. The theory insists that these courses of actions will lead to improved economic growth. Grubel (1981) observes that the traditional theory basically rejects the notion of any form of restrictions on capital flows or controls on same. The theory thereby, assumes a free flow condition for capital to any deserving and higher yielding economies. Further, this study asserts that neoclassical economic scholars in accordance with provision of this theory, expect capital to flow from developed and industrialized countries to less developed economies on the assumption of prevailing greater investment opportunities and returns on investment.

Secondly of relevance is the **Crisis Theory**, it basically doubts the exact role of foreign capital operations in less developed economies. Adherents to this theory as evidenced in the studies of Rodney (1976), Abbas (2006) and Dike (2008) view FDI flows as potential agents of neocolonial exploitation and dependency. To them, the exact role of FDI can at best, be qualified as ambiguous. Capital flows in accordance with this perspective have potential characteristics of inducing economic, political, social and financial crises in host economies. To that extent, FDI flows need to be closely controlled and monitored in host economies by means of efficient and effective economic frameworks/policies to ensure that national interests are not compromised. Advocates of the

Crisis Theory consequently argue that developing economies should therefore, take sufficient time to articulate all relevant FDI inflow policies and also, need to restrict FDI inflows to essentially desired areas in order to avert obvious consequences attributed to liberalized capital inflow policies.

Further, the **Acceleration Theory** of investment again, finds relevance in this study. Basically, the theory anchors on the premise that demand for capital goods derives from a corresponding demand for consumer goods. Since consumer goods are inadvertently produced through the employment of capital goods in the production process, it implies that a change in the quantum of demand for consumer goods would invariably, induce at worst, a corresponding change in the demand for capital goods. Either way, the quantum of investments in both consumer and capital goods will be affected and correspondingly economic growth, as observed by Olusanya (2013). Finally, Dudas (2010) comments on prevailing interest and currency exchange rates as further motivators for FDI flows, while Olusanya (2013) equally links FDI flows to **Product-Life Cycle Theory** in which case, FDI flows are eventually and unavoidably subjected to defined, definite and natural limiting factors. Consequently, they experience maturity and decline phases in their flows.

2.2   Review of Previous Studies.

Various studies have evaluated the interrelationships between foreign direct investment inflows and economic growth of nations. In this vein, Oyatoye, *et al.,* (2011) examine the interrelationships between foreign direct investment and economic growth in Nigeria from 1987 to 2006. The study finds a positive relationship between foreign direct investment and gross domestic product (GDP) over the period. The results further indicate that a Naira increase in FDI is associated with ₦104.75 increase in Nigeria's GDP. Siabu, *et al.,* (2011) examine the influence of financial development and foreign direct investment on Nigeria's economic growth. For analytical purposes, the scholars modified the standard form of endogenous growth model in order to introduce FDI and financial development as part-determinants of a nation's economic growth in the long-run. On employment of time series data covering the period 1970 to 2009, the results provide valuable evidence to conclude that both financial development and foreign direct investments negatively and significantly, affect Nigeria's GDP. Ahmad et al., (2012), on the other hand, examine the prevailing relationship between FDI and economic growth in Pakistan and find a significant positive relationship between them.

Saqib *et al.,* (2013) evaluate the nature of empirical relationship between FDI and economic growth in Pakistan through employment of data covering the period, 1981 to 2010. The results of the study show that Pakistan's economy is negatively influenced by FDI, This observation as noted by the study, conflicts with the fact that prevailing domestically originated investments positively influenced GDP in Pakistan. Babalola *et al.,* (2012) examine the relationship among foreign direct investments, exports and economic growth in Nigeria from 1960 to 2009 and recommend sufficient policy reforms that will create good environment for increased FDI inflows as well as export expansion. In a related study, Osinubi and Amaghionyeodiwe (2010) evaluate both the direction and effect of FDI on Nigeria's domestic investment growth as well as net exports and conclude that a beneficial positive relationship prevails. On the other hand, Yaqub *et al.,* (2013) examine the effects of FDI on Nigeria's employment level and economic growth and conclude that FDI inflows promote both employment and economic growth in Nigeria. Dutse (2008) evaluates the empirical link between FDI and technological transfers as well as possible spill-over effects on Nigeria's domestic enterprises. The study substantially finds sufficient evidence in Nigeria to assert that FDI operations facilitate not only economic growth but also, induce technological efficiency, innovation and adaptation of technology.

Izuchukwu and Huiping (2011) assess the relationship between FDI and Nigeria's economic growth and find a positive and valuable relationship statistically between them. In the same vein, Hassen and Anis (2012) find significant beneficial relationships between FDI and Tunisia's economic growth over the period 1975 to 2009. In a later study. Saqib *et al.,* (2013) examine the effect of FDI on Pakistan's economy over the period 1981 to 2010. While GDP is specified as the dependent variable, the study employs a total of six explanatory variables which include FDI, debt service ratio, gross domestic savings, inflation rate and trade value as explanatory variables. The findings show a significant negative relationship between FDI and GDP in Pakistan. Debt service ratio, inflation rate and trade value also followed the same pattern with FDI. The study consequently concludes that dependency on FDI should be minimized while domestic investments should be encouraged.

Mun *et al.,* (2008) evaluate influence of FDI on economic growth in Malaysia. Employing statistical techniques that range from Unit root to multiple regression tests, the study concludes that a significant positive relationship prevails between FDI and economic growth in Malaysia. It therefore recommends adoption of policies that will encourage FDI inflows. On the Ghanaian scene, evidences from Antwi *et al.,* (2013) indicate that FDI inflows are of benefit to Ghanaian economy. Consequently, the study recommends that the government should encourage greater FDI inflows to maximize the benefits accruing from all the associated externalities to the

domestic economy. In a study that involves a sample of developing economies, Borensztein *et al.,* (1995) observe that FDI inflows have valuable overall effects on economic growth in less developed economies. The study provides further evidence that in the developing economies, FDI positively affects domestic investment. However, the study observes that these effects differ from country to country depending on the level of each country's human capital development. In the same vein, Akinlo (2004) finds that FDI inflows benefit Nigeria's economy. However, the study observes that the relative effect of FDI on Nigeria's economic sectors are more in the manufacturing sector than the extractive industries' sector. Onu (2012) finds beneficial relationship between FDI and Nigeria's economic growth and concludes that FDI is a potential engine of growth within the Nigerian environment. On the contrary, Ariyo (1998) observes that domestic investments in Nigeria contribute to economic growth more than FDI on the ground that FDI investments in Nigeria tend to be significantly pro-consumption and import dependent. Finally from export earnings perspective, Nnamdi (2008) evaluates the relationship between Nigeria's external economic performance as indicated by growth of external reserves and export volumes of oil and non-oil related products. The results remain surprising that despite the relatively lower quantum of non-oil exports, Nigeria's economy exhibits far larger and significant sensitivity to non-oil exports compared to oil exports.

3.   MATERIALS AND METHODS
For clarity, this part is sub-divided as follows:

3.1   Data and Employed Variables Description:
This study employs aggregated values of the following annualised variables-gross domestic product (GDP), oil related foreign direct investments (OFDI) and non-oil related foreign direct investments (NFDI). The data were sourced from the Statistical Bulletin of Central Bank of Nigeria over the period 1981-2016, shown in table 1 below.

Table 1. Gross Domestic Product (GDP), Oil Related Foreign Direct Investments (OFDI), Non-oil Related Foreign Direct Investments (NFDI) and Aggregate (Total Value) of Foreign Direct investments in Nigeria over the period, 1981 to 2016 (N'b.).

Year	GDP	OFDI	NFDI	Aggregate FDI
1981	15,258.00	141.9	192.8	334.7
1982	14,985.08	73.4	216.6	290
1983	13,849.73	115.2	149.1	264.3
1984	13,779.26	89.7	270.7	360.4
1985	14,953.91	75.9	358.2	434.1
1986	15,237.99	437.1	298.7	735.8
1987	15,263.93	2306.2	146.6	2452.8
1988	16,215.37	1598.1	120.1	1718.2
1989	17,294.68	13204.2	673.2	13877.4
1990	19,305.63	2479	2207	4686
1991	19,199.06	5458.6	1457.5	6916.1
1992	19,620.19	10434.6	4028.5	14463.1
1993	19,927.99	17953.4	11706.9	29660.3
1994	19,979.12	13,782.10	8,447.10	22,229.2
1995	20,353.20	47,083.17	28,857.43	75,940.6
1996	21,177.92	69,000.36	42,290.54	111,290.9
1997	21,789.10	68,480.67	41,972.03	110,452.7
1998	22,332.87	50,064.38	30,684.62	80,749.0
1999	22,449.41	57,531.33	35,261.14	92,792.5
2000	23,688.28	71,890.34	44,061.82	115,952.2
2001	25,267.54	82,108.86	50,324.79	132,433.7
2002	28,957.71	139,639.35	85,585.41	225,224.8
2003	31,709.45	160,200.94	98,187.67	258,388.6

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2004	35,020.55	153,899.22	94,325.33	248,224.6
2005	37,474.95	405,599.75	248,593.40	654,193.2
2006	39,995.50	387,202.85	237,317.88	624,520.7
2007	42,922.41	470,815.87	288,564.57	759,380.4
2008	46,012.52	602,357.15	369,186.64	971,543.8
2009	49,856.10	789,765.79	484,050.00	1,273,815.8
2010	54,612.26	561,553.08	344,177.69	905,730.8
2011	57,511.04	843,390.90	516,917.01	1,360,307.9
2012	59,929.89	690,376.56	423,134.02	1,113,510.6
2013	63,218.72	542,563.53	332,538.94	875,102.5
2014	67,152.79	457,682.25	280,514.93	738,197.2
2015	69,023.93	373,282.05	228,785.77	602,067.8
2016	67,931.24	696,972.37	427,176.61	1,124,149.0

Source: Central Bank of Nigeria, Statistical Bulletin, (2016).
Nigeria's GDP is carried at current market prices to agree with those of oil and non-oil related FDI since they are all historical and need to be on the same base.

3.2 Model Specifications

Inflows of foreign investable funds into the domestic economy adds to the quantum of capital formation which on employment for productive purposes, will raise output of goods and services. In that wise, the quantum of output of goods and services as well as the variations implied, would theoretically be expected to derive from the level of FDI inflows within the oil related and non-oil related sectors of the Nigerian economy as follows;

$$\text{GDP} = f(\text{OFDI, NFDI}) \quad\quad\quad (1)$$

Where;

GDP   =   Gross domestic product,
OFDI   =   Oil related foreign direct investments,
NFDI   =   Non-oil related foreign direct investments.

For estimation purposes, equation (i) is rewritten as follows
$$\text{GDP}_t = \beta_0 + \beta_1\text{OFDI}_t + \beta_2\text{NFDI}_t + \mu_t \quad\quad\quad (2)$$

Where GDP, OFDI and NFDI retain their previous notations, while β_1 & β_2 are the coefficients of OFDI and NFDI respectively, μ_t is the error or stochastic term and β_0 is the constant term.

3.3 Apriori expectations
Theoretically, based on the productivity of employed capital, variations in capital inflows are expected to directly influence output growth. In that wise, it is expected that sensitivities of Nigeria's economy to variations in foreign capital inflows in both oil and non-oil related sectors of the Nigerian economy would be greater than zero i.e.

$\beta_1 > 0, \beta_2 > 0$.

3.4.   Specification of Analytical Tools and Tests.
The core objective of this study is to ascertain empirically, the influences of classified foreign direct investments on economic performance in Nigeria. For clarity, this sub-part is further detailed as follows;

3.4.1 Stationarity Tests:

The stationarity attributes of the time series data need to be verified by employment of unit root tests in order to validate their employment and avoid spurious estimates. In this exercise, according to Brooks (2009), the Augmented Dickey Fuller (ADF) test is relevant. The decision rule is to reject the implied null hypothesis if the ADF test statistic on absolute basis, is greater than all associated Mackinnon's Critical Values at 1%, 5% and 10% levels respectively.

3.4.2   Multiple Regression Test (Ordinary Least Squares)

A multiple regression test captures the short-run dynamics of a predictive regression equation. Accordingly, the significance of the t-statistic of any of the independent variables is expected not to be less than 0.05, for the null hypothesis of no significance to be rejected.

3.4.3   Johansens's Cointegration Test:

Johansen's Co-integration test aims at ascertaining the significance of long run equilibrium relationship that prevails among a chosen set of study variables (Brooks, 2009). The decision rule implied is that the magnitude of the Max-Eigen statistics must be more than the associated critical value at 0.05 level.

3.4.4 Error Correction Estimates.

Brooks (2009) shows that Error Correction Estimates tend to assess the long term sensitivities of the explained variable to each of the independent variables. Further, it shows the speed at which the explained variable adjusts back to equilibrium following short run distortions in the explanatory variables.

3.4.5   Granger Causality Test:

In accordance with Brooks (2009), the PairWise-Granger Causality test attempts to evaluate the extent to which variations in a given set of explanatory variables tend to support or promote changes in the dependent variable. Further, it shows the extent to which addition of lagged values of the variables can improve the explanation and vice versa in accordance with equations (3) and (4) below;

$$\gamma t = \beta 0 + \sum_{i=k}^{n} \quad \beta i \gamma t - i + \sum_{i=k}^{n} \quad \beta \mu X t - i + \mu t \qquad (3)$$

$$X t = \alpha 0 + \sum_{i=k}^{n} \quad \alpha i \gamma t - i + \sum_{i=k}^{n} \quad \alpha i \gamma t - i + V t \qquad (4)$$

4.   PRESENTATION OF RESULTS

4.1   Presentation of Stationarity (Unit Root) Test Results:

The outcome of the stationarity tests for the variables of study are presented in table 2 below:

Table 2: Results of Stationarity (Unit Root) Tests:

Differenced Variable	ADF Test statistic	Mackinnon's Critical Values at 1%, 5% & 10%			Order of Integration	Prob.
		1%	5%	10%		
D(GDP)	-3.958449	-3.639407	-2.951125	-2.614300	I(1)	0.0029
D(OFDI)	-7.086799	-3.639407	-2.951125	-2.614300	I(1)	0.0000
D(NFDI)	-7.085358	-3.639407	-2.951125	-2.614300	I(1)	0.0000

D(GDP), D(OFDI) and D(NFDI) denote the differenced variants of gross domestic product, oil related foreign direct investments and non-oil related foreign direct Investments respectively.

Source: Extracts from E-Views 10 Output.

Table 2: above shows the stationarity properties of the study variables. It indicates that on absolute basis, values of the ADF test statistics for the variables are more than their corresponding Mackinnon's critical values at 1%, 5% and 10% respectively. Further, the results show that all the variables are integrated of order I(1). Accordingly, the time series data are deemed fit for engagement in subsequent estimations.

4.2   Presentation of Multiple Regression (OLS) Results:

To examine the short run relationships and the percentage variation accounted for by changes in predictor variables in the short run, the multiple regression test was implemented. The results are shown in table 3 below:

Table 3: Results of Multiple Regression (OLS) test:
Dependent Variable: D(GDP)
Method: Least Squares
Date: 08/27/17   Time: 17:35
Sample: 1981 2016
Included observations: 36

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	18837.48	1810.148	10.40660	0.0000
D(OFDI)	-0.123814	0.629524	-0.196679	0.8453
D(NFDI)	0.300155	1.025544	4.292679	0.0016

R-squared	0.813782	Mean dependent var		31757.15
Adjusted R-squared	0.802496	S.D. dependent var		18151.71
S.E. of regression	8066.884	Akaike info criterion		20.90858
Sum squared resid	2.15E+09	Schwarz criterion		21.04054
Log likelihood	-373.3544	Hannan-Quinn criter.		20.95464
F-statistic	72.10570	Durbin-Watson stat		2.176025
Prob(F-statistic)	0.000000			

Source: Extracts from E-Views 10 Output.

The results of multiple regression analysis displayed in table 3 above shows a coefficient of determination (R^2) value of 0.813782. It implies that changes in the study's explanatory variables account for 81.38% of the changes in Nigeria gross domestic product. Consequently 18.82% of the variations is attributed to variables not captured in this study. The significance of the t-values indicate that in the short run, FDI inflows in the non-oil related sector in Nigeria is important in explaining the changes in output level in Nigeria. On the other hand, variations or changes in the quantum of oil-related foreign direct investments (OFDI) as indicated by insignificance of the associated t-value indicates that they do not significantly explain variations in Nigeria's GDP in the short run. On the whole, the probability value of 0.000 for the f-statistic depicts a good line of fit, while the Durbin-Watson statistics value of 2.176025 is within tolerable range.

4.3 Presentation of Johansen's Co-integration Test Results:
The results of Johansen's Cointegration test for this study's variables are presented in table 4 below:
Table 4: Results of Johansen's Unrestricted Cointegration Rank Test:
Test (Maximum Eigen Value):

Obs	Series	Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
23	D(GDP)	None *	0.661000	35.69788	21.13162	0.0002
23	D(OFDI)	At most 1 *	0.423086	18.15202	14.26460	0.0116
23	D(NFDI)	At most 2	0.136621	1.807751	1.841466	0.0577

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values
Source: Extracts from E-Views 10 Output.

Johansen's Cointegration test results are shown in table 4 above. They evidence prevalence of two (2) co-integrating equations. This indicates evidence of a significant long run relationship among the variables under study.
4.4. Presentation of Error Correction Estimates:

To examine and correct for estimation errors prevailing in the long and short run dynamics of this study, the error correction estimation was executed. The results are shown in table 5 below:

Table 5: Results of Error Correction Model

Dependent Variable: GDP
Method: Least Squares
Date: 08/27/17   Time: 17:50
Sample (adjusted): 1982 2016
Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	19575.38	1516.843	12.90535	0.0000
OFDI	-0.086755	0.513759	-0.168863	0.8670
NFDI	0.235817	0.836902	4.281774	0.0000
ECM(-1)	-0.622670	0.144371	4.312987	0.0002

R-squared	0.881490	Mean dependent var		32228.55
Adjusted R-squared	0.870021	S.D. dependent var		18191.76
S.E. of regression	6558.602	Akaike info criterion		20.52215
Sum squared resid	1.33E+09	Schwarz criterion		20.69991
Log likelihood	-355.1377	Hannan-Quinn criter.		20.58351
F-statistic	76.86026	Durbin-Watson stat		1.907935
Prob(F-statistic)	0.000000			

Source: Extracts from E-Views 10 Output.

From Table 5 above, the ECM coefficient stands at 0.622670 with the expected negative sign. It means that approximately 62.3% of the disequilibrium in gross domestic product (GDP) is offset within the year by FDI inflows in the oil related and non-oil related sectors of Nigeria's economy. On the other hand, the coefficient of determination (R^2) value of 0.881490 indicates that about 88.15% of the variations in gross domestic product in Nigeria in the long run, is accounted for by variations in oil and Non-oil related foreign direct investments. Further, the results show that only activities in non-oil related foreign direct investment (NFDI) are important statistically, in explaining Nigeria's output performance (GDP) in the long run. On the whole, the (ECM) results confirm that activities in the non-oil foreign direct investment in the long run, constitute significant basis for explanation of variations in Nigeria's economy in the long run.

4.5   Presentation of Granger Causality Test Results:

The outcome of the Pair-Wise Granger Causality tests are presented in table 6 below:

Table 6: Results of Pair-wise Granger Causality Tests:

Pairwise Granger Causality Tests
Date: 08/27/17   Time: 17:49
Sample: 1981 2016
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
D(OFDI) does not Granger Cause D(GDP)	33	3.60875	0.0403
D(GDP) does not Granger Cause D(OFDI)		0.48400	0.6214
D(NFDI) does not Granger Cause D(GDP)	33	3.54787	0.0423
D(GDP) does not Granger Cause D(NFDI)		0.48361	0.6216

Source: Extracts from E-Views 10 Output.

From table 6 above, there is absence of any bi-directional causality between the paired study variables. However, it is observed that uni-directional causalities exist in two instances. These are as follows; (i) from activities in oil related foreign direct investment to gross domestic product and (ii) from activities in non-oil related foreign direct investment to Nigeria's GDP. This implies the prevalence of supply leading activities from both oil and non-oil related FDI inflows to Nigeria's economy, In other words, they provide compelling evidence to assert that foreign direct investment inflows in both oil and non-oil related sectors of Nigeria's economy do promote and support economic growth in Nigeria.

5. DISCUSSIONS, CONCLUSIONS AND POLICY RECOMMENDATIONS.

The results of this study provide clear evidence that both in the short and long run, Nigeria's economic growth as captured by the employment of gross domestic product (GDP) remains over the period of study, significantly more sensitive to non-oil related FDI inflows compared to oil related FDI inflows. This assertions is irrespective of the fact that both forms of FDI inflows tend to promote Nigeria's economic growth generally.

The results are consistent with those of Babalola *et al.,* (2012) and Osunibi and Amaghionyeodiwe (2010). Further in consonance with these results, are those of Nnamdi (2008) which clearly assert that Nigeria has over the years, relied on the fallacy of quantum of exports of oil related products without realizing that unit changes in oil export earnings per naira export are far lower than those associated with non-oil exports. Further, these results are in consonance with the nature of FDI inflows and definitely constitute valuable lessons for the nation. On the whole, non-oil related FDI inflows are more beneficial to Nigeria's economy compared to oil related FDI inflows. Consequently, it is recommended that both Nigeria's private and public sectors should intensify efforts to attract further FDI inflows into the non-oil related sectors of the economy, while relatively de-emphasizing attraction of inflows into the oil related sector in the interest of the country.

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