



FOREIGN DIRECT INVESTMENT AND ECONOMIC GROWTH IN NIGERIA

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ABSTRACT

The study is patterned to empirically investigate foreign direct investment (FDI) and the economic growth in Nigeria between 1990 and 2021. It is based on the traditional theory of FDI. For the attainment of its objectives Oil related Foreign Direct Investment (OFDI) and Non-oil related Foreign Direct Investment (NFDI) were used as proxies for study's explanatory variable FDI while gross domestic product (GDP) was used to proxy the study's dependent variable economic growth in Nigeria. Secondary data from the Central Bank of Nigeria (CBN) statistical bulletin was obtained and employed in the study. In the study stationarity test was indulged in. The ordinary Least Square (OLS) approach was used to carry out the short-run analysis while Johansen co-integration test was employed to carry out the long-run analysis. Also, the Granger causality test was employed in the study so as to ascertain if a causal relationship exists between the study's variables. Our results reveal the following: Data were stationary at order one (1), positive and insignificant relationship between NFDI and economic growth in Nigeria, negative and insignificant relationship between OFDI and economic growth in Nigeria, positive and significant relationship between FDI and economic growth in Nigeria. The results also reveal the underlisted: In the short-run FDI largely determines economic growth in Nigeria, a long-run relationship between FDI and economic growth in Nigeria, and no causal relationship between FDI and economic growth in Nigeria. Lastly, the study made some recommendations so as to permit economic growth brought about by the inflow and survival of FDI in Nigeria.

KEYWORDS

Economic Growth, Foreign Direct Investment (FDI), Oil-related FDI, Non-oil related FDI.



1. Introduction

Developed countries of the world thrive on the availability of multiple investments. Liesbeth et al. (2009) and Torabi (2015) opined that investment serve as the engine of economic growth and human development. Okereke (1997) defined investment as the process of suspending immediate consumption in the expectation of greater and better consumption in the future. The investment environment in Nigeria is made up of both foreign and domestic investments.

In an attempt to eliminate unemployment and solve the problem of stagnant economic growth the government introduced a number of initiatives (Michael, 2020) one of which is foreign investment. Foreign investment is an important determinant of economic growth (Quoc et al., 2021). Majorly, it is divided into Foreign Direct Investment (FDI) and Foreign Portfolio Investment (FPI). This research effort, as suggested by its title, concentrates on foreign direct investment (FDI) which is the business interest which an investor has in a business located in another country. According to World Bank (1996) FDI is an investment made by an investor from another country inside a host country for the purpose of full ownership. It occurs whenever an investor that is based in country acquires an asset in another with the intention to manage the asset (World Trade Organization, 2020). Foreign direct investment (FDI) is essentially equity and not debt form of financing and is an attractive form of foreign capital (Awe, 2013). Thus, Nnamdi (2018) conceives foreign direct inflow 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 regulatory conditions for such investment.

Foreign direct investment (FDI) has been regarded as the most stable and prevalent component of foreign capital inflows in developing and transition countries (Sam et al., 2021). Hence, Wang et al. (2021) asserts that foreign direct investment (FDI) has a vital influence on the growth of an economy. In Nigeria foreign direct investment (FDI) is mostly evidenced by the existence of Multinational Corporations (MNCs) in the oil and non-oil sectors. To buttress this, Todaro and Smith (2003) noted that most FDI are subsidiaries of Multinational Corporations (MNCs) such that the investors are the parent organizations of the firms.

Ashamu and Abiola (2014) states that the quantity and quality of economic output (goods and services) as well as the rate of growth of same constitute significant measures for assessment of the level of any country's economic growth and foreign direct investments is a major source through which large quantity of quality economic output is obtained. 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. Also, Gbosi (2002) acknowledges Nigeria's efforts towards balance of payment maintenance, employment promotion, and output growth through the attraction of foreign direct investments (FDI).

Foreign direct investment (FDI) inflows is greatly important for developing countries to support economic growth and development (Wang et al., 2021). Thus, the inflow of foreign direct investment into the Nigerian investment environment could bring about some economic benefits which could be leveraged on to actually achieve economic growth and development. Okeke et al. (2014) states that it can serve as a potential catalyst for economic growth by contributing to employment generation, export base expansion, capacity building, technological advancement, etc. Foreign direct investments have encouraged the flow of foreign monetary resources into the economy of Nigeria through the supply of foreign exchange (Ezirim, 2005). However, Chimobi and Igwe (2010) remark that a nation's capacity to accomplish these noble objectives is significantly a function of the quantum of investable resources available, as well as their productive efficiencies. In the absence of these, low productivity, limited foreign exchange earnings, significant and disturbing level of abject poverty and low standard of living would continue to prevail (Nnamdi, 2018). Imoughele et al., (2014) opined that given the low level of capital formation as well as technological development in less developed economies they invariably resort to investment policies that would principally promote the rapid inflow of foreign financing avenues in order to bridge the prevailing gaps in their national investment promotion plans and strategies. Thus, Ezirim (2005) opined that foreign direct investment (FDI) constitutes one the biggest single source of employment opportunities for the country's teeming population. From the foregoing, foreign direct investments

(FDI) is motivated by the actualization of some desired objectives thus, Dudas (2010) says that prevailing interest and currency exchange rates are the motivators for foreign direct investments (FDI) inflows. For the purpose of this study, foreign direct investments (FDI) are grouped into oil and non-oil related inflows so as to reflect the present structure of Nigeria's economy.

There abounds a plethora of literature in modern macroeconomics with regard to various studies on both long-run and short-run relationship between foreign direct investment (FDI) and Nigeria's economic growth as well as that of other emerging market economies. However, the results of these studies are conflicting in the sense that while some of them (Onu, 2012; Antwi et al. 2013; Otto & Ukpere, 2014; Mabuza, 2022) assert that there is positive relationship between foreign direct investment (FDI) and economic growth others (Mesinger, 2003; Saibu et al., 2011; Saqib et al., 2013) found that there is a negative relationship between foreign direct investment (FDI) and economic growth. Additionally, this study employed recent data of which previous studies such (Saibu et al., 2011; Onu, 2012; Otto & Ukpere, 2014) did not make use of. This research is spurred to ascertain the type of relationship existing between foreign direct investment (FDI) and the growth of Nigeria's economy employing recent data. Also, this study employs the classification of foreign direct investment (FDI) as contained in the Central Bank of Nigeria (CBN) Statistical Bulletin (2021) to ascertain which of the classification of foreign direct investment(FDI) actually affect Nigeria's economic growth positively or negatively respectfully.

2.0 REVIEW OF RELATED LITERATURE

2.1 Concept of Foreign Direct Investment (FDI)

Foreign direct investment (FDI) is the business interest which a legal person (investor) has in a business situated in another country. World Bank (1996) asserts that FDI is an investment made by an investor from another country inside a host country for the purpose of full ownership. It could be defined as that type of investment made into certain aspects of an economy that could include either business or production sector from an individual or a company of one country to another (Hanson et al, 2020). Graham (1995) views FDI as an increase in the book value of the net-worth of investment in one country held by investors of another country where the investments are under the managerial control of the investor.

The inflow of foreign direct investment (FDI) into any country is a pivot through which economic growth can be achieved. Mahembe and Odhiambo (2014) states that theoretically, FDI can serve as a boost to economic growth in the host countries through the accumulation of capital, introduction of foreign technology and enhanced stock of knowledge via skills transfer. Basically, it (FDI) functions as a replacement for deficit local investment within the economy which emanates from lack of loanable funds brought about by shortage in the savings capacity of the economy. According to World Investment Report (2021) global foreign direct investment (FDI) flows fell by 35% in 2020, reaching \$1 trillion from \$1.5 trillion in 2019. This situation has gone far to affect Nigeria hence, National Bureau of Statistics (2022) asserts that the total value of capital importation into Nigeria declined year-on-year by 31 percent to \$6.7 billion in 2021 making it the lowest in five years. Foreign direct investment (FDI) in Nigeria experienced a decline by 30 percent (Bailey, 2022). Analysts opined that this decline is not surprising due to recession coupled with the fact that foreign exchange environment became very hostile due to policies of Central Bank of Nigeria (CBN) in the management of FX. Also, the state of insecurity ranging from the activities of insurgents, militants and terrorists in the country is a key factor in the reduction of foreign direct inflows into Nigeria.

2.1.2 Categories of FDI

FDI is grouped in two major categories which are Greenfield and Brownfield investments (Sunanda, 2010). These two groupings are explained below:

- (i) **Greenfield Investment:** This occurs when an individual or government establishes new business outlay by building its own structure in another region where the firm is headquartered. Greenfield investments are used for promotion mainly in the newly targeted country. It assists in the creation of production capacity jobs, technology transfer and aid in bridging the global marketplace. It can only do this by controlling the industry: this is because the MNC shave the

capacity to produce more goods in a cheap rate by using advanced technology and other resources (such as labour, intermediate goods and so on).

- (ii) **Brownfield Investment:** This is a short-cut method of FDI. In this type of FDI, foreign businesses do not take the pain of building a structure from the scratch in another country but they expand their businesses by either going for cross- border mergers or acquisitions. This allows them to start their heads-up right away without building anything from zero.

FDI can further be categorized into three, these are: vertical, horizontal and conglomerate FDIs.

- (a) FDI is vertical when it operates in an entirely different business area which however has a linkage with the main business of the investor who owns it. Its set up could be for the purpose of obtaining raw materials for the main business of its owner in his home country.
- (b) Horizontal FDI is established when foreign investors set up the same type of business operation abroad as it operates at home.
- (c) Conglomerate FDI is an investment whereby a foreign investor sets up a company in a business area which is not related to the line of business in which he has in his home country.

2.1.3 Nigerian Economy

Jhingan (2002) defines economic growth “as the process whereby the real per capita income for a country increases over a long period of time”. He states that economic growth is measured by increase in the amount of goods and services in each successive time period. Thus, growth occurs when an economy’s productive capacity increases which in turn is used to produce more goods and services.

2.1 Theoretical Foundations

This paper is anchored on selected theories relating to foreign direct investment (FDI) as they relate to economic growth of a country.

Traditional Theory: The first to be considered among the theories is the Traditional theory which rest 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 asserts that these stated courses of actions will lead to improved economic growth in developing countries (Nnamdi, 2018). According to Grubel (1981) the traditional theory basically rejects the notion of any form of restrictions or controls on capital flows. As such, the theory assumes a free flow condition for capital to any deserving and higher yielding economies. In furtherance, this states that neoclassical economic scholars in line with the provision of this theory, expect capital to flow from developed as well as industrialized economies to less developed economies based on the assumption of prevailing greater investment opportunities and returns on investment.

Crisis Theory: The second is the Crisis theory. Basically, this doubts the exact role of foreign capital operations in economies that are less developed. Those who are adherents to this theory as shown in the studies of Abbas (2006), Dike (2008), Rodney (1976) see foreign direct investment (FDI) flows as potential agents of neocolonial exploitation and dependency. To this group of persons, the real role of foreign direct investment (FDI) at best can be qualified as ambiguous. Following this line of thought, the flow of foreign capital, have potential characteristics of inducing economic, social, political and financial crises in host economies. Thus, foreign direct investment (FDI) flows have to be keenly monitored and controlled in the host economies through efficient and effective economic frameworks/policies to ensure that national interests are not compromised. Consequently, the crisis theory states that developing economies should take sufficient time to articulate all relevant foreign direct investments (FDI) inflow policies and also, need to restrict foreign direct investment (FDI) inflows to essentially desired areas in order to avert obvious consequences attributed to liberalized capital inflow policies.

Acceleration Theory: The next theory is the acceleration theory of investment. It is relevant to this study. Basically, this theory anchors on the premise that the demand for capital goods is derived from a corresponding

demand for consumer goods. Since consumer goods are inadvertently produced through the usage of capital goods in the process of production, it means that a change in the quantum of demand for consumer goods would bring about a corresponding change in demand for capital goods (Nnamdi, 2018). Anyway it is, the level of investments in both consumer and capital goods will be affected and correspondingly economic growth will be attained. Dudas (2010) claimed that prevailing interest and currency exchange rates are further motivators for foreign direct investment (FDI) inflows. Ezirim(2005) states that foreign direct investments have encouraged the flow of foreign monetary resources into the economy of Nigeria through the supply of foreign exchange.

Empirical Review

Significant scholarly effort has been directed towards the study of the role of foreign direct investment (FDI) in the Nigerian economies and the world at large. Many studies have evaluated the inter-relationships between foreign direct investment inflows and economic growth of nations. In this light, 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) assessed the relationship between FDI and Nigeria's economic growth where they found a positive and valuable relationship statistically between them. Oyatoye et al. (2011) examine the interrelationships between FDI and economic growth in Nigeria within the periods 1987-2006. Their study finds a positive relationship between foreign direct investment and gross domestic product which measures economic growth, throughout the period. In the study where Osinubi and Amaghionyeodiwe (2010) examine both the direction and effect of FDI on domestic investment growth as well as net exports. They ended up finding out that a beneficial positive relationship prevails. Saibu, et al. (2011) examined the influence of financial development and foreign direct investment on Nigeria's economic growth. On the usage of time-series data which covered the periods 1970-2009, the results obtained provide valuable evidence to conclude that both financial development and foreign direct investment (FDI) negatively and significantly affect Nigeria's gross domestic product (GDP). Babalola et al., (2012) evaluated the relationship among foreign direct investments, exports and economic growth in Nigeria for the periods 1960-2009. The study recommended sufficient policy reforms that will create good environment for increased FDI inflows as well as export expansion. Yaquib et al., (2013) evaluated the effects of FDI on Nigeria's employment level and economic growth and concluded that FDI inflows promote both employment and economic growth in Nigeria. Otto and Ukpere (2014) assessed FDI and economic development and growth in Nigeria over a period of 41 years. They observed that there is a positive relationship between FDI and economic growth in Nigeria. Saqib et al.(2013) examined the nature of empirical relationship between FDI and economic growth in Pakistan by making use of data covering the periods 1981- 2010. The result of the study showed that FDI negatively influenced Pakistan's economy. Ahmad et al. (2012) examined the prevailing relationship between FDI and economic growth in Pakistan and find a significant positive relationship between them. In the same vein. Hassen and Anis (2012) find significant beneficial relationship between FDI and Tunisia's economic growth over the period 1975-2009. Mun et al. (2008) evaluated the influence of FDI on economic growth in Malaysia. The study concluded that a significant positive relationship prevails between FDI and economic growth in Malaysia and recommends adoption of policies which will encourage inflows of FDI. Evidences derived from Antwi et al. (2013) shows that FDI inflows are beneficial to the Ghanaian economy. As such the study recommended that the government should encourage greater FDI inflows to maximize the benefits accruing from all the associated externalities to the domestic economy. In a sample which involves a sample of developing economies, Borensztein et al. (1995) observed that the inflow of FDI have valuable overall effects on economic growth in less developed economies. This study evidences the fact that in developing economies FDI positively affects domestic investment. Onu (2012) found beneficial relationship between FDI and Nigeria's economic growth and concluded that FDI is a potential engine of growth within the Nigerian environment. Ariyo (1998) observed that domestic investment in Nigeria contribute to economic growth more than FDI because FDI investments in Nigeria tends to be significantly pro-consumption and import dependent. Oseghale and Amenkhienan (1987) examined the relationship between oil export, foreign borrowing and direct foreign investment in Nigeria on one hand and economic growth on the other hand, and the impact of these on sectoral performance between 1960 and 1984. They concluded that foreign borrowing and FDI impacted negatively on over-all GDP. De Mello (1997) surveys

the developments in the literature on impact of foreign direct investment (FDI) on growth in developing countries. He concluded that the ultimate impact of FDI on growth in recipient economy depends on the scope of efficiency spillovers to domestic firms.

3.0 Methodology

For the purpose of clarity, we divided this part as follows:

3.1 Data and Description of Variable Used

In this study, while the independent variable is foreign direct investment, the dependent variable is economic growth of the Nigerian economy. The study makes use of the yearly data from 1990-2020 (31 years) of oil related foreign direct investments (OFDI) and non-oil related foreign direct investments (NFDI) to proxy the independent variable. It also makes use of yearly data of the stated periods of gross domestic product (GDP) to represent the dependent variable. These data were sourced from Central Bank of Nigeria Statistical Bulletin.

3.2 Model Specifications

The inflow of foreign investable funds into the Nigerian economy increases the quantum of capital formation which when used for productive purposes, will raise output of goods and services. As such, the quantity of output of goods and services as well as the variations implied, would be theoretically expected to derive from the level of FDI inflows within the oil related as well as non-oil related sectors of the Nigerian economy as follows:

The functional form of the model is stated thus:

$$GDP = f(OFDI, NFDI) \dots\dots\dots (1)$$

Where;

- GDP = GROSS DOMESTIC PRODUCT
- OFDI = OIL RELATED FOREIGN DIRECT INVESTMENTS
- NFDI = NON-OIL RELATED FOREIGN DIRECT INVESTMENTS

The model's mathematical form is stated thus:

$$GDP = \beta_0 + \beta_1 OFDI + \beta_2 NFDI \dots\dots\dots (2)$$

Where;

- GDP = GROSS DOMESTIC PRODUCT
- OFDI = OIL RELATED FOREIGN DIRECT INVESTMENTS
- NFDI = NON-OIL RELATED FOREIGN DIRECT INVESTMENTS
- β_0 = Constant term
- β_1, β_2 = Estimation Parameters

For estimation purposes the econometric form of the model is written thus;

$$GDP = \beta_0 + \beta_1 OFDI_t + \beta_2 NFDI_t + U_t \dots\dots\dots (3)$$

Where;

- GDP = GROSS DOMESTIC PRODUCT
- OFDI = OIL RELATED FOREIGN DIRECT INVESTMENTS
- NFDI = NON-OIL RELATED FOREIGN DIRECT INVESTMENTS
- β_0 = Constant term
- β_1, β_2 = Coefficients of OFDI and NFDI respectively
- U_t = Error term

3.3 Apriori expectations

From theories, based on the productivity of capital employed, variations in the inflows of capital are expected to directly influence output growth. In this wise, it is expected that sensitivities of the Nigerian economy to

changes in the inflows of foreign capital in both oil and non-oil related sectors of the Nigeria's economy is expected to be greater than zero, i.e.

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

3.4 Specification of Analytical Tools and Tests

The major objective of this study was to empirically ascertain the influences of classified foreign direct investments on Nigeria's economic growth. In this study, the under listed tools are used for analytical purposes.

3.4.1 Stationarity Tests:

Stationarity characteristics of the time series data need to be verified by employment of unit root tests so as to validate their usage and avoid spurious estimates. In this study, according to Brooks (2009), the Augmented Dickey Fuller (ADF) test is relevant. The decision rule is to reject the implied null hypothesis if 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 Square)

Multiple regression test captures the short-run dynamics of a predictive regression equation. Accordingly, the significance of the t-statistics 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.

i. Probability

This probability is also known as the p-value or the marginal significance level. Given a p-value, you can tell at a glance if you reject or accept the hypothesis that the true coefficient is zero against a two-sided alternative that it differs from zero. A probability lower than .05 is taken as strong evidence of rejection of that hypothesis.

ii. Summary Statistics

The Coefficient of Multiple Determination (R^2): This is a statistical measure that represents the proportion of the variance for a dependent variable that is explained by an independent variable or variables in a regression model. It explains the extent to which the variance of one variable is explained by the variance of another variable. In this case, the R^2 is used purely as a measure of the goodness of fit, which is a measure of the explanatory power of the model.

3.4.3 Johansen's Co-integration test

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

3.4.4 Granger Causality Test

According to Brooks (2009), 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.

4.1 Presentation of Results

Presenting the results in a clear and logical format is one of the most important tasks for the researcher and the others drawing inference from the research. When presenting results, the format of the presentation should be tailored to address the aims and objectives of the study and to satisfy the potential users of the results.

4.2 Presentation of Stationarity Test result

Table 1

Variable	ADF Test Statistics	Critical Value 5%			Order of Integration	Prob.
		1%	5%	10%		
GDP	-1.318980	-3.679322	-2.967767	-2.622989	I (1)	0.6070
NFDI	-3.578385	-3.679322	-2.967767	-2.622989	I (1)	0.0127
OFDI	-3.575243	-3.679322	-2.967767	-2.622989	I (1)	0.0128

Source: Extract from Eviews 9.0 output

4.3.1 Analysis of Stationarity Test result

From our result the data is integrated at order one (1) which means that the data is stationary after first differencing. It should be noted that for the non-stationary series to be stationary the first difference of each series must be taken.

4.4 Presentation of Multiple Regression (OLS) Results:

In order to evaluate the relationships in the short run and the size of variation that is accounted for by changes in explanatory variable in the short run, the multiple regression test was utilized. The results are shown in Table 2 below.

Table 2 Results of Multiple Regression (OLS) test:

Dependent Variable: GDP

Method: Least Squares

Date: 09/07/21 Time: 12:06

Sample: 1990 2020

Included observations: 31

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NFDI	2.523628	3.880169	0.650391	0.5207
OFDI	-1.517411	2.378803	-0.637888	0.5287
C	28058.42	2973.298	9.436802	0.0000
R-squared	0.628130	Mean dependent var		40877.98
Adjusted R-squared	0.601568	S.D. dependent var		19111.30
S.E. of regression	12063.33	Akaike info criterion		21.72549
Sum squared resid	4.07E+09	Schwarz criterion		21.86427
Log likelihood	-333.7452	Hannan-Quinn criter.		21.77073
F-statistic	23.64758	Durbin-Watson stat		0.258427
Prob(F-statistic)	0.000001			

Source: Extract from Eviews 8.0 output

4.4.1 Analysis of Multiple Regression Results

From the results of multiple regression analysis (OLS) displayed in the above table 3.0 we got the coefficient of determination (R^2) value of 0.628130. This means that changes in the independent variable (FDI) account for 62.81% of changes in the dependent variable (Nigeria's economy). As such, 37.19% of the variations in the dependent variable (Nigeria's economy) is attributed to variables not captured in this study. Our result also shows that there is a positive and insignificant relationship between non-oil related foreign direct investment (NFDI) and the Nigerian economy. Also, from our result we ascertain that there is a negative and insignificant relationship between oil related foreign direct investment (OFDI) and the Nigerian economy. Summarily, in the short-run, there is a significant relationship between foreign direct investment and the Nigerian economy.

4.5 Presentation of Johansen's Co-integration test

Table 3

Date: 09/07/21 Time: 12:20

Sample (adjusted): 1992 2020

Included observations: 29 after adjustments

Trend assumption: Linear deterministic trend

Series: GDP NFDI OFDI

Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.617851	38.74068	29.79707	0.0036
At most 1	0.268159	10.84426	15.49471	0.2212
At most 2	0.059880	1.790700	3.841466	0.1808

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.617851	27.89642	21.13162	0.0048
At most 1	0.268159	9.053565	14.26460	0.2817
At most 2	0.059880	1.790700	3.841466	0.1808

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-value

Source: Extract from Eviews 8.0 output

4.5.1 Analysis of Johansen’s Co-integration Test Results

From the Trace result and the Eigen value result there is at most one co-integrating equation. This implies that there is a long-run relationship between FDI and Nigeria’s economy.

4.6 Presentation of Granger Causality Test Result

Table 4

Pairwise Granger Causality Tests

Date: 09/07/21 Time: 12:39

Sample: 1990 2020

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
NFDI does not Granger Cause GDP	29	2.10638	0.1436
GDP does not Granger Cause NFDI		2.58876	0.0959
OFDI does not Granger Cause GDP	29	2.10749	0.1435
GDP does not Granger Cause OFDI		2.58552	0.0962
OFDI does not Granger Cause NFDI	29	0.00705	0.9930
NFDI does not Granger Cause OFDI		0.00851	0.9915

Source: Extract from Eviews 8.0 output

4.6.1 Analysis of Granger Causality Test Results

The result we obtained from the granger causality test shows that they are all insignificant, hence there is no causal relationship between FDI and GDP. This simply means that none of the variables cause the other to occur.

5.0 DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

Based on the multiple regression result obtained it is observed that 63% of the dependent variable (GDP) is determined by the explanatory variable (foreign direct investment) while the remaining 37% is determined by other variables not captured in the study. It then shows that there is a positive and insignificant relationship between non-oil related foreign direct investment (NFDI) and economic growth (GDP) in Nigeria. Also, the result shows that there is a negative and insignificant relationship between oil related foreign direct investment (OFDI) and economic growth. The result obtained is consistent with that of Nnamdi (2018) which states clearly that Nigeria has over the years, relied on the fallacy of quantum 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. However, our result tells that in the short-run there is a positive and significant relationship between foreign direct investment and Nigeria’s economic growth confirming the findings of Otto and Ukpere(2014) and Mabuza (2022).

On the other hand, the result we obtained from the Johansen co-integration test shows that there is at most one co-integrating equation which states that there is a long-run co-integrating relationship among the variables. Therefore, there is a long-run relationship between FDI and Nigeria's economic growth which is consistent with the findings of Yimar (2022). However, we found no causal relationship between the study's variables.

RECOMMENDATIONS

- From the foregoing, we recommend that both the government and the private sector should intensify their efforts in attracting more foreign direct inflows into the non-oil areas of the economy because of the positive relationship it has with the Nigerian economy. This act will help diversify Nigeria's economy. Little wonder Mahembe and Odhiambo (2014) assert that FDI has the ability to boost economic growth.
- Also, unlike one of the recommendations proffered by Nnamdi (2018), the government and private sectors should not do away with its desire to attract foreign direct investments in the oil business areas of the economy. Instead, they should set up viable modalities within the oil business areas of the economy which would make foreign direct investments within that sector yield the desired objectives in the interest of Nigeria's economic growth.
- The government should re-visit the issue of local content requirement.
- Nigeria's government as well as citizens should encourage improved domestic investment to accelerate growth rather than relying on FDI as a prime mover of the economy.
- Nigeria should develop a code of conduct on multinational corporation to curb their restrictive business practice, limit their repatriation of profits from Nigeria and ensure that significant part of their profit is re-invested into the Nigerian economy.
- Since no causal relationship flows FDI to economic growth in Nigeria and from economic growth in Nigeria to FDI, the government can actually spur the inflow of FDI into the country by curbing insecurity, providing social amenities and taking other relevant measures that would result to economic growth in Nigeria.

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Table 4.1 Gross Domestic Product (GDP), Oil-related Foreign Direct Investments (OFDI), Non-oil related Foreign Direct Investments (NFDI), over the period, 1990-2020 (₦'B).

Year	GDP	OFDI	NFDI
1990	19,305.63	2,479.00	2,207.00
1991	19,199.06	5,458.60	1,457.50
1992	19,620.19	10,434.60	4028.50
1993	19,927.99	17,953.40	11,706.90
1994	19,979.12	13,783.10	8,447.10
1995	20,353.20	47,083.17	28,857.43
1996	21,177.92	69,000.36	42,290.54
1997	21,789.10	68,480.67	41,972.03
1998	22,332.87	50,064.38	30,684.62
1999	22,449.41	57,531.33	35,261.14
2000	23,688.28	71,890.34	44,061.82
2001	25,267.54	82,108.86	50,324.79
2002	28,957.71	139,639.35	85,585.41
2003	31,709.45	160,200.94	98,187.67
2004	35,020.55	153,899.22	94,325.33
2005	37,474.95	405,599.75	248,593.40
2006	39,995.50	387,202.85	237,317.88
2007	42,922.41	470,815.87	288,564.57
2008	46,012.52	602,357.15	369,186.64
2009	49,856.10	789,765.79	484,050.00
2010	54,612.26	561,553.08	344,177.69
2011	57,511.04	843,390.90	516,917.01
2012	59,929.89	690,376.56	423,134.02
2013	63,218.72	542,563.53	332,538.94
2014	67,152.79	457,682.25	280,514.93
2015	69,023.93	373,282.05	228,785.77
2016	67,931.24	696,972.37	427,176.61
2017	66,838.55	1,020,662.69	625,567.45
2018	65,745.86	1,344,353.01	823,958.29
2019	64,653.17	1,668,043.33	1,022,349.13
2020	63,560.48	1,991,733.65	1,220,739.97

Source: Central Bank of Nigeria, Statistical Bulletin, (2020)