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## Effect of Foreign Direct Investment on Economic Growth in Nigeria (1987 - 2019)

**Ighoroje Ese James**

Senior Lecturer, Department of Banking and Finance,  
Delta state Polytechnic, Delta State, Nigeria

**Okoroyibo Elizabeth Eloho**

Senior Lecturer, Department of Accountancy,  
Delta State Polytechnic, Delta State, Nigeria

### **Abstract:**

*Foreign direct investment relates to investment that grants controlling ownership of a business in one country to different entity in other country. The main objective of this study is to examine foreign direct investment on economic growth in Nigeria. The specific objectives of the study are to determine effect of foreign direct investment in agriculture on economic growth, to ascertain effect of foreign direct investment in petroleum production on economic growth in Nigeria, and to establish the effect of foreign direct investment on capital market on the economic growth in Nigeria. The study adopts an ex-post facto research design since the secondary data for study were sourced from Central Bank of Nigeria (CBN). Statistical bulletin, annual reports and statement of accounts of CBN were equally considered in sourcing for the secondary data. Data collated were analyzed using econometric techniques involving augmented Diker fuller (ADF) test and Ordinary Least Square (OSL). Available results from the analyses depicts that foreign direct investment on agriculture, foreign direct investment on petroleum and foreign direct investment on capital market has positive and significant effect on GDP within the period under review. The study concluded generally that foreign direct investments (FDI) if properly sourced and utilize is capable of lifting thousands of our people from poverty and misery through the provision of job opportunity. The study thus recommends that; regulatory framework should be strengthened to enable financial institutions and foreign investors direct their resources to the agricultural sectors to boost the Nigerian economy.*

**Keywords:** Gross domestic product, capital market, foreign direct investment and Nigerian economy

### **1. Introduction**

Over time foreign direct investment is often seen as a catalyst in the development of an economy in a country because it helps to simulate domestic investment, increase capital formation, and facilitate technological knowhow from one country to another. Aremu(2013)posited that foreign direct investment (FDI) is often seen as important catalyst for economic progress in the developing countries because it affect the economic growth by simulating internal investment, increase capital formation and as well speed up the technological innovativeness in the host countries, (Okey & Amba, 2018)In an attempt to simulate the growing need of economic growth and development perceived to experiencing slow pace in many countries, especially the less developed countries, propelled such countries to direct efforts toward foreign private investment. These imagines notice in different ways culminate into continue macroeconomic variables imbalances, like low domestic investment, high budget deficit, acute balance of payment, broad saving, investment gap, high domestic inflation, high interest, high rate of both domestic and external debt ratio and double-digit inflation. All these as manifested in Gross Domestic Product have inverse relationship in economic growth. (Abdul-Azizi & Babamu, 2014) (Otto and Ukpere2014) stated that foreign direct investment (FDI) as appeared as the most valuable sources of external resource flows to developing nations over the years, and significantly, became a part of capital formation in this nations through their part in the global sharing of (FDI) continue to decline and even remain small. The rate of foreign direct investment (FDI) inflow has been greatly noticed as a growth-improving factors in the developing nations According toMounkaila andNoma, (2017) speaking on the disadvantages and benefits of (FDI) to the host economy, are usually supposed to be increase in productivity in export and increase technology transfer. The great merit of the FDI to relevant economy are: increases in the exploitation of materials and utilization, introduce techniques of marketing and management, having opportunity to modern technologies, inflow of FDI can be used to financing current account deficits, FDI financing inflows from FDI don't generate repayment of principle of interest (as opposes to external debt) and stock of human capital increases *via* trading on the job. The awareness of the significant importance of (FDI) had masterminded the radical and pragmatic economic reforms, introduced amid the mid -1980s by the federal government of Nigeria. These reforms were focused on increasing the attractiveness of Nigeria's entrepreneurial opportunities and as well enhance investors' confidence which vis-à-vis encourage foreign investors to invest in the Nigeria economy (Oji -Okoro, Huang,

Abba & Edun, 2014) According to Benedict, and John (2017) the reforms resulted in the adoption of liberal and market-oriented economic policies, the stimulation of increased private sector participation and elimination of bureaucratic obstacles which hinders private sector investments and long-term profitable business operations in Nigeria. This, for instance, is to encourage the existence of foreign multi-national and private investors in some strategic sectors of the Nigeria economy like the oil industry, banking industry, communication industry, entertainment industry, and as well as the Agricultural sector.

### 1.1. Statement of the Problem

Despite the surfeit performance of incentive involved from foreign direct investment, the performance in terms of quantum is still not remarkable in Nigeria. Most countries all over the world endeavor to be a magnet for FDI because of its benefit to the economy. However, in spite of Nigeria contribution and efforts in attracting FDI, Nigeria is still in front of economic crisis situation featured by insufficient resources for long term expansion, high level of unemployment and other millennium development Goals. (MDGs) increasingly becoming difficult to achieve (Ebekozi, Ugochukwu & Okoye, 2015). Over the years, the significance of foreign direct investment as a vehicle for economic enlargement and expansion has been documented by the government. However, the poor and unsophisticated nature of Nigeria capital and money market may have been responsible for the poor inflow of foreign direct investment. Although efforts have been made in making these markets more effective, yet, they are not as sophisticated and vibrant as their counterpart in developed nations, thus cannot compete favorably for foreign direct investment. Even in the face of the highly publicized theory that connects foreign direct investment (FDI) to economic progress, it is on record that foreign direct investment inflow has not truly translated to front line emerging nations including Nigeria (Makwabe 2014). Both the Agricultural sector, and the nation GDP and even much celebrated petroleum production has experience tremendous fall both in the past and present. The decline in the Agricultural sector performance has been ascribed to numerous challenges such as inadequate FDI inflow. Even more worrisome is the volatility of crude oil price in the international market (Ekienobor, Aguwamba and Limon 2016). The problem thus arises as to what extent the Nigerian Agricultural subsector, oil production, capital market, and the GDP and of course the entire economy should depend on foreign direct investment (FDI). Hence this work on the effect of foreign direct investment on economic growth was carried out to fill the lacuna in the academic literature.

### 1.2. Objectives of the Study

The key objective of this study is aimed at ascertaining the effect of Foreign Direct Investment on Economic Growth in Nigeria.

The specific objectives are: To:

- Determine the effect of foreign direct investment in agriculture on real gross domestic product in Nigeria.
- Ascertain the effect of foreign direct investment in petroleum production on real gross domestic product in Nigeria.
- Establish the effect of foreign direct investment in Capital market on real gross domestic product in Nigeria.

### 1.3. Research Questions

The study seeks to answer the following question drawn from the specific objectives:

- To what extent does foreign direct investment affect agricultural real gross domestic product in Nigeria?
- To what extent does foreign direct investment affect petroleum production on real gross domestic product in Nigeria?
- To what extent does foreign direct investment affect Capital market on real gross domestic product in Nigeria?

### 1.4. Research Hypothesis

The following are considered relevant to the study:

- $H_{01}$  Foreign direct investment in agriculture does not have significant effect on real gross domestic product in Nigeria.
- $H_{02}$  Foreign direct investment in petroleum does not have significant effect on real gross domestic product in Nigeria.
- $H_{03}$  Foreign direct investment in Capital market does not have significant effect on real gross domestic product in Nigeria.

## 2. Review of Related Literature

### 2.1. Conceptual and Theoretical Framework

Foreign direct investment relates to investment that confers controlling ownership of a business in one country to a different entity in another country. The United States Department of Commerce defines foreign direct investment to include all 'foreign business organizations in which a U.S citizen, organization or affiliated group owns an interest of ten (10) percent or more'. The United Nations defines foreign direct investment as 'investment in enterprise located in one country and effectively being controlled' by residents of another country'. This definition does not only consider FDI as being mere investment, it also stresses on the status of corporate control (Okoli, and Agu, 2015).

World Bank (2014) sees FDI as 'investment made to acquire a lasting management interest (normally ten percent of the voting stock) in a business enterprise operating in a country other than that of the investor defined according to

residency'. In line with this, the United Nations Conference on Trade Agreement and Development (UNCTAD) defines FDI as 'an investment involving management control of a resident entity in one economy by an enterprise resident in another country'. The organization for economic cooperation and development (OECD) Benchmark definition of foreign direct investment (fourth edition) defines direct investment as 'a category of cross-border investment made by a -resident in one economy (the direct investor) with the objective of establishing a lasting interest in an enterprise (the direct investment enterprise) that is resident in an economy other than that of the direct investor'. The ownership of at least 10% of the equity or voting power by the direct investor is a necessary condition for an investment to be qualified as a direct investment (OECD, 2008). Foreign direct investments (FDI) are the net inflows of investment to acquiring long lasting management interest in an enterprise operating in an economy other than that of the investor (World Bank, 2014). Foreign direct investment could come to the capital-importing country as a subsidiary of a foreign firm. It could also come by means of formation of a company in which a firm in the investing company has equity holding or the creation of fixed assets in the other country by the nationals of the investing country (Okey & Amba, 2018). In such investment, the foreign firm exercises de facto or de jure control over the assets they have created. The objective of the investors is to acquire a lasting interest and effective control in the management of the enterprise in which direct investment takes place. They may not necessarily have major shareholding, but having an effective voice in the management means that the foreign investor has the potential to influence or participate in the management of an enterprise. Thus, it is the element of influence and control that distinguishes direct investment from portfolio investment (Okoli, & Agu, 2015). The major need of human being since existence is food and shelter. Agriculture has been the mainstay of developing economies including Nigeria and the recent increase in populations has called for the need to ensure food security through huge investments in agricultural sector. The current wave of integration and globalization has increased mutual co-operations among nations of the world through the attraction of foreign investments term investment made by a foreign resident to have an interest and control of over a company in another economy (Abdul-Aziz & Babamu, 2014). Agriculture involves the cultivation of crop, rearing of animals and aquatic species for human consumption. Agricultural sector has continued to contribute to the economy of developing countries through the provision of basic needs of humankind, creation of employment, provision of industrial materials both for domestic use and exportation and contribution to foreign earnings. Thus, the role of agriculture in promoting growth and development cannot be overemphasized. Mika'ilu, and Yunusa, (2018) asserted that 'report of World Bank on development revealed in 2000 over 1.1 billion people were subsisting on less than US\$1 a day and around 2.1 billion people on less than US\$2 a day of which between two thirds to three-quarters live in rural areas of developing nations'. Thus, war on poverty in developing economies can be won through the development of the agricultural sector (Gaber & Venkata, 2013). Despite government interest on revenue from oil sector, the agricultural subsector still contributes to the nation economy in terms of GDP, foreign earnings and creating employment opportunities. Oloyede (2014) states that the agricultural subsector accounts for about 40% of Gross Domestic Product and provides about 60% of employment opportunities for Nigerians about 170 million people, which is high contribution. And it is believed that Nigerian government will pay a special attention to agricultural subsector, but it is sad to note that the sector has being grossly neglected due to full reliance of the economy in oil revenue. The continuous drop in the agricultural subsector has resulted to importation of consumable product in the country. The country that was some time ago a large net exporter of agricultural products and a major foreign exchange earner prior to the discovery of crude oil in 1970s is today a high importer of agricultural products with import exceeding \$3 billion dollar in year 2010, it has grown worse each day that goes by, the worse is Nigeria importing as less as tooth-pick Oloyede (2014) A nation like Nigeria, which is overflowing with a lot of mineral resources, yet this does not translate to better life for its people. unemployment is double digit, poverty rate is over 60%, World Bank (2014). Educational standard is still an issue to combat with, needless to measure power, health services, road network, technological innovativeness. Nigeria is blessed with both human and natural resources ought to rank amongst the leading nations of the world. Unfortunately, this is not the case as the country is plagued with overabundance of problems which includes security, deprivation, low life expectancy, and high infant mortality rate. (Adeleke, Olowe, & Fasesin, 2013) The remaining part of this paper is divided into theoretical and empirical review, method, results, conclusion and recommendations. Nigeria is one of the developing countries in West Africa richly endowed with natural resources, mainly oil and gas, mineral deposits, vegetation etc., and these resources balance is dominated by petroleum as well as coal reserves but production is substantially lower than potential. From 1970-1990, Nigeria accounted for 30% of FDI inflow to Africa; this was largely as a result of its oil attractiveness (United Nations conference on trade and development (UNCTAD). Both in 2007, in spite of the oil boom, Nigeria accounted for a miserable 16% of total FDI inflow, to Africa.

## 2.2. Theoretical Framework

This paper anchored upon the Industrialization Theory on FDI and Spillover Effects. Hymer's (1976) in a study of multinational companies (MNCs) drew attention to neglected aspects of MNCs' role as global industrial organizations. Hymer's view was a major departure from the orthodox theoretical economic literature. The standard neoclassical trade theory of Heckscher and Ohlin, for example, carried restrictive assumptions about the immobility of factors of production and identical production functions across national boundaries. It postulated that no international difference existed at the scientific and technological levels, not to mention technology transfer and spillovers. In the neoclassical financial theory of portfolio flows, multinational enterprises had been viewed as simply an arbitrageur of capital in response to changes in interest rate differentials. Capital is seen to flow from countries where returns are low to those where it is higher to earn arbitrage rents. This theory did not distinguish between the roles played in a country's development by portfolio and FDI capital inflows. Hymer's major contribution was to shift attention away from neoclassical financial theory.

### 2.3. Empirical Review

Edesiri and Egbunike, (2018) empirically studied the relationship between foreign direct investment, oil revenue and economic prosperity in Nigeria. They used secondary data of Gross Domestic Product, Oil Revenue and Foreign Direct Investments obtained from the Central Bank of Nigeria Statistical Bulletin for the period of 1981-2015. Adopting the Ordinary Least Square estimation technique, their study revealed that GDP is negatively influenced by oil revenue and foreign direct investment. Mounkaila, and Noma, (2017) evaluated the impact of foreign direct investment on Nigeria economic growth. Time series data were employed covering the period 1980–2005 using Ordinary Least Square (OLS) and granger causality test as econometric methodologies. The findings show that foreign direct investment has a positive and statistically significant contribution on Nigeria economic growth. The granger causality test indicates a bi-directionary causation running from FDI to GDP. Okey and Amba, Esu-Amba (2018) studied the relationship, drawing inference from Nigeria, with a view to contributing to the on-going debate. Co-integration and error correction methodology was adopted; the paper revealed that Nigeria has fared very well in the nexus between FDI and economic growth, as the former impacted positively and significantly on the latter in Nigeria, within the period under review. Local investment and stock of human capital were also observed to have contributed majorly to the growth of Nigeria economy. However, labour force and openness of the economy impacted insignificantly to growth. Benedict, and John (2017) economic theories showed that Foreign Direct Investment (FDI) as an integral key macro-economic variable has a positive relationship with economic growth. To this end, this research explicitly test the hypothesis on whether or not FDI has positive and significant impact on output growth in the Nigeria economy adopting a model based on a modified neoclassical production function where FDI is taken as an input in the production process. The research employed unit root test and Granger-Causality test using E-Views in the determining the impact of FDI on economic growth in Nigeria. The results of the estimation analysis obtained showed that there is a positive relationship between FDI and output growth in the Nigerian economy. Akinwale, Adekunle, and Obagunwa, (2018) studied the impact of foreign direct investment on agricultural productivity in Nigeria. The study employed Augmented Dickey – Fuller (ADF), Johansen test and Error Correction Model to examine the effect of foreign direct investment and agricultural development. The unit root test results revealed that all the macro economic variables namely Agricultural Productivity, Foreign Direct Investment, Bank Credit to Agricultural Sector and Government Expenditure to Agricultural Sector were stationary at first difference. The results of the co-integration test indicated that there exist long run equilibrium relationships among the variables. The result of the error correction model showed that both foreign direct investment and bank credit to agricultural sector had significant effect on agricultural productivity while it was confirmed that an insignificant relationship exists between government expenditure to agricultural sector and agricultural productivity. Okafor, and Egayi (2018) studied the relationship between FDI, capital market and the Nigerian economy. Three hypotheses were formulated and tested using data obtained from CBN statistical bulletin 2013 – 2015. Ordinary Least Squares regression technique with the aid of SPSS 22 was employed and findings indicates that capital market has positive significant impact on Nigerian economy; FDI in Nigeria have significant impact on economic growth and that FDI enhances the capitalization of Nigerian capital market. Mika'ilu, and Yunusa, (2018) evaluated the impact of foreign direct investment (FDI) on stock market development in Nigeria using annual data from 1981 to 2016. The variables such as stock market development proxied by market capitalization, foreign direct investment, exchange rate, inflation rate and gross domestic savings were used in the study. The research revealed that foreign direct investment has positive and statistically insignificant effect on stock market development. Exchange rate and gross domestic savings exert positive and statistically significant impact on stock market development, while inflation rate has insignificant negative influence on stock market development in Nigeria throughout the study period. Okafor, Ugwuegbe and Ezeaku (2016) investigated the relationship between foreign capital inflows and economic growth in Nigeria for the period, 1981-2014. In this study, foreign capital inflows had Foreign Direct Investment, Foreign Portfolio Investment and Foreign Aid as proxies, while economic growth had Gross Domestic Product (GDP) as proxy. The result found out that there is bi-directional causality running from GDP to FDI as well as from FDI to GDP. It also indicated that there is a unidirectional causality between FDI and GDP with causation running from FDI to GDP. Akinlo, (2013); Anowor, Ukwenu, Ibiham and Ezekwem, (2013); posit that foreign direct investment has positive effect on real gross domestic product in Nigeria while Antwi, Atta Mills, & Xicang, (2013); Otto, & Ukpere, (2014) posit that foreign direct investment has negative effect on economic growth in Nigeria. However, the research work anchored upon the Industrialization Theory on FDI and Spillover Effects. Hymer's (1976) pioneering a study on multinational companies (MNCs) drew attention to neglected aspects of MNCs' role as global industrial organizations. Hymer's view was a major departure from the orthodox theoretical economic literature. The standard neoclassical trade theory of Heckscher and Ohlin, for example, carried restrictive assumptions about the immobility of factors of production and identical production functions across national boundaries. It postulated that no international difference existed at the scientific and technological levels, not to mention technology transfer and spillovers. In the neoclassical financial theory of portfolio flows, multinational enterprises had been viewed as simply an arbitrageur of capital in response to changes in interest rate differentials.

## 3. Method

### 3.1. Method of Data Analysis

The ex-post facto research design was adopted because the data are secondary data which were collected from Central Bank of Nigeria Annual Reports, and National Bureau of Statistics (N.B.S) which form the data base for this study. Independent variables are foreign direct investment in agriculture, foreign direct investment in petroleum, foreign direct

investment in capital market(x) While Nigerian economy is the dependent variable (Y).The data were analyzed with econometric techniques involving Augmented Dickey Fuller Tests for Unit Roots and the Ordinary Least Square (OLS).

### 3.2. Model Specification

The model used for the study was the adaptation and modifications from the work of Adeleke, Olowe and Fases in (2013) which examined foreign direct investment on the Nigerian economy. The model is stated thus:

$$RGDP=f(FDAGR+FDPTL + FCDMKT)$$

Where:

RGDP= Real Gross Domestic Product

FDAGR = Foreign Direct Investment in Agriculture

FDPTL= Foreign Direct Investment in Petroleum Production

FCDMKT = Foreign Direct Investment in Capital Market

b0= the constant

The model was adopted and modified by introducing foreign direct investment in capital market as one of the explanatory variables in the study:

$$RGDP=f(FDAGR+FDPTL +FCDMT)$$

This equation can be transformed into a linear function thus:

$$RGDP = \beta_0 + \beta_1FDAG + \beta_2FDPL + \beta_3 FDMT + \mu \text{ --- (1)}$$

Where:

RGDP= Real Gross Domestic Product

FDAGR = Foreign Direct Investment in Agriculture

FDPTL= Foreign Direct Investment in Petroleum Production

FCDMKT= Foreign Direct Investment in Capital Market

b0 = the constant

b1- b4 = the coefficients of the explanatory variables

Ut = Error term

### 3.3. Data Analysis and Interpretation

#### 3.3.1. Unit Root Test

The Augmented Dickey-Fuller (ADF) tests for unit root were conducted on the variables, to determine whether they are stationary or non-stationary series.

##### 3.3.1.1. Decision Rule

Reject the null hypothesis when the test statistical value is less than the critical value. Otherwise, accept and test at higher difference (1 or 2). The significance level for the analysis is at 5%. The tests are done at levels and first difference and presented in Table1.

Variables		Levels		Decision
		ADF	PP	
RGDP		-4.412986*	-4.387653*	1(0)
FDAG		-3.532749*	-3.532749*	1(0)
FDPL		-3.789869*	-2.867464***	1(0)
FDMT		-2.101323	-2.111128	1(0)
Critical Values	1%	-3.679322	-3.679322	
	5%	-2.967767	-2.967767	
	10%	-2.622989	-2.622989	

Table 1: The Unit Root Test Results for the Selected Variables in Nigeria

\*, \*\*, \*\*\* Denotes Significance at 1%, 5% and 10% Respectively

The results on Table 1 indicate that variables of RGDP, FDAG, FDPL and FDMT have unit root at level. This means that these variables were integrated in the order of I (0). This implies that RGDP, FDAG, FDPL and FDMT are stationary at levels.

### 3.4. Empirical Results and Discussion

The analysis commenced with ADF Unit root test which assessed the order of integration of the variables as shown in the above table, while the test of hypothesis was done using the Ordinary Least Square (OLS) Technique as shown in the table below.

<b>Dependent Variable: RGDP</b> <b>Method: Least Squares</b> <b>Date: 03/12/20 Time: 15:27</b> <b>Sample: 1987 2019</b> <b>Included observations: 32</b>				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
rGDP	0.667553	0.824890	10.809263	0.0260
FDAG	0.164745	1.010577	2.163021	0.0058
FDPL	0.518247	0.672745	3.770347	0.0183
FDMT	0.068816	0.039042	2.762604	0.0302
R-squared	0.712561	Mean dependent var		4.676947
Adjusted R-squared	0.655073	S.D. dependent var		7.153306
S.E. of regression	6.953540	Akaike info criterion		6.888364
Sum squared resid	1208.793	Schwarz criterion		7.165910
Log likelihood	-100.7696	Hannan-Quinn criter.		6.978837
F-statistic	19.349696	Durbin-Watson stat		2.971283
Prob(F-statistic)	0.006525			

Table 2: OLS Regression of the Effect of Foreign Direct Investment and Economic Growth in Nigeria

From the results of the OLS, the constant parameter is positive at 0.667553. This means that if all the independent variables are held constant, RGDP as a dependent variable will grow by 0.667553 units in annual-wide basis.

The coefficient of the regression showed that foreign direct investment in agriculture (FDAG) had positive (0.164745) and significant ( $p < 0.05$ ) effect on real gross domestic product (RGDP). This means that the Alternate Hypothesis: Foreign direct investment in agriculture have significant effect on gross domestic product, is accepted

To determine the effect of foreign direct investment in petroleum on real gross domestic product (RGDP), the coefficient of foreign direct investment in petroleum (FDPL) was used. The result showed that foreign direct investment in petroleum (FDPL) had positive (0.518247) and significant ( $p < 0.05$ ) effect on gross domestic product (GDP). Thus, hypothesis two: Foreign direct investment in petroleum have significant effect on gross domestic product, is accepted

The coefficient of foreign direct investment in capital market (FDMT) showed that foreign direct investment in capital market (0.068816) had a positive and significant ( $p < 0.05$ ) effect on real gross domestic product (GDP). This implies that hypothesis four foreign direct investment on capital market have significant effect on gross domestic product (RGDP), is accepted.

However, the coefficient of determination ( $R^2$ ) = 0.712561 showed that about 71% of changes in Nigeria economy is accounted for by the level of foreign direct investment in Nigeria. This implies that foreign direct investment is one major contributor to the Nigeria economy.

The F-statistics (19.349696;  $p < 0.05$ ) indicated that all the variables of the model (foreign direct investment variables) have significant effect on economic growth in Nigeria.

The Durbin Watson statistics (2.971283) showed that there was no autocorrelation in the model employed.

### 3.5. Test of Hypotheses

To test the hypotheses, the statistical significance of the individual parameters is use to test hypotheses.

- $H_{01}$ : Foreign direct investment on agriculture has no significant effect on the gross domestic product in Nigerian.
- $H_i$ : Foreign direct investment on agriculture as significant effect on the gross domestic product in Nigerian.

Since the probability value is less than 5% (0.0058 < 0.05), the null hypothesis is rejected while the alternative hypothesis is accepted implying that Foreign direct investment on agriculture has a significant effect on the gross domestic product (GDP) in Nigeria.

- $H_{02}$ : Foreign direct investment on petroleum has no significant effect on the real gross domestic product (RGDP) in Nigeria.
- $H_i$ : Foreign direct investment on petroleum has a significant effect on real gross domestic product (RGDP) in Nigeria.

Since the probability value is less than 5% (0.0183 < 0.05), the null hypothesis is rejected while the alternative hypothesis is accepted implying that Foreign direct investment on petroleum has a significant effect on real gross domestic product (RGDP) in Nigerian.

- $H_{03}$ : Foreign direct investment on capital market has no significant effect on real gross domestic product (RGDP) in Nigeria.
- $H_i$ : Foreign direct investment on capital market has a significant effect on real gross domestic product (RGDP) in Nigeria.

Since the probability value is less than 5% (0.0302 < 0.05), the null hypothesis is rejected while the alternative hypothesis is accepted implying that foreign direct investment on capital market has a significant effect on real gross domestic product (RGDP) in Nigeria.

### 3.6. Discussion of Findings

The result of the study indicates that foreign direct investment in agriculture has positive effect on real gross domestic product (RGDP). This is consistent with the works of Adeleke, Olowe, and Fasesin, (2013) in terms of foreign direct investment on agriculture, it was discovered that foreign direct investment in agriculture has positive effect on economic growth in Nigeria

The result indicates that foreign direct investment on petroleum has positive effect on real gross domestic product (RGDP). This is consistent with the works of James and Ebekozi, Ugochukwu and Okoye (2015) they posit that foreign direct investment on petroleum has positive relationship with economic growth in Nigeria.

The result indicates that, foreign direct investment on capital market (FCMT) has a positive effect on real gross domestic product in Nigeria. This is consistent with the works of Benedict, and John, J. C. (2017) in terms of foreign direct investment in capital market (FCMT), it was discovered that foreign direct investment in capital market (FCMT) has positive relationship with economic growth in Nigeria.

## 4. Conclusion and Recommendations

### 4.1. Conclusion

Drawing from the industrialization theory of foreign direct investment (FDI) and Spillover effects of Hymens (1976) this work looked at FDI on economic growth in Nigeria. Attracting FDI has been a core policy making in both emerging and developed economies of the world. Successive government in Nigeria has put in one policy or another to attract FDI. However, the Nigeria economy has not improved significantly despite its policy of attracting FDI. The OLS technique was used to evaluate the data and results conclude generously that FDI have beneficial effects in boosting the Agricultural, petroleum and the capital market sector.

### 4.2. Recommendations

Based on the results from the data analysed, the study recommends that; There should be a regulatory framework that will enable the financial institutions and foreign investors to channel their resources to the agricultural sector of the Nigerian economy

An effective policy should be made based on the fiscal and monetary policies which should be aimed at achieving a realistic foreign direct investment in petroleum and agriculture, and also,

There is the need for greater foreign participation in the stockmarket which could be achieved by greater openness. Authorities should look for ways of strengthening the working mechanisms of the capital market especially against fraudulences, to ensure the effectiveness of the policy tools in achieving the desired macroeconomic goals in the country.

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### Appendix

Year	RGDP (₦b)	FDAG (₦b)	FDPL (₦b)	FDMT (₦b)
1987	205971.4	12338.1	12338.1	27.57
1988	204806.5	16667	16667	38.36
1989	219875.6	25696.8	25696.8	45.9
1990	236729.6	22593.8	22593.8	52.86
1991	267550	10795.3	10795.3	75.4
1992	265379.1	63581.5	63581.5	111.11
1993	271365.5	16888	16888	165.34
1994	274833.3	22.2	22.2	230.29
1995	275450.6	75.9	75.9	289.09
1996	281407.4	111.3	111.3	345.85
1997	293745.4	110.5	110.5	413.28
1998	302022.5	80.7	80.7	488.15
1999	310890.1	92.8	92.8	628.95
2000	312183.5	116	116	878.46
2001	329178.7	132.4	132.4	1269.32
2002	356994.3	225.2	225.2	1505.96
2003	433203.5	258.4	258.4	1952.92
2004	477533	248.2	248.2	2131.82
2005	527576	406.1	406.1	2637.91
2006	561931.1	824.7	824.7	3797.91
2007	595821.6	1797.3	1797.3	5127.4
2008	634251.1	2059.6	2059.6	8008.2
2009	672202.5	2281.2	2281.2	10780.63
2010	718977.3	3068.9	3068.9	11525.53
2011	776332.2	3636.7	3636.7	13303.49
2012	834000.8	3626.8	3626.8	15483.85
2013	888893	4149.6	4149.6	15688.96



Year	RGDP (N <b>₦</b> )	FDAG (N <b>₦</b> )	FDPL (N <b>₦</b> )	FDMT (N <b>₦</b> )
2014	950114	3267.7	3267.7	18913.03
2015	851.38	2677.2	2677.2	20029.83
2016	595821.6	2490.3	2490.3	23591.73
2017	634251.1	3990.2	3990.2	24140.63
2018	672202.5	3636.7	3636.7	15688.96
2019	201036.3	3641	3641	23.81

Table 3: Data for the Analysis  
Source: CBN Statistical Bulletin, 2019

Variables	Levels		Decision
	ADF	PP	
RGDP	-4.412986*	-4.387653*	1(0)
FDAG	-3.532749*	-3.532749*	1(0)
FDPL	-3.789869*	- 2.867464** *	1(0)
FDMT	-2.101323	-2.111128	1(0)
Critical Values	1%	-3.679322	
	5%	-2.967767	
	10%	-2.622989	

Table 4: The Unit Root Test Results for the Selected Variables in Nigeria  
\*, \*\*, \*\*\* Denotes Significance at 1%, 5% and 10% Respectively

Dependent Variable: RGDP Method: Least Squares Date: 03/12/20 Time: 15:27 Sample: 1987 2019 Included observations: 32				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
rGDP	0.667553	0.824890	10.809263	0.0260
FDAG	0.164745	1.010577	2.163021	0.0058
FDPL	0.518247	0.672745	3.770347	0.0183
FDMT	0.068816	0.039042	2.762604	0.0302
R-squared	0.712561	Mean dependent var		4.676947
Adjusted R-squared	0.655073	S.D. dependent var		7.153306
S.E. of regression	6.953540	Akaike info criterion		6.888364
Sum squared resid	1208.793	Schwarz criterion		7.165910
Log likelihood	-100.7696	Hannan-Quinn criter.		6.978837
F-statistic	19.349696	Durbin-Watson stat		2.971283
Prob(F-statistic)	0.006525			

Table 5: OLS Regression of the Effect of Foreign Direct Investment and Economic Growth in Nigeria