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## FOREIGN DIRECT INVESTMENT FLOWS AND ECONOMIC GROWTH IN NIGERIA

By

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### Abstract:

The study examined the relationship between foreign direct investment and economic growth in Nigeria for the period of 1997-2022. Gross domestic product was used as proxy for Nigeria economy as the dependent variable, while foreign direct investment inflow and foreign direct investment outflow constitutes the independent variables. Time series data was adopted from the central bank of Nigeria statistical bulletin and World bank data, and analysed using the Ordinary Least Square (OLS) technique. The findings reveal a positive and significant relationship between foreign direct investment inflows, foreign direct investment outflows, and Gross Domestic Product in Nigeria. The outcomes suggest that FDI plays a crucial role in contributing to economic growth in the country. As such, we recommended that government should note that FDI is an integral part of trade, hence policies that promote foreign investment and at the same time protect, supplement domestic production and investment, as well as complements the development goals of the host countries should be encouraged.

### Keywords:

**Foreign Direct Investment Inflows, Foreign Direct Investment Outflows,  
Economic Growth, Gross Domestic Product.**



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## 1.1 Introduction

For every economy to achieve predictable and long-term growth, capital inflow from abroad is very critical. Maintaining a favourable balance of trade, increased standard of living and increase in job creation is an indicator of growth in an economy (Omogbe, 2019). A growing economy will experience favorable balance of trade when more locally made goods are exported thus showing increase in the nations' production capacity. Broadly, economic growth is a measure of the level of standard of living of the people and reducing inequalities of income distribution. Therefore, to ascertain a sustained economic growth, Nigeria must continue its drive to diversify, invest in infrastructure, address regulatory challenges, and enhance security to foster a conducive environment for foreign investors.

Investment is the most important and strategic component in driving growth in any country. It has been established as the most important factor in increasing production. Several empirical and theoretical investigations by researchers in both developing and industrialized nations have indicated a substantial association between investment and economic growth. Poor savings habits occur in Nigeria, resulting in savings falling short of anticipated investment, and product market instability, which slows economic growth (El-Rasheed, and Abdullahi, 2022). Foreign Direct Investment (FDI) is used by the majority of developing nations as a strategy of obtaining foreign reserves through investments, businesses, and foreign help from developed nations.

Foreign direct investment (FDI) is seen as a way of filling the gap between domestic available supplies of saving, government revenue, human capital skills and the desired level of resources needed to achieve growth and development targets. From the economic perspective, foreign direct investment can enhance the financial expansion in both emerging and developed countries (Olasehinde and Ajayi, 2022). The essence of FDI in emerging economies is for capital to be accumulated for investment, leading to diverse employment opportunities and transfer of technology within and outside the countries, which eventually contributes to economic growth and expansion (Makwe & Oladele, 2018).

However, the level of FDI attracted by Nigeria is mediocre (Asiedu, 2003). In 2018, the total FDI inflow to the country was around USD 1.9 billion, while in 2017, FDI inflow was around USD 3.5 billion, showing a decrease due to the consequence of the austerity measures imposed in 2018. In 2019, net FDI inflows for Nigeria was 2,305 million US dollars, it increased to \$2.4 billion in 2020 from \$2.3 in the previous year. The changes in the level of net FDI inflow in Nigeria reflect changes in the political, social and economic environment of the country over the period of study. Even when they (Foreign investors) have established manufacturing facilities in Nigeria, they still engage in substantial importation of intermediate products, a practice that help to deplete foreign exchange

reserve in the host country. The foreign investors have not successfully transferred the technological know-how and managerial skills and expertise to Nigerians, the host country.

Nguyen, (2022) postulates that foreign direct investment increases the rate of technical progress in the host country through a "**contagion effect**" from the more advanced technology and management practices. Nguyen, (2019) opined that level of insecurity in the country; especially Boko Haram insurgency constitutes a major hindrance to multinational companies' influx with serious impediment to Foreign Direct Investment inflow. FDI is also hindered by other forms of insecurity, such as weak and bad governance, inefficient policy implementation, reversals, bureaucratic bottleneck and regulatory burden.

As a result, foreign capitals which could have accrued to the country in form of technical skills and investments were discouraged. The underdeveloped nature of the financial markets in Nigeria retarded capital formation geared towards economic growth and development in the country. Therefore, the purpose of this study is to investigate empirically, the effect of foreign direct investment on using time series data for twenty-five years (25).

## 2.0 Synopsis of Literature Review

### 2.1 Conceptual Review

#### 2.1.1 Foreign Direct Investment

Foreign direct investment (FDI) is a type of investment made by businesses from one country to another country or also known as the host country. Frequently, interested firms would invest in an open economy which offers a lot of benefits the investors. Such as better growth potential, cheaper workforce and highly-skilled labor to besides that, FDI encourages job opportunities, increases output, generates competition among local business and achieves advantages through technological knowledge enhancement and innovative capability of other firms and countries (Eze, 2020). According to Makwe, and Oladele (2020), FDI serves as an important engine for growth in developing countries through two modes of action: expanding capital stocks in host countries and bringing employment, managerial skills, and technology. Several frameworks have evolved for analyzing the determinants and effects of FDI. The term 'foreign direct investment' of **'FDI'** encompasses two related but different sets of topics or activities, explained by different theories and by different branches of economics. The first might be referred to as the international finance, or macro view, while the second might be referred to as the industrial organization or micro view.

The macro view sees FDI as a particular form of capital across National borders from his countries to host countries, measured in balance of payment statistics. These flows give rise to a particular form of

stock of capital in host countries, these includes the value of home country investment in entities, controlled by a home country owner, typically corporation, or in which a home country owner holds a certain share of voting rights. The micro view tried to explain the motivations for investment in controlled foreign operations from the views of investors, it also examined the consequences to the investor and to home and host countries of the operations, rather than the size of the firms or the value of the investment stock or investment position.

Oyegoke and Aras, (2021) states that foreign direct investment is the most critical wellspring of outside assets streams to creating nations throughout the years which has turned into a huge piece of capital arrangement in these nations. As indicated by Anichebe, (2019) FDI gives genuinely necessary assets to creating nations, for example, capital, innovation, administrative aptitudes, entrepreneurial capacity, brand and access to business sectors which are fundamental for creating nations to industrialize, create, make occupations and assault the destitution circumstance in their countries.

Adeyi (2015), characterize FDI as the long-haul speculation that mirrors the goal of an enduring premium and control by an inhabitant substance of one economy (the immediate speculator) in a venture that is inhabitant in another economy (Coordinate venture endeavor). Remote direct venture, a noteworthy segment of universal capital streams, alludes to speculation by multinational organizations with headquarters in their home country. Ahmad and Khan, (2021) characterizes foreign direct investment as the procedure whereby individuals in one nation acquire responsibility for with the end goal of picking up control over the creation, circulation and different exercises of a firm in a remote nation.

### **2.1.2 Economic Growth**

The concept of economic growth usually refers to the increase in the inflation-adjusted market value of goods and services produced by an economy over a period of time. Economic growth is the most powerful instrument for reducing poverty and improving the quality of life in developing countries (Turrey and Maqbool, 2018). It is measured as the percentage rate of increase in real GDP usually in per capita terms. Growth usually is calculated in real terms i.e., inflation-adjusted terms. Economic growth also means increased growth in the level of output produced by a country over time and it crucially measures the economic performance of a country. Economic growth is a complex, long-run phenomenon, subjected to constraints like: excessive rise of population, limited resources, inadequate infrastructure, inefficient utilization of resources, excessive governmental intervention, institutional and cultural models that make the increase difficult, etc. (Hendriks, 2020).

Economic growth is obtained by an efficient use of the available resources and by increasing the capacity of production of a country. It facilitates the redistribution of incomes between population and

society. Growth can generate virtuous circles of prosperity and opportunity. Strong growth and employment opportunities improve incentives for parents to invest in their children's education by sending them to school. This may lead to the emergence of a strong and growing group of entrepreneurs, which should generate pressure for improved governance. Strong economic growth therefore advances human development, which, in turn, promotes economic growth (Turrey and Maqbool, 2018). The cumulative effects, the small differences of the increase rates, become big for periods of one decade or more. It is easier to redistribute the income in a dynamic, growing society, than in a static one.

Gross domestic product (GDP) is a key measure of a nation's economic growth, The Gross Domestic Product (GDP) is one of the primary indicators used to measure the healthiness of a country's economy and also, it is the most comprehensive measure of the total output or performance of an economy is the Gross Domestic Product. It is also used to determine the standard of living of individuals in an economy. GDP or gross domestic product, is the market value of all final goods and services produced in a country in a given time period. This implies that Gross Domestic Product considers the market value of each good or service rather than adding up the quantities of the goods and services directly.

Gross Domestic Product is important in an economy because it is used to determine if an economy is growing more quickly or more slowly (Onuoha, Ibe, Njoku, and Onuoha, 2015). Also, it is used to compare the size of economies throughout the world. Again, the Gross Domestic Product is used in the comparison of relative growth rate of economies throughout the world. For instance, the Federal Reserves in the United States uses it as one of the indicators of whether the economy needs to be restrained or stimulated. According to Meyer and Shera, (2017) Gross Domestic Product is everything produced by all the people and all the companies within an economy.

### **2.1.3 Relationship between Foreign Direct Investment and Gross Domestic Product**

There is an agreement which states that FDI has serve as an advantage to local firms by increasing gross domestic product which leads to productivity and efficiency. Developed nations have agreed that productivity has been the key to domestic firms. The literature on FDI and gross domestic product in general points to a positive relationship between the two variables and recommends few explanations for it. In theory, gross domestic product may encourage FDI inflow when FDI is seeking consumer markets, or when growth leads to greater economies of scale and therefore increased cost efficiency. On the other hand, FDI may affect economic growth through its impact on capital stock, technology transfer, skill acquisition or market competition.

The FDI's importance in export promotion is said to be debatable and it relies on it solely for the purpose of investment. The main agreement is that FDI spill over depends on the capacity of the host country in order to absorb the type of investment nature and also foreign technology. The relationship between Gross domestic product and FDI is tagged conditional depending on the country it is passing through. It has been asserted the extent to which FDI contributes to gross domestic product depends on economic and social conditions or in short, the quality of the environment of the recipient country (Zeqiri & Bajrami, 2016). FDI often involves substantial capital inflows into the host country, which can be used to finance infrastructure projects, expand existing industries, or establish new businesses.

These investments contribute to the expansion of productive capacity and can lead to increased GDP through higher levels of output and employment. Thus, employment opportunities are created through FDI in the hosting countries and this is done through direct employment in the domestic economy for operations, for forward and backward connections, leads to more employment creation in the economy due to growth. Growth can be generated through FDI and a steady state of growth over a period of time reduces poverty (Amin, Anwar & Liu, 2022). FDI can facilitate access to international markets for host country firms. Foreign investors may establish export-oriented industries or integrate local businesses into global value chains, leading to increased exports. Higher export levels contribute to GDP growth by generating foreign exchange earnings and expanding the country's export base.

## **2.2 Theoretical Framework**

### **2.2.1 Dependency Theory**

Dependency theory is a set of ideas with a strong potential for influencing policy actions in the Third World. Originally developed during the late 1960s to explain the problems of development in Latin America by scholars working in that region, the theory has attracted a great deal of attention both in the literature and in Third World countries. Drawing from the experience of Latin America, proponents of this theory argue that relations of free trade and foreign investment with the industrialized countries are the main causes of underdevelopment and exploitation of developing economies (Wilham and Witter, (1998).

This theory focuses largely on the relationship between center and periphery. Well-developed and industrialized countries are deemed to constitute the center and the least developed countries. Dependency theory researchers argue that transnational companies (TNC) can prevent economic development by crowding out local entrepreneurs, worsening income distribution, reducing consumer welfare, and introducing inappropriate consumption patterns in host countries. It is also worth noting that the favorable impact of FDI is not a specific fact, it may largely depend on favorable conditions in the host country, political and macroeconomic stability, institutional capacity, infrastructure, and education system.

The most common statement of the theory of dependence is that developing countries “suffer” from the negative consequences of foreign capital in the country due to the repatriation of profits, reduce reinvestment, and increase income inequality. For example, Dixon and Boswell (1996) argued that FDI, although positively affecting economic growth at the very beginning, however, in the long run, the dependence of the national economy on FDI has a negative impact on its growth. Similarly, Moran (1978) investigated that foreign investors adversely affect political processes in the host country; and the benefits of FDI are poorly distributed between TNCs and the host country.

In general, supporters of the theory of dependence, for example, Alfaro (2003) and others, blamed TNCs for exploiting developing countries until the 90s of the last centuries and, as a result, the underdevelopment of the “periphery” of the world economy. In support of this, in a study by Kentor et al. (2003) it was proved that countries with a relatively high dependence on foreign capital (measured as accumulated foreign reserves) show slower economic growth than less dependent countries. According to the authors, the concentration of foreign investment has a significant, long-term negative impact on growth, which is the strongest in the first five years and decreases over time.

### **2.3 Empirical Review**

Amin, Anwar and Liu (2022). Examined the impact of Outward foreign direct investment and economic growth in Romania, covering the period of 1990–2019. The results indicate that both an increase and a decrease in OFDI have a positive and significant impact on Romania's economic growth, with a greater effect arising from the increase in OFDI. Our research adds to the preceding literature by providing new insights into the OFDI-led growth hypothesis. The results of the present study portray the growth-enhancing effects of OFDI, which are consistent with the notion that firms conduct OFDI in order to combine domestic output with overseas output to decrease expenditures and to enhance their competitiveness both at global and domestic levels. Thus, an increase in OFDI is both a cause and a consequence of the home country's economic growth.

Ahmad and Khan (2021) conducted a study to find the effect of foreign remittances, foreign direct investment (FDI) on economic growth in Pakistan. Time series data is used which is covering from 1990 to 2018, collected from the world development indicator data bank. ARDL bound test is used in which GDP is dependent variable while foreign remittance and foreign direct investment (FDI) are independent variables. The form the Auto Regressive Distribution Lag (ARDL) model suggest that there is long run relationship between FDI, foreign remittance and economic growth of Pakistan. Sohail and Mirza (2020) investigated the impact of foreign direct investment on economic growth of Pakistan using time series data from the period 1996 to 2015. The results of the study showed that there is a significant relationship between foreign direct investment and gross domestic product of the country.



Bakirtas, and Alpdoğan (2020) developed a quantitative analysis related to the following five countries: Brazil, Russia, India, China and Turkey, during the years 1992-2013. Unit root tests, Fully Modified OLS and Dynamic OLS methods, Granger causality testing and panel data causality testing by Dumitrescu-Hurlin method were performed in the analysis. The research showed that the expected results are positive and statistically significant. Granger causality testing has shown that there is a unidirectional relationship between gross domestic product and foreign direct investments, while the Dumitrescu-Hurlin method has shown a bidirectional relationship.

Makwe, and Oladele (2020) examined the effect of Foreign Direct Investments flow to agriculture, manufacturing and processing, and mining and quarrying subsectors of the Nigerian economy on revenue generation in Nigeria proxies by company income tax and petroleum profit. The six hypotheses that guided the study were formulated in line with the stated objectives and relevant theoretical as well as empirical literature were reviewed and evaluated. The relevant data were extracted from the annual statistical bulletin of the central Bank of Nigeria. Unit root tests were carried out using Augmented Dickey Fuller method which revealed that the variables were integrated at different orders. The autoregressive distributive lag/bound test was used to explore the long run relationship existing among the variables in each model and the result of the bound test showed that the variables in the two models are co-integrated thus the study proceeded in evaluating the long run as well as the co-integrating form in each model. It was found that Foreign Direct Investments to agriculture does not enhance the generation of company income tax and petroleum profit tax in Nigeria in the long run as its coefficient turned out negative and insignificant whereas the coefficient of manufacturing and processing was positive but not significant in relations with company income tax, but negative and nonsignificant with respect to petroleum profit tax. Going further, Foreign Direct Investments to mining and quarrying had positive and significant relationship with both company income tax and petroleum profit tax generation in Nigeria. The study recommended that Government can by the use of moral suasion; appeal to foreign investors to plough back about 70% of their earnings so as to expand their output as such expansion will invariably increase the company income tax and petroleum profit tax revenues of government. Tax holidays should be granted to investors in Agriculture and Manufacturing and Processing sectors so as to encourage Foreign Direct Investments inflow to these sub-sectors which will no doubt increase output, stimulate growth and increase the government tax revenue generation capacity in Nigeria.

Sarker and Khan (2020). Investigated the causal nexus between FDI and GDP in Bangladesh. To explore the relationship between the two variables, FDI and GDP in Bangladesh, this study used data collected from the World Bank's World Development Indicators database. The data series included annual data (in millions of U.S. dollar) for both FDI and GDP covering the period from 1972 to 2017. We took the GDP variable as a real series measured in constant 2000 U.S. dollars. By employing



standard time-series econometric tools, namely, augmented Dickey-Fuller, augmented Dickey-Fuller generalized least square, Kwiatkowski-Phillips-Schmidt-Shin, and Lee-Strazicich unit root tests to check stationarity, augmented autoregressive distributed lag (augmented ARDL) bounds testing approach to check cointegration, and Granger causality to explore the direction of causality. The empirical results of the augmented ARDL bounds testing approach to cointegration with structural breaks suggested that there was a long-run relationship between GDP and FDI in Bangladesh. The signs and values of ECT coefficients and the values of corresponding t-statistic confirmed the existence of this long-run relationship. The ECT results also confirmed the finding that the disequilibrium for the FDI equation converged. The disequilibrium for the GDP equation did not converge if there was any shock in the equilibrium position. This meant that the long-run causality was unidirectional, and it ran from GDP to FDI. Having confirmed that there was a long-run relationship between GDP and FDI through a cointegration analysis, the study applied a Granger causality test, which also indicated the presence of short-run unidirectional causality running from GDP to FDI. These results were consistent, as Bangladesh has been experiencing stable economic growth over the past few decades and the volume of FDI also has increased to a significant extent with little fluctuation.

Ma'in, and Mat Isa (2020) presented a quantitative analysis regarding the Malaysian economy during the years 1975-2015. The Auto-Regressive Distributed Lag (ARDL) method is used to investigate the long-run relationship between FDI and economic growth. This study used the Autoregressive Distributed Lag approach, including also control variables such as: gross fixed capital formation, population growth and life expectancy. The empirical result of this study is able to prove that FDI has significant positive impact toward the economic growth in Malaysia. This is aligned with the proposed idea by endogenous theory where FDI inflow will have a positive impact toward a host country's economic development through spillover effects created by foreign investments. Other than that, life expectancy and gross fixed capital formation, which represent human capital and total domestic investment respectively, also show a positive impact on economic growth in the long run. This shows that the theory developed to prove an improved human capital will eventually have a significant impact on economic. Growth is accepted. Conclusively, this improvement in human capital has been influenced by positive spillover received through FDI inflows into Malaysia. Based on the findings, a suitable recommendation should be proposed to Malaysia's government is to attract more FDI inflows into the economy with the main focus to improve the welfare and health of the human capital. As proven by results, human capital (life expectancy) and population growth have the highest impact towards the economic growth in Malaysia. Moreover, they also need to emphasize on the policy to improve the wellbeing of the current economy, which will indirectly attract more FDI inflow and also properly serve the investments. As for improvement for human capital, the government can

help by introducing more policies that involves local upstream parties. Other than that, Malaysian government also can facilitate more implementation of local management trainee programs with valuable foreign firms in the country to gather more experiences and knowledge from such firms.

Hendriks (2020). used the eclectic paradigm as a broad organizing framework to bring together two somewhat parallel international business (IB) literatures, one on the development effects of multinational enterprise activity and the other on the internationalization of emerging market multinationals (EMNEs). The author does so to better understand how outward foreign investment shapes economic development in firms' home countries. Considering that the characteristics of foreign investment by EMNEs likely differ from that of their developed economy counterparts and that such characteristics may have unique development consequences, the author revisits one of IB's overarching theories to rethink how ownership, location and internalization advantages take shape and stimulate diverse development outcomes. The results indicated that the eclectic paradigm is a valuable framework that can be used to shed light on underexplored phenomena and thereby inform important policy debates. The analysis suggests that unique characteristics of EMNE investment simultaneously have positive and negative development consequences in their home countries. The author sets out a research agenda that revolves around six propositions that separately relate one of these three distinct characteristics of EMNE investment to two development outcomes, namely, spillovers and direct effects on home-country employment.

### **3.0 Methodology**

#### **3.1 Research Design**

According to Baridam (2001), research design is seen as a framework or plan that is used as a guide in collecting and analyzing data for a study. In other words, the research design articulates what data is required, what method is going to be used to collect and interpret these data, and how all of these are going to answer the research questions. To achieve the aim of this study, the ex-post facto tool that examines how an independent variable affects a dependent variable, was used by obtaining secondary data from the statistical bulletin of the Central Bank of Nigeria and journals published by past researchers.

This research evaluates the impact of foreign direct investment on Nigeria economy growth, for the purpose of this study, however, the non-probability sampling method was used. Also, the judgmental sampling procedure was adopted as it allowed the researcher to consider typical members of the population that would produce appropriate data needed for the study. The study sampled the Nigeria economy, between 1997-2022. The data used for the analysis in this study were extracted mainly from

the statistical database of the Central Bank of Nigeria (CBN), Publications of the National Bureau of statistics and other important Journals.

### 3.2 Model Specifications

This study adopted the model by Ahmed and Ibrahim (2019) and Aras and Oyegoke (2021) with slight modification.

Thus, from the foregoing, the functional equation models was stated as follows:

$$GDP_t = f(FDF_t, FDO_t) \text{-----} (1)$$

$$GDP_t = \alpha_0 + \alpha_1 FDF_t + \alpha_2 FDO_t \text{-----} (2)$$

Converting to econometric form by the introduction of the constant term ( $\alpha_0$ ) and error term ( $\mu$ )

$$GDP_t = \alpha_0 + \alpha_1 FDF_t + \alpha_2 FDO_t + \mu \text{-----} (3)$$

Where:

GDP = Gross Domestic Product.

FDF = Foreign Direct Investment Inflow.

FDO = Foreign Direct Investment Outflow

$\alpha_0$  = Constant Term

$\alpha_1$ – $\alpha_2$  = Coefficients of Predictors

$\mu$  = Error Term/White Noise

#### 3.2.1 Apriori Expectation

The study shall subject to theoretical framework test for economic *a priori* expectation. Therefore, it is expected that;

$$\alpha_1 > 0, \alpha_2 > 0$$

From the above apriori expectation, it is expected that an increase in Foreign Direct Investment Inflow, Foreign Direct Investment Outflow, will have a positive impact on Gross Domestic Product.

### 3.3 Method of Data analysis

The data obtained for the research must be analyzed in order for it to have any meaning. To analyze the data obtained, the raw data was classified, grouped, and tabulated. Obtained data was analyzed with the use of an Econometric View (E-views) statistical package. E-views is a statistical package used mainly for Time series oriented econometric analysis. However, data obtained were fitted to the equation by Ordinary Least Square (OLS) techniques for regression analysis. This technique is used to evaluate the impact of foreign direct investment on Nigeria economy growth. Furthermore, the model was evaluated using the following tests:

- i. **Test:** This was used to test the validity of the parameter estimate. In other words, it was used to decide whether the estimate (Independent variables) is individually significant or not.
- ii. **Regression Coefficient (C):** This measured the extent to which the independent variable affects the dependent variable in the study.
- iii. **Coefficient of Determination:** This is also known as the R-squared. The R-squared ( $R^2$ ) measured the magnitude of the influence or ability of the independent variables simultaneously in describing the dependent variable. If the value is more than 0.5 then the ability of the independent variable is strong in explaining the dependent variable. While vice versa if the value is less than 0.5 then the ability of the independent variable is not strong in explaining the response variable.
- iv. **The Adjusted  $R^2$ :** this is known as the coefficient of multiple determinations. It measures the magnitude of the influence or ability of the independent variables simultaneously in explaining the response variable by observing the standard error. The explanation is the same as R Square but this value has been corrected with the standard error.
- v. **The F-Test:** The F-test was adopted to test the overall and total significance of the model. It was used to test the joint significant effect of the independent variables on the dependent variable.

### 4.0 Results and Discussions

Secondary sources were used for data collecting because of the study's nature. Our research's data came from the Statistical Bulletin of the Central Bank of Nigeria (CBN). The time series data sourced covered Gross Domestic Product (GDP), Foreign Direct Inflow and Foreign Direct outflow for the period of 25 years which range from 1997 to 2022. These data are presented in this section as follows:

**TABLE 4.1: Time Series Data on Gross Domestic Product (GDP), Foreign Direct Investment Inflow (FDF) and Foreign Direct Investment Outflow (FDO)**

Year	GDP at Constant market prices (₦' Billion)	FDF (Current US\$)	FDO (Current US\$)
1997	4,374.50	469,577,019.81	102,972,821.00
1998	4,756.71	299,566,658.26	158,800,978.70
1999	5,426.47	1,004,915,630.71	172,817,608.80
2000	6,990.62	1,140,167,556.02	168,938,514.50
2001	8,150.02	1,190,618,643.59	93,883,556.70
2002	11,383.66	1,874,070,753.14	172,161,494.50
2003	13,418.01	2,005,353,563.06	167,321,366.70
2004	17,938.38	1,874,060,886.98	-260,755,093.60
2005	22,884.90	4,982,533,930.22	14,635,077.18
2006	30,063.96	4,854,353,979.09	319,618,789.76
2007	34,318.67	6,036,021,404.82	867,680,640.35
2008	39,542.43	8,194,071,895.46	1,051,265,239.84
2009	43,012.51	8,555,990,006.72	1,525,344,474.74
2010	54,612.26	6,026,253,091.35	911,719,866.47
2011	62,980.40	8,841,062,050.77	816,759,862.41
2012	71,713.94	7,069,908,427.94	1,530,123,712.35
2013	80,092.56	5,562,857,987.47	1,227,434,198.22
2014	89,043.62	4,693,828,631.90	1,614,294,500.00
2015	94,144.96	3,064,168,904.45	1,435,203,636.69
2016	101,489.49	3,453,258,407.98	335,464,994.20
2017	113,711.63	2,412,974,916.23	310,830,719.00
2018	127,736.83	775,247,400.00	565,569,111.65
2019	144,210.49	2,305,099,811.70	285,318,845.90

2020	152,324.07	2,385,277,665.92	1,473,332,437.30
2021	173,527.66	3,313,210,000.00	1,817,909,994.50
2022	175,768.94	186,792,428.93	67,063,088.27

**Source:** World bank data and Statistical Bulletin of the Central Bank of Nigeria (2023)

#### 4.1 Data Analysis

**Table 4.2: Presentation of Philip Peron Unit Root Test Results at First Differencing 1(1)**

Variable	ADF t-stat	Test Critical Values			Prob	Order of integration
		1% Level	5% Level	10% Level		
GDP	-6.976083	-4.394309	-3.612199	-3.243079	0.0000	I(1)
FDF	-5.771334	-4.394309	-3.612199	-3.243079	0.0005	I(1)
FDO	-3.724769	-4.394309	-3.612199	-3.243079	0.0401	I(1)

**Source:** Extraction from E-views

Result of the Philip Peron unit root test presented in the table 4 above reveals that all variable are not stationary at level, further research reveals that data became stationary at first differencing in the order of 1(1) integration. Having established stationarity among the variables employed which is a condition for co-integration test, we thus proceed to test for long run relationship among the variables employed using Johanson co-integration tests.

**Table 4.3: Presentation of Johanson Co-integration Test**

Date: 11/22/23 Time: 21:53		
Sample (adjusted): 1999 2022		
Included observations: 24 after adjustments		
Trend assumption: Linear deterministic trend (restricted)		
Series: GDP FDF FDO		
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 *	0.862876	65.57830	42.91525	0.0001
At most 1	0.413293	17.89350	25.87211	0.3511
At most 2	0.191304	5.095973	12.51798	0.5826
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				

**Source: Extraction from E-views**

The result above revealed the present of two Co-integration equation judging by 5% level of significant and their ranking order which suggest that there is a long run relationship between all the variable employed in this research work and that the variable share mutual stochastic trend. Hence, we proceed to error correction model.

#### 4.1.1 Presentation of Ordinary Least Square

This section analyzes the data employed and presents the econometric-based empirical findings. The multiple regression model specified in the chapter three i.e.,  $GDP_t = \alpha_0 + \alpha_1 FDF_t + \alpha_2 FDO_t + \mu$  is estimated in this section through Ordinary Least Square (OLS) technique while the data analysis is carried out by E-views 10.0 statistical package. The results obtained from our data analysis are presented in table 4.4:

**Table 4.4: Empirical Results Obtained from the Regression Analysis**

Dependent Variable: GDP

Method: Least Squares

Date: 11/22/23 Time: 22:48

Sample: 1997 2022

Included observations: 26

Variable	Coefficient	Std. Error	t-Statistic	Prob.
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C	-0.745197	4.551561	-0.163723	0.8714
FDF	0.067489	0.247130	0.273092	0.0472
FDO	0.497079	0.209299	2.374972	0.0263
R-squared	0.791646	Mean dependent var	10.54439	
Adjusted R-squared	0.730049	S.D. dependent var	1.205738	
S.E. of regression	1.057996	Akaike info criterion	3.058798	
Sum squared resid	25.74520	Schwarz criterion	3.203963	
Log likelihood	-36.76437	Hannan-Quinn criter.	3.100600	
F-statistic	4.734810	Durbin-Watson stat	0.382539	
Prob(F-statistic)	0.000000			

**Source:** Output of E-views 10.0 Statistical Package

$$\text{GDP} = -0.745197 + 0.067489 \text{ FDF} + 0.497079 \text{ FDO}$$

#### 4.1.2 Interpretation of R-Squared ( $R^2$ )

The sample regression line's ability to fit the data was evaluated using the coefficient of multiple determinations (R-squared). It assesses the extent to which variation in the independent factors explains variance in the dependent variable. According to the regression result in table 4.2, the R-squared ( $R^2$ ) value is 0.791646. This finding shows that foreign direct inflow and foreign direct outflows explained about 79.6% of the variation in GDP, with the remaining 20.4% of variation explained by other determining variables not included in the model.

#### 4.1.3 The Adjusted R-Squared (Adj $R^2$ )

The value of the adjusted R-squared ( $R^2$ ) produced for the model is strong, with a value of 73.0% after further adjustment (adjusted  $R^2$ ) for the coefficient of multiple determination (adjusted  $R^2 = 0.730049$ ). It implies that about 73.0% of the variation in the gross domestic product was explained by foreign direct inflow and foreign direct outflows, with the remaining 27.0% of the variation being explained by other determining variables not included in the model.

#### 4.1.4 Summary of the Apriori Signs

This is used to examine the economic usefulness of the equation with regard to meeting the apriori expected sign of the parameters. Thus, table 4.5 below shows the summary of the outcome of the signs of the parameters and expected signs:

**Table 4.5: Signs of Parameters and Expected Signs**

Parameters	Expected Signs	Obtained Signs	Estimate	Conclusion
<b>Foreign direct investment inflows</b>	Positive (+)	Positive (+)	$\alpha_1 > 0$	Conform
<b>Foreign direct investment outflows</b>	Negative (-)	Positive (+)	$\alpha_2 < 0$	Does not conform

**Source:** Researcher's Computation

#### **(a) Foreign Direct Inflows(FDI) and Gross Domestic Product (GDP)**

Foreign direct inflows have a regression coefficient of 0.067489, as seen in table 4.4 results. The association between Foreign direct inflows and Nigeria's gross domestic product is positive, as indicated by the positive value (0.067489). This implies that an increase of 1% in Foreign direct inflows will result in an increase of 0.067489 in GDP.

#### **(b) Foreign Direct Outflows(FDO) and Gross Domestic Product (GDP)**

The coefficient of Foreign Direct Outflows from the regression result as shown in table 4.2 is 0.497079. This positive value (0.497079) indicates that Foreign Direct Outflows has a positive relationship with gross domestic product in Nigeria. The implication of this is that a 1% increase in Foreign Direct Outflows will lead to 0.497079 increase in gross domestic product.

## **4.2 Tests of Hypotheses**

Testing of hypothesis is concerned with the acceptance or rejection of an assumption made about an unknown characteristic. Our hypotheses testing in this study were carried out using the p-values from the regression results. The decision rule for accepting or rejecting any of the hypotheses (specifically the null hypothesis) is stated below:

1. Reject the null hypothesis ( $H_0$ ) at 5% level of significance if the p-value is less than the alpha value of 0.05.

2. Retain the null hypothesis ( $H_0$ ) at 5% level of significance if the p-value is greater than the alpha value of 0.05.

#### 4.2.1 Restatement of Hypothesis One

**H<sub>01</sub>:** There is no significant relationship between foreign direct inflows and the Gross Domestic Product (GDP) in Nigeria.

**H<sub>A1</sub>:** There is significant relationship between foreign direct inflows and the Gross Domestic Product (GDP) in Nigeria

**Decision:** The p-value for foreign direct inflows from the regression result as shown in table 4.2 is 0.0472 while the alpha value is 0.05. However, since the p-value (0.0472) is greater than the alpha value (0.05), we therefore reject the null hypothesis one ( $H_{01}$ ) and conclude that there is significant relationship between foreign direct inflows and the Gross Domestic Product (GDP) in Nigeria. This study is in line with Oyegoke and Aras (2021) that found that FDI inflow has a significant impact on the economy.

#### 4.2.2 Restatement of Hypothesis Two

**H<sub>02</sub>:** There is no significant relationship between foreign direct investment outflows and the Gross Domestic Product (GDP) in Nigeria.

**H<sub>A2</sub>:** There is significant relationship between foreign direct investment outflows and the Gross Domestic Product (GDP) in Nigeria.

**Decision:** The p-value for foreign direct investment outflows from the regression result as shown in table 4.2 is 0.0263 while the alpha value is 0.05. However, since the p-value (0.0263) is less than the alpha value (0.05), we therefore reject the null hypothesis two and conclude that there is significant relationship between foreign direct investment outflows and the Gross Domestic Product (GDP) in Nigeria. This result is in line with Ameer, and Xu (2017) that found there is a significant relationship between foreign direct outflow and economic growth in Nigeria.

### 5.0 Conclusion and Recommendations

#### 5.1 Conclusion

The study has provided analysis on the relationship between foreign direct investment and economic growth in Nigeria between 1997 and 2022. The findings emanating from the study revealed that foreign direct investment inflows and foreign direct investment outflows are both significantly and insignificantly, exert positive effects on Gross Domestic Product in Nigeria. Based on the findings,

the study therefore concludes that foreign direct investment plays both significant and insignificant, and positive role in improving the Nigeria economy growth. The results also demonstrate that perhaps, it is as a result of low investment and capital accumulation amongst other determinants the economic growth is deterred in Nigeria.

## 5.2 Recommendations

Based on the findings and conclusions of the study, the following recommendations are hereby presented:

- i) The government should know that any form of investment for Nigeria should be more of an infusion into the country, perhaps advance the financial strength of the country.
- ii) Government should note that FDI is an integral part of trade, hence policies that promote foreign investment and at the same time protect, supplement domestic production and investment, as well as complements the development goals of the host countries should be encouraged.
- iii) Finally, Nigeria should ensure a stable government by guaranteeing the sustainability of democratic rule devoid of unwarranted changes.

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