IMPACT OF FOREIGN INVESTMENT INFLOWS ON ECONOMIC GROWTH IN NIGERIA (2005-2022)

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Abstract
This study examined the impact of foreign investment inflows on economic growth in Nigeria for the period 2005-2022. The specific objectives of the study were to: determine the impact of foreign direct investment on the economic growth in Nigeria, investigate the impact of foreign portfolio investment on the economic growth in Nigeria, and examine the impact of foreign loan on the economic growth in Nigeria. The study used time series data sourced from the CBN statistical Bulletin. The study adopted the *Ex post facto* research design and employed the Vector Error Correction Mechanism(VECM) method to analyze the results. The empirical result indicated that foreign direct investment has positive significant impact on the gross domestic product of Nigeria, foreign portfolio investment has significant negative impact on the gross domestic product in Nigeria, and foreign loan has significant positive impact on the gross domestic product in Nigeria. The policy recommendations following the findings are: government should ensure a good ease of business in order to attract more direct investments into the country, this will enhance the performance of the economic sectors and improve aggregate output, and there is need to improve trade especially export trade.
Keywords: Gross Domestic Product; Foreign direct Investment; Foreign Portfolio Investment; Foreign Loan; Economic Development

Introduction

The role of foreign investment inflows (FII) in the growth process of developing countries like Nigeria has been a topic of intense debate. Foreign investment inflow is believed to be a catalyst for economic growth as it enhances the country's Gross Domestic Products (P) and in turn brings about managerial skills, international production and access to international capital markets; and Nigeria with her vast natural resources qualifies to be a major recipient of FII in Africa (Abubakar, Hassan &Okowa, 2018). This is why government at all levels in Nigeria at various times, have directed their policies towards attracting foreign investments into the country with a view of boosting industrial development, and by extension, economic growth. For instance, Umah (2007) asserts that the Nigerian government has instituted various institutions, policies and laws aimed at encouraging foreign direct investment from 1985 when the Nigerian Investment Promotion Commission (NIPC) was established by Decree 16 of 1995.

The interaction between foreign loans and economic growth of underdeveloped countries is still questionable and debatable. It has been proposed that if an underdeveloped country seeks an economic growth and welfare for its people, the principal mechanism to do so is to try to have foreign loans (Lawal, Dada, Ajose and Aina, 2017). Although there are factors that affect economic growth, this simple proposition still claims that foreign loans are necessary ingredients. While foreign loans can have both negative as well as positive consequences, the positive benefits outweigh the negative on balance, and hence the policy and strategy should be to maximize the positive effects and minimize the negative ones (Villami& Asiedu, 2001).Foreign investment inflow is one of the main sources through which capital deficient countries augment inadequate domestic capital for investment

purposes (Nkoro and Furo, 2012). These inflows are indeed transmitted through Foreign Direct Investment (FDI), Foreign Portfolio Investment (FPI), foreign loans and credits (Cross Border Borrowing) etc… (Obadan, 2004).

The inflows of both depend majorly on the existing foreign trade policy in the country. Foreign investment can be referred to as investment made by foreign entities, such as individuals or corporations, into a domestic economy. These investments can be made through various channels and have the potential to bring substantial benefits to both the investor and the recipient country. John (2016) opined that foreign direct investment is seen as a process of moving technology and capital from a nation either developed or developing countries to another nation. Farrell (2008) opined that foreign direct investment refers to the package of technology, capital, management, and entrepreneurship that firm uses to operate and provide goods and services in a foreign market. For instance, if McDonalds establishes a subsidiary in Nigeria, they come in with their machinery and equipment to build and operate a physical structure (subsidiary firm). This is direct investment. The flow of direct investment into Nigeria has seen much movement into the oil and gas sectors, hence oil and gas constitute the highest direct investment destinations into Nigeria (Farrell 2008).

Foreign portfolio investment (FPI) unlike FDI, does not require the building or transfer of structures from parent firms into the host country. It is mostly termed briefcase investment. Here the citizens of a country can make a financial investment into another county by buying shares or participating by moving money into the capital market of a recipient economy. Such investment helps to broaden the capacity of the domestic capital market to provide the financial resources needed to finance huge public investments. The Nigeria capital market through the Nigerian exchange group has seen moderate inflow of portfolio investment into the group although the bond ratings of the bond market has not helped this matter.

Foreign Investment inflow (FII) is an issue which attracts considerable attention in economies all over the world, it plays a significant and important role in global businesses and serves as a gauge of productive assets owned by a foreign investor. The countries participating in foreign investment inflows stand to gain in terms of joint venture management, expertise, technology transfer, manufacturing, and construction for the purpose of economic development. Graham and Spauling (2005) state that foreign direct investments provides a firm with new markets and marketing channels, cheaper production facilities, access to new technology, products, skills and financing. Through FII, countries with surplus funds and technology are able to seek advantage of developing countries where there is availability of labour, hence movement of production to more profitable areas, and at the same time globalizing production and competition.

According to Maryam (2013) economic growth is the growth in real terms of gross Domestic Product (GDP) in a given year. Economies grow as a result of several factors, but growth in GDP is most critical because it signifies the output of domestic industries thereby creating wealth and employment. Nigeria's economy is one which has been and continues to be dominated by the oil sector. Structural reforms pursued have centered on enhancing the management of public finance and improving the efficiency of the entrepreneurial environment, but the issue of oil production remains the dominating factor. With a strong surge in oil production, the economy has achieved an average annual growth rate of about seven per cent over the past years (UNIDO 2017). A lot can be achieved in terms of economic growth if attention is shifted from the oil sector to the non-oil sector. Agriculture has been the dominant non-oil productive sector, contributing to the highest employment sector in the country but most developing countries have failed to pay desired attention as it relates to foreign investments.

Statement of the Problem

Many developing countries like Nigeria always managed to attract foreign direct investment despite its poor economic outlook but thanks to its oil reserves and the consumption potential of its large population (Lyndon and Ayaundu, 2020). These inflows of foreign investment have been in decline and now seem to have hit a halt, Over the past five years, foreign direct investment in Nigeria has dropped by almost 80%. This partly reflects a broader trend for the region: according to the African Development Bank, inward investment fell by almost 24% between 2019 and 2020. Investors around the world were also cautious about risky markets during the COVID-19 pandemic. But foreign investment inflows to Nigeria had been falling even before the pandemic. The country's net inflows based on balance of payments fell from about US$9 billion in 2012 to below US$1 billion in 2018. So Nigeria's 80% drop is steeper than the region's, which suggests that there is another dynamic at play (Lyndon and Ayaundu, 2020).

After more than 58years of independence, Nigeria is yet to attain industrialization status, it still remains a net importer of raw materials and commodities and over 90% of export earnings and 70% of government revenues are derived from crude oil export, public policy analysts assert that Nigeria has been made indolent by crude oil. Nigeria turned in its worst ever corruption perception index rating by Transparency International (TI) moving back 12 steps in 2018 rankings from 136 before the ouster of the previous government to 148 as at present, Nigeria since 1999 (4^{th} democratic era) failed in sustaining far-reached market and social economic reforms (CBN 2017).

Foreign capital inflow into Nigeria is under the influence of constraints that are making investors gradually to lose confidence in the stock market of the economy. These constraints were signals to the delisting of Nigeria by JP Morgan from the list of emerging markets bond index in 2015 (Ventures Africa, 2016). On September 8th 2015, the United States-based lender, JP Morgan, said Nigeria would be phased out of its Emerging Market Government Bond Index (GBI-EM) by the end of October 2015 due to alleged lack of liquidity and transparency in the nation's foreign exchange market. This announcement comes after JP Morgan earlier in 2015, placed Nigeria on a negative index watch on its Government Bond Market Index.

Against the backdrop of deep seated structural challenges stifling the economic operating environment for business, Nigeria has persistently been ranked low by the World Bank Ease of Doing Business (EODB) report. Out of the 190 countries surveyed in 2017, Nigeria was ranked 169^{th}, a negligible improvement from 170^{th} of 189 countries in 2016. On the average, the country ranked 158^{th} of 189 countries surveyed in the last 5years and 37^{th} of 48 countries in Sub-Saharan Africa for 2017 (World Bank 2018). Borrowing a leaf from several countries that have implemented Ease of Doing Business (EODB) reforms within a very short time, (Kenya for example undertook five reforms which moved her ranking upward by 21 places to rank among the top 100 countries in 2017). Nigeria FDI flows in 2017 dropped by 21% to reach 3.5 billion USD which could be as a result of political instability, lack of transparency widespread corruption and poor quality of infrastructure

The issues in question are: have all the efforts of government in this direction yielded the desired objectives? This was the overriding concern in this study; in other words, to what extent has foreign investment inflows stimulated economic growth in Nigeria?

The broad objective of this study is to investigate the impact of foreign investment inflows on economic growth in Nigeria. The specific objectives of the study are:

i. To investigate the impact of foreign direct investment on economic growth in Nigeria

ii. To find out the impact of foreign portfolio investment on economic growth in Nigeria
iii. To determine the impact of foreign loans on economic growth in Nigeria

In order to achieve the research objectives, the following questions were developed to guide the study:

i. What impact does foreign direct investment have on economic growth in Nigeria?
ii. To what extent does foreign portfolio investment impacts on economic growth in Nigeria?
iii. What effect does foreign loans have on economic growth in Nigeria

The study formulated and tested the following hypotheses in line with the research questions, they are in null form:

$H0_1$: Foreign direct investment has no significant impact on economic growth in Nigeria
$H0_2$: Foreign portfolio investment has no significant impact on economic growth in Nigeria
$H0_3$: Foreign loans have no significant effect on economic growth in Nigeria

This study will benefit certain economic agents such as the foreign investors, policymakers, and the government. The government will benefit from this study by using its outcome to formulate, direct, and enhance the foreign policy with regards to investment and achievement of economic growth objective. The policymakers will utilize the outcome of this study to guide its understanding of the level of impact of foreign investment components on the economy. This understanding will further enhance policy formulation.

Geographically, it is focused on Nigerian economy, it covers the foreign sector of the economy and the period is 2005-2022. The reason for the scope chosen is based on the introduction of major foreign investment policy in 2005. For example, the export promotion and regulation policy of 2005. The major limitation of this study is on the accessibility of the relevant data for the model variables. This limited the time scope of the study to 2005. However, this limitation was not significant enough to affect the reliability of the outcome of this study.

Review of Related Literature

Conceptual Review

Foreign Investment Inflows

Foreign investment inflows involves capital flows from one country to another, granting the foreign investors extensive ownership stakes in domestic companies and assets. Foreign investment denotes that foreigners have an active role in management as a part of their investment or an equity stake large enough to enable the foreign investor to influence business strategy. A modern trend leans toward globalization, where multinational firms have investments in a variety of countries (James-Chen, 2020).

Foreign Direct Investment

Foreign direct investment is the process of making a long-term investment in an enterprise which operates in any other economy than that of the enterprise which is making this investment. In this context, intention of the investing firm is not just to get higher returns but also to gain some extent of managerial authority and control or an effective voice in the management of enterprise in which this investment will be made (IMF, 2009). Similarly, the IMF (2008) defines direct investment as a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy. It refers to the physical investments made by foreign investors in the domestic country such as investments into building, machinery and equipment. In this process, resident(s) of one country (i.e.

home country) acquires ownership for the purpose of controlling production, distribution and other activities of a firm in the another country. (i.e. the host country), and is then regarded as a direct investor.

Foreign Portfolio Investment

Foreign portfolio investment refers to the short-term investments by foreign entity in the financial markets; these are indirect investments and include investment in tradable securities, such as shares, bonds, debenture of the companies. Foreign Portfolio investors don't exert management control on the enterprise in which they invest, thus clearly distinguishes it from foreign direct investment. The important objective of FPI is the appreciation of the capital investment regardless of any long-term relationship with enterprise. Usually, they are made with short-term speculative gains, and may include foreign institutional investment (investments made by foreign institutions like pension funds, foreign mutual funds etc. in the financial markets), off-shore funds, etc.

Foreign Loan

Foreign Loan is defined as the debt owed by the government to non-residents payable in terms of foreign currency, food or services. It is a source of financing investment inflow of an economy World Bank (2012). According to Udoidem and Udofot (2014) who noted that foreign loan is one of the major source of foreign investment inflows to developing nations. The rate at which they depend on the links among foreign and domestic savings, investment and economic growth so that borrowing countries can increase their capacity output with the aid of foreign savings (Tang 2015). It is required that the borrowing nation should be able to invest the borrowed fund wisely especially in financing development project like road construction, electricity generation plant and any other major project of the economy. However, Tang (2015) pointed out that this can only be productive if well managed by making rate of return higher than the cost of servicing the debt.

Economic Growth

Economic growth of an economy is measured in terms of the gross domestic product. The Gross Domestic Product is also in turn measured in monetary terms of all goods and services during a period (Okafor,Ezeaku& Eje, 2015). The GDP provides important information to support evidence based policy making. It also helps to identify key drivers of economic growth and access the performance of an economy. However, by revealing the structure of the economy, the contribution to the national output can be determined. Invariably gross domestic product is the sum of gross value added of all resident producer units (industries) within the economic boarders of the country during a given period of time including taxes, less subsidies, on products.

Foreign Investment Inflows and Economic Growth

The classical economists postulate that the flow of foreign investment into low income countries helps in providing resources to close savings – investment gap in the recipient countries. This point is that capital inflows are desirable in developing economies because they augment domestic resources and enhance industrial activities.The flow of both economic and financial capital across international boundaries could have taken a leap from the United States policy of encouraging reconstruction and sufficiency among war-torn nations. It is often asserted that inflow of foreign investment is an indispensable component of economic growth and development, mostly since it is the core driver of the fast and effective transfer and adoption of best practices from one economy to another. Foreign inflows are mostly adapted to transfers and its transformation into global growth, precisely in making the most of human capital development in low-income economies.

Empirical Review

Ugonna and Christian (2022) investigated foreign direct investment (FDI) and the economic growth in Nigeria between 1990 and 2021. 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 of 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. The ordinary Least Square (OLS) approach was used in carrying out the data analysis. The results revealed that there was a positive and insignificant relationship between NFDI and economic growth in Nigeria among other things. Lastly, the study made some recommendations so as to permit economic growth brought about by the inflow and survival of FDI in Nigeria.

Danladi (2022) investigates the effect of foreign direct investment on economic growth in Nigeria for the period of 1986 to 2020. Autoregressive Distributed Lag (ARDL) model was employed for the analysis. The study found that FDI and Exchange rate have positive and significant effect on the economic growth. Based on the findings, the study recommends an improvement in the institutional quality so as to attract the further inflow of foreign direct investment in Nigeria and government should make exchange rate stable so that more foreign investment can be attracted for desired economic growth and development in the country.

Lyndon and Ayaundu (2020) evaluated the effect of foreign investment inflows on economic growth of Nigeria, using secondary data for the period 2001 to 2018.The study employed descriptive statistics and multiple regression analysis technique based on the E-view computer software for analyzing data. The results of analysis revealed that foreign direct investment, foreign portfolio investment and exchange rate had significant positive influence on gross domestic product. The study recommended that the regulatory authorities should formulate policies and create the enabling environment to attract foreign investments into Nigeria.

Hammed, Musibau and Agboola (2017) studied the impact of foreign capital inflows, corruption, and infrastructure on economic growth among ECOWAS members over the period 1980 to 2016. They adopted the Two-Gap model using ECM method. Findings of the study also established a negative relationship between FDI, Infrastructure and real growth while corruption, political stability have positive impact on real growth among ECOWAS members. The study recommended policy across the ECOWAS countries that will attract foreign capital inflow, and that policy makers should look inwards, re-strategize and begin to formulate and implement sound and credible economic policies that will be aimed at attracting productive capital inflows into the region.

Akpan and Eweke (2017) examined the impact of foreign direct investment (FDI) and industrial sector performance on economic growth in Nigeria. The study utilized annual time series data for the period 1981-2015 using elaborate econometric analysis which tests the sensitivity of GDP to shocks in FDI and Industrial Sector Output, using the Impulse Response Functions (IRFs) and Variance Decomposition (VDC) techniques within a Vector Autoregressive (VAR) framework. The Johansen Integration test result reveals the absence of a long-run relationship between FDI, Industrial Sector Output and GDP. The study recommends that proper management of existing industries in other to enhance a positive impact on the economy.

Okonkwo (2016) investigated the effect of foreign portfolio investment on industrial growth in Nigeria. The ordinary least square (OLS) estimation technique was employed in this study, and the findings revealed that there is a significant positive relationship existing among foreign portfolio investment, gross fixed capital formation, market capitalization and industrial growth in

Nigeria. The study recommended among others that proactive steps must be taken to expand market capitalization which is the major driver of foreign portfolio investment in order to keep stimulating industrial productivity in the economy.Okafor, Ezeaku and Eje (2015) investigated the effects of foreign investment inflows on economic growth in Nigeria. The study disaggregated foreign investment into foreign direct investment and portfolio investment in other to realize the objectives of the study using data spanning from 1987 to 2012 with OLS and granger causality econometric procedures. The findings of the study indicate that FDI and FPI have significant positive impact on economic growth in Nigeria and therefore recommends that government should pursue policies that will encourage foreign investment.

Theoretical Framework

The theoretical framework adopted in this study is the location theory. This theory was propounded by Hover in 1937. The theory is concerned with territorial allocation of resources within a country; it explains FCI in the context of the location of specific factor differentials. The basic assumptions of the theory are:

- That the availability and cost of inputs can explain the existence of FCI
- That marketing factors are the main factors that stimulate foreign firms to invest abroad and
- That direct investment is stimulated by the existence of trade barriers.

The location theory's explanation for foreign capital inflow can be discussed by the following factors: Firstly, availability and cost of inputs can explain the existence of FCI. A firm considers the source of input and cost of production in order to choose the location. Therefore, a firm investing abroad may be attracted by the availability in another country of some inputs, which are scarce at home, or by the lower cost of inputs abroad such as labour cost. The theory is relevant to this study in that it captures the cross-boundary movement of investment and the projected impact on the host economy. It also addressed the major variables of the study which attempts to investigate the impact of foreign investment inflows on the economy of Nigeria. Adopting this theory will also show how locating specific characteristics could trigger the inflow of foreign investments and the benefits for the recipient economy.

Methodology

The study adopted the *ex-post facto* research design due to its suitability in forecasting time series variables. In this design, the use of past values to explain future outcomes is made possible; it combines theory and empirical exercises in estimating the impact of the explanatory variables on the explained variable. Time series data on the variables (the gross domestic product - GDP, foreign direct investment and foreign portfolio investment) were collected from secondary sources via the Central Bank of Nigeria (CBN) statistical bulletin, the Stock Exchange Group (NGX), and the Debt Management Office (DMO) Annual Reports for the period 1980 to 2022.

Model Specification

To estimate the impact and test the hypotheses the study adopted the general formula for multiple regression:

$Y_t = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + \ldots + b_nX_n + U_t \ldots (1)$

Hence the model for the study is specified functionally as:

GDP =f (FDI, FPI, GCF, TOP) … (2)

Where;

GDP = gross domestic product

FDI = foreign direct investment
FPI = foreign portfolio investment,
FOL = foreign loans
The error correction notation is the differenced form of the model specified thus:
$\Delta GDP_t = \beta_0 + \sum\Delta\beta_1 FDI_{t-1} + \Delta\beta_2 FPI_{t-1} + \Delta\beta_3 FOL_{t-1} + \mu t \ldots (3)$
β_0 = constant term
U_t = the error term
$\sum\Delta$ = is the notation for first difference and error correction form of the model
$\beta_1, \beta_2, \beta_3$, and β_4, are the coefficients of the parameter estimate
The apriori assumptions of our model are: $\beta_1, \beta_2, \beta_3, \beta_5$ and $\beta_6<0$, while $\beta_4 > 0$.

Description of Model Variables

FDI: Foreign Direct investment (Independent Variable): represents Investment involving a long-term relationship and reflecting a lasting interest and control of a resident entity in one economy (foreign direct investor or parent enterprise) in an enterprise resident in an economy other than that of the foreign direct investor.

FPI: Foreign Portfolio investment (Independent Variable): refers to the short-term investments by foreign entity in the financial markets; these are indirect investments and include investment in tradable securities, such as shares, bonds, debenture of the companies.

FL: Foreign Loan (independent variable): This refers to government borrowings from both multilateral and bilateral institutions. This represents the aggregate of all loans taken from foreign financial institutions such as the IMF, World Bank, the AFDB, bilateral loans especially loans from the People's Republic of China and other bilateral credit assistance received from other countries

GDP: Gross Domestic Product (dependent variable): Gross Domestic Product denotes the aggregate value of services and goods produced within a country in any given period. It is the monetary value of all finished goods and services within a country used to estimate the sizes of an economy and growth rate.

Method of Data Analysis

The analytical techniques employed in the study include, the Augmented Dickey Fuller Unit Root test, the Johansen Cointegration test, the Vector error correction mechanism, the system equation estimation of the vector error correction estimates. The study carried out further tests using E-views statistical software in order to establish the reliability and robustness of the thesis findings. The test of significance of the model variables includes the standard error test and the f-test of joint influence. The decision rule on statistical significance will be based on the sign and size of the parameter estimates and the t-statistic and the probability value (p-value) of the parameter estimates.

Result

Pre estimation tests

Pre estimation test was first carried out to show some characteristics of the data employed in estimating the parameters. This was necessary in order to enhance the reliability of the outcome of the findings that will follow. The unit root test of stationarity was first applied in order to show the suitability of the data set.

Unit Root Test

The unit root test is used to test for stationarity of model series. Stationary time series are important because, if a time series is non-stationary; its behavior can only be investigated for the time period under consideration. However, each set of time series data will therefore be for a particular period. As a result, it is not promising to generalize it to other periods. Therefore, the prediction of such (non-

stationary) time series may be of little practical value. **Decision rule:** the series is stationary if the ADF t-stat is greater than the 5% critical value or if the p-value is less than 5% level of significance (i.e, p-value < 0.05). summary of the unit root test result on the variables is presented in the table below:

Table 1: Unit Root Test Result

ADF Test @ Level				**ADF Test @ 1st Difference**			
Series	**ADF**	**5% C.V**	**P-value**	**ADF**	**5% C.V**	**P-value**	**order**
RGDP	-2.613226	-3.526609	0.2769	-3.538102	-3.529758	0.0491	1(1)
FDI	-2.688774	-3.526609	0.2464	-6.955731	-3.529758	0.0000	1(1)
FPI	-3.478432	-3.526609	0.2223	-8.937314	-3.529758	0.0000	1(1)
TROP	-2.544417	-3.526609	0.3065	-7.955053	-3.529758	0.0045	1(1)
GCF	-1.692228	-3.526609	0.7362	-8.631558	-3.529758	0.0000	1(1)

Source: Researchers' computation 2023 (E-views 10)

The test for stationarity conducted using the Augmented Dickey Fuller Test (ADF) approach to unit root testing shows that the data on the dependent variable (RGDP) and the independent variables (FDI, FPI, and FOL) did not achieve stationarity @ level, hence they were subjected to first differencing. All achieved stationarity at first differencing. Differencing is done when the data set fails to be stationary @ level; stationarity is concluded if the ADF statistic is greater than the 5% critical value or if the probability value (P-value) is less than (0.05). Hence, stationarity and integration was achieved at order 1(1).

Cointegration Test of Long Run Relationship

When series are integrated of order 1(1), it is recommended to run the cointegration test to ascertain a long run tendency among the model variables. Stationary series are assumed to be cointegrated, this means that there is evidence of long run relationship between stationary series in a model. Hence, the Johnsen cointegration test was employed because the series were integrated of order 1(1). In testing for cointegration, the decision rule is:

Decision rule: there is cointegration (longrun relationship) if the trace statistic is greater than the 5%critical value.

The result is shown below:

Table 2: cointegration Test Result

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.696905	86.14162	69.81889	0.0015
At most 1	0.412577	40.78064	47.85613	0.1958
At most 2	0.320520	20.56429	29.79707	0.3854
At most 3	0.143312	5.880031	15.49471	0.7097
At most 4	5.66E-05	0.002150	3.841466	0.9593

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: Researcher's Computation 2023 (E-views)

As seen in table 2 above, one cointegrating equation was identified. The decision criteria for the presence of cointegration is the identification of at least one of cointegrating equation. The conclusion on the presence of cointegration is done using the trace statistics which must be greater than the 5% critical value, or the p-value of the trace stat is less than the level of significance (0.05). The obtained trace-stats at identified cointegrating equation is greater than the 5% critical values (86.14162 > 69.81889), hence it is concluded that the variables show evidence of long-run relationship. This means that a long-run relationship exists between the flow of foreign direct investment into Nigeria.

Vector Error Correction Mechanism

The presence of long run relationship (cointegration) has the implication of short run errors in the system or over the periods, hence the need for the error correction mechanism. The study adopted the vector error correction mechanism because the study used a multivariate model.

Table 3: VECM Result

Vector Error Correction Estimates

Error Correction:	D(RGDP)	D(FDI)	D(FPI)	D(TROPI)	D(GCF)
CointEq1	-0.046047	-0.001716	0.052363	7.982107	0.012309
	(0.02439)	(0.02750)	(0.02829)	(1.90106)	(0.00437)
	[-1.88787]	[-0.06242]	[1.85065]	[0.41857]	[2.81897]

Source: researcher's computation 2023 (E-views)

The error correction mechanism smoothens the short-run errors associated with variables which have long run relationship or co-integration properties and also shows the speed of adjustment of the errors. The conditions for smoothening effects are that the error correction coefficient must be negative, fractional and significant. The result obtained indicated VECM coefficient of -0.046047 which means that about 4.60% of the short run errors are corrected each during each period. The conditions for error corrections are satisfied since the coefficient is negative, fractional and significant, and the error correction shows a fast speed of adjustment to the long-run equilibrium.

Estimation of the impact of Foreign Direct Investment inflow on the Economic Growth in Nigeria

Table 4: System Equation Estimation Result

Dependent Variable: D(RGDP)

Method: Least Squares (Gauss-Newton / Marquardt steps)

	Coefficient	Std. Error	t-Statistic	Prob.
ECM	-0.046047	0.024391	-1.887871	0.0703
GDP-1	0.284859	0.197505	1.442288	0.1612
GDP-2	0.368685	0.193844	1.901972	0.0683
FDI-1	0.823132	0.229984	2.500583	0.0007
FDI-2	0.315343	0.203926	2.146356	0.0141
FPI-1	2.247029	0.201536	3.225733	0.0013
FPI-2	0.071031	0.184424	-0.385149	0.7033
FOL-1	1388.008	196.3019	3.434606	0.0000
FOL-2	-1638.740	2519.667	-0.650380	0.5212
C(12)	649.8949	297.5022	2.184504	0.0381
R-squared	0.525887			
Adjusted R-squared	0.325300			
F-statistic	2.621746	Durbin-Watson stat		1.863962
Prob(F-statistic)	0.021212			

Source: Researcher's Computation 2023 (E-views)

From table 4, it could be observed that foreign direct investment (FDI), foreign portfolio investment (FPI), and foreign loans (FOL) conformed to their predicted sign (FDI + and > 0, FPI + and > 0, and FOL – and < 0). An increase in foreign direct investment (FDI) will lead to a decrease in the real domestic product (GDP) by 4.16 billion naira; an increase in the foreign portfolio investment (FPI) improves the size of gross domestic product by 12.00 billion naira. Similarly, an appreciation in the size of foreign loans (FOL) will lead to a decline in the aggregate economic output by 18.64 billion naira.

Initially, the individual variables were not stationary at level since the ADF statistic of the variables were less the 5% critical value, but they all became stationary after first differencing. From table 1.0 above, it is observed that the ADF test statistic of the individual variables is greater than the 5% critical values at first difference. Hence the study rejected the null hypothesis and concludes that all the variables are stationary and are integrated of the same order 1(1).

Since all the variables were integrated of the same order 1(1) implying cointegration, the Johansen cointegration test was conducted to test for the long run relationship between the variables. From the result presented, the trace statistic is greater than the5% critical value at none*. With at least one cointegrating equation, it is safe to conclude that a long run relationship exists in model; the study therefore rejects the null hypothesis and conclude that a long run relationship exists between foreign direct investment economic growth in Nigeria.

The presence of long run relationship provides for short term fluctuations. These fluctuations are straightened out using the error correction mechanism (VECM) to tie the short run and the long run

equilibrium relationships. The conditions to be satisfied are that the coefficient of the error correction term must be negative, fractional and significant. The VECM result presented in table 3.0 above indicates that all three conditions have been fulfilled and it can be said that 0.046047 or 4.61% of the short-run errors are corrected each period.

The empirical value of the adjusted coefficient of determination (Adjusted R^2 = 0.515300) shows that 51.53% of the total variations in Nigeria's real gross domestic product (RGDP) is accounted for by variation in the foreign direct investment variables (foreign direct investment, foreign portfolio investment, trade openness and the gross capital formation) s modelled in this study, while the remaining 48.47% is attributed to the other economic and growth factors that were not captured in the model.

Evaluation of the Hypotheses

The broad objective of this study is to determine the impact of foreign investment inflows on the economic growth of Nigeria. The test of hypotheses proceeds thus:

Test of Research Hypotheses

$H0_1$: Foreign direct investment has no significant impact on the gross domestic product in Nigeria

HA_1: Foreign direct investment has significant impact on the gross domestic product in Nigeria

Decision Rule:

If the p-value of the parameter estimate of foreign direct investment series (FDI) is less than 0.05, reject the null hypothesis, otherwise do not reject. The parameter estimate of (FDI) is (0.823132) while the p-value of the parameter estimate (0.0007), this is less than (0.05), hence the study hereby rejects the null hypothesis and concludes that foreign direct investment has positive significant impact on the gross domestic product of Nigeria.

Hypothesis Two

$H0_2$: Foreign portfolio investment has no significant impact on the gross domestic product in Nigeria

HA_2: Foreign portfolio investment has significant impact on the gross domestic product in Nigeria

Decision Rule: If the p-value of the parameter estimate foreign portfolio investment (FPI) is less than 0.05, reject the null hypothesis, otherwise do not reject. From the result in table 4, the parameter estimate is (2.247029), while the p-value of the parameter estimate is (0.0013). This is less than (0.05), hence the study hereby rejects the null hypothesis and concludes that foreign portfolio investment has significant negative impact on the gross domestic product in Nigeria.

Hypothesis three

$H0_3$: Foreign loan has no significant impact on the gross domestic product in Nigeria

HA_3: Foreign loan has significant impact on the gross domestic product in Nigeria

Decision Rule: If the p-value of the estimated coefficient of foreign loan (FOL) is less than 0.05, reject the null hypothesis, otherwise do not reject. As indicated in table 4 above, the coefficient of the foreign loan variable (FOL) is (8.702937) while the p-value of the parameter is (0.0000) The p-value is less than the 5% significance level (0.05), hence the study hereby in line with the decision rule rejects the null hypothesis and concludes that foreign loan has significant positive impact on the gross domestic product in Nigeria.

Policy Implications of the Result

The results of this study pose some policy implications for economic growth in Nigeria. The policy implication of the results is that in addition to the relevant traditional growth theories on the importance of foreign direct investment on the aggregate economy holds true and as such policies targeting sustainable economic growth and expansions in aggregate production should hold priority status. Such policies should be deliberate and especially those which ensure sustained improvements in the ease of doing business which attracts foreign investors; this will improve the aggregate economic output of Nigeria.

Summary, Conclusion And Recommendations

Summary of Findings

The summary of the major findings of the study are:

1. Foreign direct investment has positive and significant impact on economic growth in Nigeria.
2. Foreign portfolio investment has significant and negative impact on economic growth in Nigeria.
3. Foreign loan has significant and positive impact on economic growth in Nigeria.

Conclusion

The study investigated the impact of foreign investment inflows on the economic growth in Nigeria for the period 2005-2022. The specific objectives of the study were: determine the impact of foreign direct investment on the economic growth in Nigeria; to investigate the impact of foreign portfolio investment on the economic growth in Nigeria; to examine the impact of foreign loan on the economic growth in Nigeria. The study adopted the ex post factor design, employing the vector error correction method in the data analysis. Based on the findings, the study concludes that foreign investment inflows had significant positive impact on economic growth in Nigeria

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