

Foreign Direct Investment, Domestic Capital Formation And Economic Growth Of Nigeria

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ABSTRACT: *This study examined the effect of foreign direct investment and domestic capital formation on economic growth of Nigeria. Data were extracted from CBN bulletin, 2023 covered the period from 1986-2023. The study employed descriptive statistics coupled with autoregressive distributed lag (ARDL). The results revealed that foreign direct investment exhibited an insignificant positive impact on economic growth while the impact of gross capital formation is significant and positive. Similarly, it was revealed that exchange rate and inflation rate showed an insignificant negative impact on economic growth. Based on the findings, the study recommended that for inflow of foreign direct investment to be more harnessed and contribute meaningfully to the economy, Nigerian government should embark on selective investment criteria among foreigners and focus on investment that can contribute maximally to the economy. More so, efforts should be geared toward encouraging capital formation within the economy as this will reduce overreliance on foreign investors.*

Keywords: Foreign Direct Investment, Domestic Capital Formation, Economic Growth

1.0 INTRODUCTION

Foreign direct investment (FDI) and local capital formation are significant determinants of economic growth in emerging nations like Nigeria. FDI involves the infusion of capital from one country into another, often in the form of establishing company operations or acquiring shares in existing firms. FDI inflows can bring in new technology, managerial knowledge, and access to global markets, which can drive economic growth (Alfaro et al., 2020). Similarly, domestic capital formation, which refers to the accumulation of physical and human capital within a country, is vital for raising productivity and enhancing competitiveness (Khan & Rehman, 2021).

Both Foreign Direct Investment (FDI) and indigenous capital formation are widely regarded as significant drivers of economic growth in Nigeria. FDI inflows bring in much-needed cash, technology, and knowledge, stimulating diverse sectors of the economy and fostering competitiveness (Asiedu, 2022). Similarly, domestic capital formation, which includes investments in infrastructure, education, and healthcare, plays a crucial role in boosting productivity and creating employment possibilities (Osinubi & Amaghionyeodiwe, 2021). Policymakers in Nigeria need to understand the subtle effects of both FDI and local capital formation to establish policies that attract sustainable FDI inflows and support robust domestic investment, eventually promoting long-term economic growth and development in the country. Nigeria has experienced fluctuating amounts of FDI inflows and local capital formation over the years, which have had repercussions for economic growth. The Nigerian government has pursued numerous measures to encourage FDI, including the introduction of free trade zones and the easing of investment laws (Adelegan, 2020).

However, the influence of these policies on economic growth remains a subject of discussion. Similarly, initiatives to boost domestic capital formation through expenditures in infrastructure, education, and technology have had mixed results (Ogunleye & Alege, 2022). Understanding the effects of FDI and indigenous capital formation on economic growth in Nigeria is vital for establishing effective policies to achieve sustainable development. Despite the potential benefits of FDI and local capital generation, there are also obstacles associated with these elements. FDI inflows can be variable and sensitive to changes in the global economy, making them susceptible to external shocks (Asiedu, 2022). Similarly, domestic capital development might be hindered by issues such as limited access to funding, inadequate infrastructure, and regulatory impediments (Osinubi & Amaghionyeodiwe, 2021). Addressing these difficulties and leveraging the potential of FDI and domestic capital formation demands a complete understanding of their effects on economic growth and the factors that influence their dynamics in the Nigerian context.

More so, FDI is typically lauded as a catalyst for economic progress, its impact on Nigeria's economic growth has been uneven and not as revolutionary as hoped. This contradiction raises significant issues regarding the effectiveness of FDI in fostering sustainable economic growth and the conditions under which it can actually assist the Nigerian economy. Moreover, domestic capital development, which is vital for establishing local industries and infrastructure, has also encountered various problems, including

inadequate finance, poor policy execution, and infrastructural shortfalls. These obstacles hinder the potential of domestic investments to contribute meaningfully to economic growth (Alfaro et al., 2020).

Furthermore, there is a paucity of comprehensive studies that simultaneously assess the impacts of FDI and local capital formation on Nigeria's economic growth, taking into account the specific economic, social, and political setting of the country. This vacuum in the research makes it difficult to grasp the intricate relationships between these two forms of investment and their aggregate influence on economic performance. Addressing this problem is vital for designing focused policies that may harness the full potential of both FDI and indigenous capital formation, hence encouraging sustained economic growth and development in Nigeria. This study intends to fill this vacuum by empirically examining the impact of FDI and domestic capital formation on Nigeria's economic growth.

2.0 LITERATURE REVIEW

2.1.1 Foreign Direct Investment (FDI)

FDI connotes investments made either by individuals or firm in one country into business interests existing in another country. It is different from portfolio investments, which are passive investments in the securities of another country such as stocks and bonds. The primary motive behind FDI is to gain a lasting interest and influence in enterprises management. According to the International Monetary Fund IMF (2020), FDI is a fundamental driver of economic growth and globalization, contributing to the transfer of technology, skills, and innovations across borders (Khan & Rehman, 2021).

There are several types of FDI, each characterized by the entry mode coupled with the nature of investments. Greenfield investment is one of the most common forms. This type of FDI typically involves the creation of new jobs and infrastructure development. For example, when Toyota establishes a new manufacturing plant in the United States, it represents a greenfield investment. This form of FDI is often preferred when firms seek to establish a significant presence in the host country and exert greater control over their operations (OECD, 2019).

Another prominent type of FDI is mergers and acquisitions (M&A), where a company acquires or merges with an existing firm in the foreign country. This form of FDI allows for quicker entry into the market and can provide access to established brand names, customer bases, and distribution networks. An example of this is the acquisition of British telecom company Vodafone by Verizon in the United States.

According to the World Bank (2018), FDI inflows are critical for bridging the investment gap in developing countries, enabling them to achieve higher growth rates. For example, in many African countries, FDI has been instrumental in developing the telecommunications and energy sectors, which are fundamental for sustainable economic growth. A study by Alfaro et al. (2020) found that FDI not only creates jobs but also improves the quality of employment by introducing better working conditions and higher wages. This increase in employment and income levels boosts domestic consumption, further driving economic growth.

2.1.2 Domestic Capital Formation

Domestic capital formation refers to the process by which a country increases its stock of real capital. This involves the accumulation of physical assets such as machinery, buildings, and infrastructure, as well as the development of human capital through education and training. The concept encompasses several components, including gross fixed capital formation, human capital formation, and infrastructure development, each playing a crucial role in the overall economic development process (Asiedu, 2022).

Gross fixed capital formation (GFCF) is a crucial indicator of an economy's investment in future productive capacity. According to the World Bank (2020), high levels of GFCF are often associated with robust economic growth, as they signify significant investment in improving and expanding productive infrastructure. This investment leads to increased production efficiency, technological advancement, and overall economic development.

Human capital formation is another vital component of domestic capital formation, involving investments in education, training, and health to enhance the skills, knowledge, and productivity of the workforce. Human capital is an intangible asset that contributes significantly to economic growth by improving labor productivity and innovation capacity. Investments in human capital lead to a more skilled and capable workforce, which is essential for the efficient use of physical capital and for driving technological progress. Asogwa et al. (2018) argues that human capital formation is as crucial as physical capital formation for long-term economic growth, as it directly influences a country's ability to innovate and adapt to changing economic conditions.

Economic Growth

According to the Gross Domestic Product (GDP), economic growth is the expansion of an economy's size between two periods. The total worth of all completed goods and services produced inside a nation's boundaries over a given time period is known as its GDP (Asiedu, 2022). It is computed as the total of net exports at market prices in an open economy, private consumption, government spending, and private capital investment. The GDP formula is displayed here (Dada, 2022b, 2023a).

2.2 Theoretical Review

One of the foundational theories in this area is the Solow-Swan growth model, which emphasizes the role of capital accumulation (both domestic and foreign) in driving economic growth. According to the Solow-Swan model, long-term economic growth is

The endogenous growth theory further extends these ideas by incorporating the role of FDI in promoting technological spillovers and innovation. This theory suggests that FDI not only increases the capital stock but also enhances the host country's technological capabilities through knowledge transfer, skill development, and innovation (Romer, 1986; Lucas, 1988). FDI can introduce new technologies and managerial practices that domestic firms can learn from, leading to overall productivity improvements. These positive externalities are particularly crucial for developing countries like Nigeria, where technological gaps often hinder economic progress. Endogenous growth models highlight the importance of creating an environment conducive to learning and innovation to fully capitalize on the benefits of FDI (Asiedu, 2022).

Another important theoretical perspective is the eclectic paradigm, also known as the OLI (Ownership, Location, Internalization) framework, developed by Dunning (1993). This theory posits that FDI occurs when three conditions are met: firms possess ownership advantages (O), such as proprietary technology or brands; the location (L) offers specific advantages, such as natural resources or favorable regulatory environments; and internalization (I) benefits exist, meaning that firms prefer to control operations in foreign markets rather than licensing or exporting. For domestic capital formation, the theory underscores the need for a favorable business environment that includes stable macroeconomic policies, strong institutions, and efficient financial markets. By attracting FDI and fostering domestic investment through improved economic policies and infrastructure, countries can create a virtuous cycle of growth.

Asogwa et al. (2018) provide a detailed examination of how FDI impacts different sectors of the Nigerian economy and their overall contribution to economic growth. The research spans from 1981 to 2016 and utilizes the Vector Error Correction Model (VECM) to analyze the data. This methodology allows for an understanding of both the short-term dynamics and long-term equilibrium relationships between sectoral FDI inflows and economic growth. The authors focus on three primary sectors: manufacturing, services, and primary sectors (which include agriculture, mining, and oil). The findings indicate that FDI in the manufacturing and services sectors has a significant positive impact on economic growth, while FDI in the primary sector shows a less pronounced effect.

In their study, Ezeanyej and Ifebi (2016) focus on examining the impact of Foreign Direct Investment (FDI) on Nigeria's economic growth over a period spanning from 1980 to 2017. Employing the Autoregressive Distributed Lag (ARDL) bound testing approach, the researchers find that FDI has a positive effect on Nigeria's economic growth, not only in the short term but also in the long term. This indicates that FDI inflows have played a significant role in driving economic growth in Nigeria over the studied period.

Ogunleye and Alege (2022) investigated the interplay between domestic investment, Foreign Direct Investment (FDI), and economic growth in Nigeria over a span of nearly four decades, from 1981 to 2018. Employing the Johansen cointegration technique and error correction model, the researchers find that both domestic investment and FDI have a significant positive impact on economic growth in Nigeria. Interestingly, they note that while FDI contributes significantly to economic growth, domestic investment has a stronger influence, highlighting the importance of fostering a robust domestic investment climate.

Adeola et al. (2020) investigate foreign direct investment in relation to African tourism development. Utilizing the Generalized Method of Moments (GMM), the study finds that FDI positively influences tourism growth, with the impact being stronger in the presence of a well-developed human capital base. Policy recommendations include investing in education and skill development to enhance the positive effects of FDI on tourism growth.

An *ex-facto* research design that relied on existing data was employed in this study. Since the unit root embraced integration order of zero and one, Autoregressive Distributed lag was employed. It uses real gross domestic as the dependent while other variables are foreign direct investment, domestic capital formation, exchange rate and inflation rate.

To examine the effect of foreign direct investment and domestic capital formation on economic growth of Nigeria from 1986 to 2023, the study formulates its model as:

$$GDP = f(FDI, \quad GCF, \quad EXCH, \quad INF - - - - - 3.1$$

Where: GDP denotes gross domestic product; GCF connotes domestic capital formation; EXCH depicts exchange rate while INF

symbolized inflation rate. To express econometrically, equations 3.1 is represented as follow:

$$GDP = \beta_0 + \beta_1 FDI_t + \beta_2 GCF_t + \beta_3 EXCH + \beta_4 INF_t + \mu_t - 3.2$$

Where: $\beta_0, \beta_1 - \beta_4$ denote the intercept and coefficient of the estimate and μ is the error term

4.0 RESULTS AND DISCUSSION

Table 1: Descriptive Statistic

	GDP	FDI	GCF	EXCH	INF
Mean	10.50509	6.613417	2.773215	4.340254	2.690081
Median	10.49288	6.808742	3.475711	4.838325	2.564949
Maximum	11.19992	10.29756	4.752183	6.049585	4.287716
Minimum	9.741426	3.101407	-1.756282	0.703394	1.686399
Std. Dev.	0.515110	1.569855	1.769386	1.405268	0.663783
Skewness	0.066930	0.127269	-0.786065	-1.115695	0.865860
Kurtosis	1.401656	3.050523	2.589511	3.181956	2.933472
Jarque-Bera	3.966128	0.103820	4.070142	7.727156	4.630053
Probability	0.137647	0.949415	0.130671	0.020993	0.098764
Sum	388.6881	244.6964	102.6089	160.5894	99.53298
Sum Sq. Dev.	9.552185	88.71996	112.7061	71.09197	15.86189
Observations	37	37	37	37	37

Sources: Author's Computation, (2025)

Table 1 presents the descriptive of all the variables. It shows the mean value of GDP, FDI, GCF, EXCH and INF stood at 10.50509, 6.613417, 2.773215, 4.340254 and 2.690081 respectively. From the standard deviation gross capital formation indicated the highest discrepancy, while real gross domestic product showed the lowest. Skewness measures the degree of asymmetry or deviation of the variables from symmetry. Accordingly, gross capital formation and exchange rate due to their negative values exhibited a long-left tail while other variables are right tailed. Similarly all the variables except exchange rate are normally distributed since their p-values exceeded 0.05.

4.1 Unit Root

Table 2: ADF Unit Root Test

Variables	ADF Test at Level	Critical Values at 5%	ADF Test at FD	Critical Values at 5%	Decision
GDP	-0.774850	-2.948404	-3.780714	-2.948404	I(1)
FDI	-2.722270	-2.945842	-7.586550	-2.948404	I(1)
GCF	-2.877273	-2.945842	-6.774933	-2.951125	I(1)
EXCH	-3.462894	-2.945842	NA	NA	I(0)
INF	-3.227640	-2.945842	NA	NA	I(0)

Source: Author's Computation, (2025)

Table 2 presents the outcome of unit root conducted for the study. It was revealed that GDP, FDI and GCF were not stationary when tested at level but at first difference while the outcome of unit root conducted on EXCH and INF revealed that the two variables were stationary at level. The outcome emanated from the unit root suggested that ARDL is best suited for estimating both the long and short-run model.

4.2 Test for Co-integration

Table 3 Co-integration Bound Test for GDP

F- Statistic		12.10323
Significance	I0 Bound	I1 Bound
5%	2.56	3.49

Source: Author's Computation, (2025)

Table 3 showed the outcome of the bound test estimation and it revealed that at 5%, the F-statistic value of 12.10323 exceeded 2.56 and 3.49 lower and upper bound tests respectively. This therefore, validates that long-run relationship is upheld in the study.

4.3 ARDL Long-Run Co-integration Regression for GDP

Table 4 ARDL Long-Run Co-integration Regression for GDP

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
C	12.025075	2.870191	4.189643	0.0002
FDI	0.063344	0.102719	0.616673	0.5423
GCF	0.501240	0.165128	3.035463	0.0033
EXCH	-0.294934	0.500346	-0.589461	0.5601
INF	-0.378506	0.326560	-1.159068	0.2559
CointEq(-1)	-0.039527	0.004685	-8.436255	0.0000

Source: Author's Computation, (2025)

The long-term link between GDP and other explanatory variables was described in Table 4. Firstly, the ECM is positive, statistically significant at all levels, and well defined. With a value of -0.039527, the GDP imbalance from the prior year was around 4%. This illustrates that the model converges to equilibrium at a slow rate. The size of this coefficient suggests that the independent variables compensate for over 4% of any GDP disequilibrium in a single period (one year).

In terms of the signs and magnitude of the coefficients which signify the effect of foreign direct investment and domestic capital formation on economic growth of Nigeria, it can be observed that in the long run, foreign direct investment exhibited an insignificant positive relationship with the gross domestic product in Nigeria. The result indicated that for every one unit increase in foreign direct investment, there is corresponding increase of 0.063344 units in economic growth in the long-run. The coefficient of gross capital formation is positive and significant with a value of 0.501240 units. The result implies that a unit increase in gross capital formation will lead to 0.501240 units increase in real gross domestic product in the long-run. Also, the coefficient of exchange rate is negative and insignificant with a value of -0.294934 units. The result implies that a unit increase in exchange rate will lead to -0.294934 units decrease in real gross domestic product. In the same vein, inflation rate has insignificant negative relationship of -0.378506 units with economic growth of Nigeria, implying that a unit increase in inflation rate will lead to -0.378506 unit decrease in economic growth of Nigeria.

4.4 Diagnostic Tests

Table 5 Diagnostic Tests

Serial Correlation LM Test			
F-statistic	1.428098	Prob. F(2,27)	0.2573
Obs*R-squared	3.443944	Prob. Chi ²	0.1787
Heteroskedasticity Test			
F-statistic	1.618527	Prob. F(6,29)	0.1777
Obs*R-squared	9.031034	Prob. Chi ² (6)	0.1718

Scaled exp. SS	12.06560	Prob. Chi ² (6)	0.0605
Normality Test			
Stat.	12.56105	Prob.	0.001872

Source: Author's Computation, (2025)

The three diagnostic tests carried out revealed absence of serial correlation, normality of data and no heteroskedasticity problem that can affect the model. This is based on the evident that their p-values exceeded 5%.

4.5 Discussion of Findings

The result revealed that in the long run, foreign direct investment exhibited an insignificant positive relationship with gross domestic product. The implication of the insignificant impact of foreign direct investment on economic growth is that the repatriation of profit by foreign investors has wiped away the benefits in foreign direct investment. Though contributed positively in the long-run, the impact is not felt on the economy. This concurred to Asiedu (2022), Asogwa et al. (2018), Ogunleye and Alege (2022) among others.

Similarly, gross capital formation exhibited insignificant positive relationship on economic growth in the long-run. The implication of the long-run estimate is that an increase in gross capital formation increases the growth of the economy but the impact of this increase is not significant. Lastly, exchange rate revealed an insignificant positive relationship with economic growth of Nigeria. The implication of this result is that a unit increase in exchange rate will increase economic growth of Nigeria in the long-run. Conversely, exchange rate and inflation rate depicted an insignificant negative relationship.

5.0 CONCLUSION AND RECOMMENDATIONS

This study uses descriptive for normality distribution of the variables, unit root test for time series properties of the data set and ARDL was used to conduct co-integration test where the variables are not in the same order using the bound test. The findings from this study revealed that FDI exhibited an insignificant positive impact on economic growth while the impact of gross capital formation is significant and positive. Similarly, exchange rate and inflation rate showed an insignificant negative impact on economic growth. Based on the findings, the study concluded that there exist a long-run relationship between the identified variables and that Nigerian government should look beyond foreign direct investment for sustainable economic growth to be achieved in Nigeria. In this direction, it was suggested that the Nigerian government should embark on selective investment criteria among foreigners and focus on investment that can contribute maximally to the economy. More so, efforts should be geared toward encouraging capital formation within the economy as this will reduce overreliance on foreign investors.

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