International Journal of Applied Social Science
Volume 9 (11 & 12), November & December (2022) : 586-591
Received : 30.10.2022; Revised : 14.11.2022; Accepted : 29.11.2022

RESEARCH ARTICLE
ISSN : 2394-1405 (Print)
DOI: 10.36537/IJASS/9.11&12/586-591

Nexus of FDI and Growth: A Case Study Nigeria

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ABSTRACT

This study investigates the nexus between foreign direct investment (FDI) and economic growth in Nigeria for 1981-2017. The study is conducted to find out the impact of foreign direct investment (FDI) on economic growth of Nigeria. It is based on time series from 1981 to 2017, collected from the Central Bank of Nigeria. Multiple regression technique is used in which GDP is dependent variable while foreign direct investment (FDI) and Exchange rate (EXR) are independent variables. The result indicates that there is a positive relationship between the FDI and GDP. When FDI will increase, it will have positive effect on the GDP of Nigeria.

Key Words : FDI, Economic Growth, Exchange rate, Nigeria, Nexus

INTRODUCTION

In recent years, policymakers, particularly in developing nations, have recognized the necessity of foreign direct investment (FDI) to stimulate economic growth. It is asserted that FDI can generate employment opportunities, enhance technological advancement within the host nation, and generally improve the economic landscape. Lall (2002) noted that the impact of FDI on economic growth is influenced by various factors and can differ over time as well as between different host countries. According to UNCTAD (2008), foreign direct investment is characterized as an investment that establishes a long-term relationship, indicating a sustained interest and control by a resident entity in one economy (the foreign direct investor or parent enterprise) over an enterprise located in a different economy (the FDI enterprise or affiliate). Shearer (1961) defined economic growth as an increase in the production and consumption of goods and services, which encompasses a growing population and/or rising per capita consumption, alongside an increasing gross domestic product (GDP).

Mencinger (2003) examined the significant role of foreign direct investment in economic growth, particularly in contexts where domestic savings are insufficient. Numerous international organizations, politicians, and economists regard FDI as a crucial instrument for fostering a nation's economic development and addressing economic challenges.

Wang and Wong (2009) asserted that FDI promotes the economic growth of the host country, serving as a catalyst for accelerating the economic progress of developing nations. FDI not only represents a vital source of capital inflows but also facilitates substantial technology transfers within the host country, with both capital inflows and technology transfer acting as key drivers of economic growth.

Gao (2004) determined that foreign direct investment (FDI) enhances the economic growth of a host nation via multiple avenues, with the primary mechanisms being technology transfer and spillover effects. Technology transfer occurs within the host country through the operations of multinational corporations, while spillover effects arise from the engagement of domestic companies with these multinationals, including interactions with suppliers, customers, and the workforce. Consequently, FDI can exert a beneficial influence on income levels.

How to cite this Article: Gupta, Vibha (2022). Nexus of FDI and Growth: A Case Study Nigeria. *Internat. J. Appl. Soc. Sci.,* **9** (11 &12) : 586-591.

Literature Review:

Har *et al.* (2008) explored the relationship between foreign direct investment (FDI) and economic growth in Malaysia. Their research highlighted FDI as a significant contributor to economic development. In addition to capital, FDI offers various advantages to the host country, including job creation, management expertise, advanced technology, and competitive products.

Zilinske (2010) identified that the effects of foreign direct investment can be both beneficial and detrimental. For example, greenfield investments tend to yield more favorable outcomes compared to mergers and acquisitions, which can sometimes produce negative externalities affecting the host country's economic growth.

Durham (2004) investigated the influence of foreign direct investment on economic growth, utilizing data from 80 countries. He concluded that FDI can occasionally have insignificant or adverse effects on the economic growth of developing nations, asserting that the impact of FDI is contingent upon the absorptive capacity of the host country.

Koojaroenprasit (2012) analyzed the effect of foreign direct investment on South Korea's economic growth, relying on secondary data from 1980 to 2009. Employing multiple regression analysis, the study found a strong and positive correlation between FDI and economic growth in South Korea. Additionally, it revealed that human capital, employment, and exports also exert a positive and significant influence.

Otto and Ukpere (2014) examined the relationship between foreign direct investments and economic development in Nigeria over a span of 41 years. Their analysis indicated a positive correlation between FDI and economic growth in Nigeria, recommending the implementation of policies to enhance foreign direct investments in the Nigerian economy.

Muntah *et al.* (2015) assessed the impact of foreign direct investment on economic growth in Pakistan from 1995 to 2011, utilizing data derived from secondary sources. A significant portion of the data utilized in this study was sourced from the World Bank, Index Monde, and the Economic Survey of Pakistan. The research employed regression analysis to examine the relationship between foreign direct investment (FDI) and economic growth in Pakistan, concluding that FDI has a positive effect on the country's economic development.

In a separate investigation, Ayanwale (2007) explored the connection between FDI and economic growth in Nigeria, utilizing secondary data obtained from the Central Bank of Nigeria, the International Monetary Fund, and the Federal Office of Statistics, covering the period from 1970 to 2002. The study employed ordinary least squares and the two-stage least squares (2SLS) method to develop a more accurate growth model, revealing that the key determinants of FDI in Nigeria include infrastructure development, market size, and a stable macroeconomic environment. Conversely, factors such as trade openness and the availability of human capital were found to have no significant impact on attracting FDI. The findings indicated that FDI positively contributes to Nigeria's economic growth.

While numerous studies have affirmed the positive influence of FDI on the economic growth of host countries, some research presents a more ambiguous perspective. For example, Aitken and Harrison (1999) argue that the net effect of foreign direct investment on host countries is minimal. Borensztein *et al.* (1998) suggest that FDI can only foster economic growth if the host country possesses adequate absorptive capacity for advanced technology.

Additionally, Vissak *et al.* (2005) note that, although there is no consensus regarding the effects of FDI on host country economic growth, the number of studies demonstrating positive effects significantly outweighs those indicating negative impacts.

Consequently, the influence of foreign direct investment on the economic growth of host countries remains a topic of debate. Despite the extensive research conducted to assess the effects of FDI on economies, a definitive consensus has yet to be reached. Numerous studies have produced varying conclusions regarding the effects of foreign direct investment (FDI) on the economy, with some indicating a positive impact while others suggest a negative one. Additionally, certain research has determined that the influence of FDI is contingent upon the absorptive capacity of the host nation, which encompasses its political, economic, and technological conditions.

METHODOLOGY

This research is grounded in a quasi-experimental framework that investigates the impact of an independent variable, which existed prior to the commencement of the study, on a dependent variable. The analysis utilized secondary data spanning the years 1981 to 2017, sourced

from the statistical bulletin of the Central Bank of Nigeria. Foreign Direct Investment (FDI) is defined as the investment made by a company or entity in a foreign country. Gross Domestic Product (GDP) represents the market value of all final goods and services produced within a nation during a specified timeframe, and it is frequently regarded as a measure of economic growth and living standards within a country.

The exchange rate denotes the value of one country's currency in relation to that of another country or economic region. For instance, it reflects how many Nigerian Naira are required to purchase one US Dollar (N/US$1.00). To analyze the relationship between Nigeria's GDP, FDI, and the Exchange Rate (EXR), the following theoretical model is employed.

GDP = F (FDI & EXR)

The core intention of the paper is to study the effect of FDI on GDP of Nigeria.

The trend of foreign Direct Investment inflows is also observed with relevance to GDP growth and exchange rate of Nigeria. To examine the relation of Nigeria's GDP with FDI and exchange rate (EXR), the following multiple regression model is used.

$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$

where, Y = Gross Domestic Product (Dependent Variable)

X_1= Foreign Direct Investment

X_2= Exchange rate

β= Coefficient of independent variable

α= Constant

ε= Error term

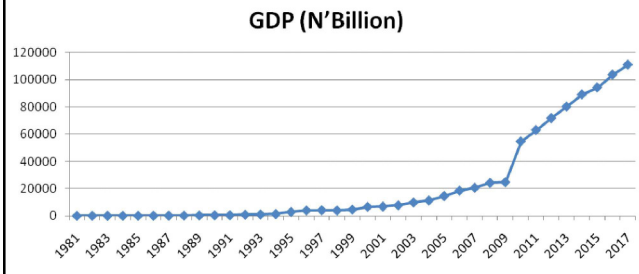
Gross Domestic Product is the dependent variable. It is obtained as a gross output of all finished goods and services in the entire economy. Normally used because it is a good measure of for economic growth. Foreign Direct Investment is the independent variable; Exchange Rate is the moderating variable.

The research utilized multiple regression analysis to examine the collected data. It is anticipated that foreign direct investment will exert a significant positive influence on the growth of the host economy, specifically Nigeria, through the transfer of technology, expertise, and enhanced management practices, along with a contagion effect that is likely to improve the performance of local enterprises. This perspective is corroborated by the findings of Koojaroenprasit (2012), Otto *et al.* (2014), Muntah *et al.* (2015), Ayanwale (2007), Har *et al.* (2008), and Roman *et al.* (2012), all of whom identified a positive impact of FDI on the domestic economy.

RESULTS AND DISCUSSION

Gross Domestic Product:

The findings on the GDP real values are shown in Fig. 1.



Sourced: Central Bank of Nigeria

Fig. 1 : GDP Distribution

The data presented in Table 1 and Fig. 1 illustrate the trend of Gross Domestic Product (GDP) from 1981 to 2017. The lowest recorded GDP value was Nigerian Naira 94.33 billion in 1981, whereas the highest reached Nigerian Naira 110,847.86 billion. Over the span of 37 years, there has been a consistent rise in GDP values, indicating a sustained economic growth in Nigeria during this period.

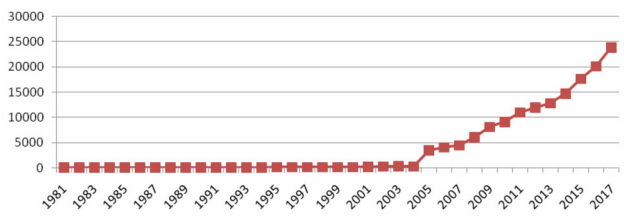
Table 1: Descriptive Statistics

	FDI (N'Billion)	Exchange Rate	GDP (N'Billion)
Mean	4017.85	82.82	22657.78
Standard Error	1083.61	13.23	5613.17
Median	111.30	92.69	4679.21
Mode	#N/A	21.87	#N/A
Standard Deviation	6591.32	80.45	34143.59
Sample Variance	43445563	6472	1165784889
Kurtosis	1.77	0.03	0.92
Skewness	1.64	0.74	1.53
Range	23895.05	305.18	110753.53
Minimum	0.15	0.61	94.33
Maximum	23895.20	305.79	110847.86
Sum	148660.60	3064.32	838337.97
Count	37	37	37
Confidence Level (95.0%)	2197.66	26.82	11384.04

Table 2 : Regression Statistics (summary output)	
Regression Statistics	
Multiple R	0.984346
R Square	0.968936
Adjusted R Square	0.967109
Standard Error	6192.256
Observations	37

Foreign Direct Investment (FDI) :

The findings on the FDI values are shown in Fig. 2.



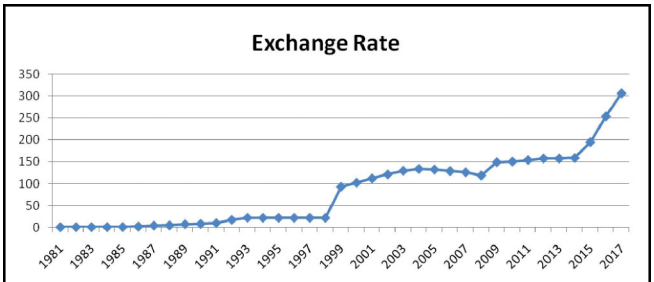
Sourced: Central Bank of Nigeria

Fig. 2 : FDI Distribution

The findings of Table 1 and Fig. 2 shown indicate the trend of FDI values over the period of 1981-2017. The minimum value is calculated as Nigerian Naira 0.15 billion in 1986 while the maximum value is calculated as Nigerian Naira 23895.2 billion in 2017. The findings clearly indicate rising trend in the values of FDI during the last 37 years. The value of standard deviation is calculated as 6591.32 billion. The higher value of standard deviation indicates that there is a variation over the yearly values of foreign direct investment.

Exchange Rate:

The findings on the exchange rate nominal values are shown in Fig. 3.



Sourced: Central Bank of Nigeria

Fig. 3 : Exchange Rate

The data illustrated in Table 1 and Fig. 3 demonstrate the trend of the Nigerian Naira's exchange rate against the US Dollar from 1981 to 2017. The lowest recorded exchange rate was 0.61 in 1981, whereas the highest reached 305.79 in 2017. These results suggest a significant increase in exchange rate values over the 37-year period.

The empirical results of the proposed model are illustrated in the Table 3.

The regression analysis results, as shown in Table 4, indicate that Foreign Direct Investment (FDI) positively influences Gross Domestic Product (GDP), evidenced by a coefficient of 4.93668. This implies that a 1% increase in FDI corresponds to an increase of 4.93668 in GDP. The effect is statistically significant at the 1% level, indicating that FDI plays a positive and significant role in driving economic growth in Nigeria.

Conversely, the exchange rate also exhibits a positive effect on GDP; however, this effect lacks statistical significance. Therefore, it can be concluded that the exchange rate does not significantly impact economic growth in Nigeria. The R-squared value reveals that 96.8% of the variability in the dependent variable is accounted for by the independent variables in the model,

Table 3: ANOVA Test					
ANOVA					
	df	SS	MS	F	Significance F
Regression	2	40664558871	20332279435	530.2593	2.33533E-26
Residual	34	1303697127	38344033.15		
Total	36	41968255998			

Table 4: Regression Coefficients of independent variables						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	1547.06711	1571.21754	0.984629	0.331761434	-1646.03	4740.165
FDI (N'Billion)	4.93668957	0.30513853	16.17852	1.54004E-17	4.316573	5.556806
EXR	15.4048053	24.9994699	0.616205	0.541862962	-35.4002	66.20984

with an Adjusted R-squared value of 96.7%. Additionally, the F value is significant at the 1% level.

Hypothesis 1:

H_0: FDI has no significant positive impact on GDP in Nigeria.

H_1: FDI has significant positive impact on GDP in Nigeria.

Hypothesis 2:

H_0: Exchange rate has no significant positive impact on GDP in Nigeria.

H_1: Exchange rate has a significant positive impact on GDP in Nigeria.

The analysis reveals that foreign direct investment (FDI) exerts a positive and statistically significant influence on gross domestic product (GDP), which serves as an indicator of economic growth. Consequently, the alternative hypothesis positing that FDI significantly enhances economic growth in Nigeria is upheld, while the null hypothesis is dismissed. This finding aligns with prior expectations.

Furthermore, the analysis shows that the exchange rate has a positive, albeit not statistically significant, impact on GDP. As a result, the null hypothesis is accepted, and the alternative hypothesis is rejected.

Conclusions and Recommendations

This study investigates the effect of FDI on Nigeria's economic growth, as measured by GDP. Utilizing multiple regression analysis, the research assesses the relationship between FDI and economic growth, employing secondary data from 1981 to 2017 sourced from the Central Bank of Nigeria's statistical bulletin and the National Bureau of Statistics' publications. The empirical findings indicate a positive correlation between FDI and Nigeria's economic growth.

In light of these findings, the study emphasizes the crucial role of government in fostering foreign direct investment within the nation. Policymakers are encouraged to implement various reforms in Nigeria's domestic market to attract increased FDI. Additionally, the government should enhance infrastructure facilities across the country. It is also recommended that policies be established to stabilize the Naira's exchange rate against major global currencies. Finally, the government should create a conducive environment to encourage foreign investors to commit to long-term investments in Nigeria.

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