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Foreign Direct Investment and Economic Growth: The Nigeria Experience

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Abstract

This study investigated the effect of foreign direct investment on economic growth in Nigeria. The study covered the period of 30 years from 1990 to 2020. The annual time series data for the study were analyzed using the Ordinary least square (OLS) technique. The results of the estimated model show that foreign direct investment had a strong negative impact on economic growth. Foreign exchange rate and exchange rate and government expenditure both have positive relationships with economic growth. The study therefore concludes that insufficient FDI fund invested into the Nigerian economy has not been able to exert enough impact to make it positive or growth-enhancing. Furthermore, the study recommended that Nigeria should encourage improved domestic investment to accelerate growth rather than relying on FDI as a prime mover of the economy

Keywords: Foreign Direct Investment, Nigeria, Gross Domestic Product, Exchange Rate, Government Expenditure, Economic Growth.

1.0 INTRODUCTION

The relevance of foreign direct investment cannot be overemphasized. Its significant influence on the provision of new technologies, products, management skills, and competitive business environment, over time, has been a strong impetus for economic growth. Many countries of the world, especially emerging economies favor policies that encourage the inflow of foreign direct investment because of its positive spillover associated with the provision of funds and expertise that could help smaller companies to expand and increase international sales and transfer of technology thus, forming new varieties of capital input (i.e. flow of services available for production from the stock of capital goods e.g. equipment, structures, inventories, etc) that cannot be achieved through financial investments or trade in goods and services alone (Fredrick *et al* 2004).

Since 1986, the government of Nigeria has vigorously pursued economic policies aimed at liberalizing and promoting competition and investment in the Nigerian economy. Appropriate incentives are also continuously being put in place to encourage and promote private investment. Foreign direct investment are the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in the host country economy. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. Foreign direct investment (FDI) not only provides developing countries (including Nigeria) with the much-needed capital for investment, but it also enhances job creation, managerial skills as well and the transfer of technology. All of these contribute to economic growth and development. To this end, Nigerian authorities have been trying to attract FDI via various reforms (Obida & Abu, 2010).

The level of net inflow of FDI as a percentage of GDP in Nigeria remained at an average of 1.02% between 1981 and 1986. It rose to 5.8 percent in 1994 and has since then continued to fall. It was 2.9 percent in 2009 and has fallen to 0.6 percent as of 2017, 0.2 percent in 2018, and -0 percent in 2022 (World Bank database, 2023). The fluctuations in the level of net FDI inflow in Nigeria reflect changes in the political, social, and economic environment of the country throughout the study.

In Nigeria the performance of FDI has been so low this is as a result of the weak macroeconomic framework and poor government policy, the success of foreign investments in the country mainly is determined by the market size, human capital, and stable macroeconomic environment, and influenced largely by the pull factor and the push factors. FDI has a positive influence on output, but is not significant, suggesting the poor performance of FDI on economic growth in Nigeria.

Recent Studies have turned to investigate the effect of foreign direct investment on economic growth. De Mello (1997) found positive effects of FDI on economic growth in both developing and developed countries while Carkovick and Levine (2013) argue that there is no significant positive relationship between FDI and economic growth. Among the studies conducted in Nigeria, Akinlo (2004) concluded that FDI does not influence economic growth while Egwaikhide (2012) noted that the impact of FDI on economic growth in Nigeria is very little, especially in the long run. The review of the literature showed that there are significant variations in results from studies conducted both in developed European countries and developing countries like Nigeria. Some of these Studies failed to adopt robust methodologies in carrying out the analysis of research data. This study therefore seeks to examine the impact of foreign direct investment on Nigeria's economic growth.

2.0 REVIEW OF RELATED LITERATURE

2.1 Theoretical Framework

This study is supported by the Harrod-Domar theory of growth which states that for any economy to grow, a proportion of its GDP must be saved and invested. In other words, the capital-output ratio and savings available to a country determine the economic growth level. The main obstacle to growth according to Harrod-Dormar's growth model is low capital formation which brings about low savings-investment.

Harecord-Domar Growth Model

The Harrod-Domar growth model stresses the importance of savings and investment as key determinants of growth. The model was developed independently by Roy F. Harrod in 1939 and Evsey Domar in 1946. It is used in development economics to explain an economy's growth rate in terms of the level of saving and capital.

According to the Harrod–Domar model there are three kinds of growth: warranted growth, actual growth, and natural rate of growth. The warranted growth rate is the rate of growth at which the economy does not expand indefinitely or go into recession. Actual growth is the real rate increase in a country's GDP per year. Natural growth is the growth an economy requires to maintain full employment. For example, If the labor force grows at 3 percent per year, then to maintain full employment, the economy's annual growth rate must be 3 percent.

The growth model raised three issues:

- How can steady growth be achieved for an economy with a fixed (capital-output ratio) (capital-coefficient) and a fixed saving-income ratio?
- How can the steady growth rate be maintained? Or what are the conditions for maintaining steady uninterrupted growth?

- How do the natural factors put a ceiling on the growth rate of the economy?

Harrod and Domar assign a crucial role to capital accumulation in the process of growth. They emphasize the dual role of capital accumulation: On the one hand, new investment generates income (through the multiplier effect); on the other hand, it increases the productive capacity (through the productivity effect) of the economy by expanding its capital stock. It is pertinent to note here that classical economists emphasized the productivity aspect of the investment and took for granted the income aspect. Keynes had given due attention to the problem of income generation but neglected the problem of productive capacity creation. Harrod and Domar took special care to deal with both the problems generated by investment in their model

2.2 Review of Empirical Studies

Balasubramanyan et al. (1996) report positive interaction between human capital and FDI in Bangladesh. They had earlier found significant results supporting the assumption that FDI is more important for economic growth in export-promoting than import-substituting countries. This implies that the impact of FDI varies across countries and that trade policy can affect the role of FDI in economic growth.

Blonigen and Wang (2005) noted that the factors that affect FDI flows are different across the income groups. Interestingly, they find evidence of beneficial FDI only for developing countries and not for the developed ones, while they find the crowding-out effect of FDI on domestic investment to hold for the wealthy group of nations.

Maji and Achegbulu (2011), examine the effect of foreign direct investment on economic growth in Nigeria. The data used were sourced from the Central Bank of Nigeria statistical bulletin. The Ordinary least square (OLS) technique was used in estimating the relationship between foreign direct investment and Economic growth over the period. The study shows that foreign direct investment has a positive impact on gross domestic product in Nigeria.

Ugwuegbe, Okore & Onoh(2013), examine the relationship between Foreign Direct Investment and economic growth in Nigeria. The study covered the period of 1981-2009 using annual time series data from the Central Bank of Nigeria statistical bulletin. The Ordinary Least Square technique was used to test the relationship between foreign direct investment and Economic growth. The result indicates that FDI has a positive and insignificant impact on the growth of the Nigerian economy for the period under study. Gross fixed capital formation is positively and significantly related to economic growth. The interest rate has a positive and insignificant effect while the exchange rate positively and significantly affects the growth of Nigeria's economy.

Egwaikhide (2012) also investigates the relationship between foreign direct investment (FDI) and economic growth in Nigeria, the Johansen Co-integration technique, and the Vector Error Correction Method in which FDI is disaggregated into various components. The Johansen Co-integration result establishes that the impact of the disaggregated FDI on real growth in Nigeria namely: the agriculture, mining, manufacturing, and petroleum sectors is very little except for the telecom sector which has a good and promising future, especially in the long run. Furthermore, the past level of FDI and the level of infrastructures are FDI enhancing.

3.0 METHODOLOGY

3.1 Data and Variables

This study was based on secondary data. A sample of annual observations on time series covering the period from 1990 to 2020 was employed. All data variables were sourced from the Central Bank of Nigeria Statistical Bulletin

3.2 Model Specification

Taking inference from the empirical findings and theories, which have been derived from the theoretical exposition of the Harrod-Domar theory of growth and then making foreign direct investment central to the equation, a model will be drawn up to deter:

$$GDPgr = f(FDIgr, GEXP, EXC) \dots\dots\dots 3.1 \text{ Where:}$$

GDPgr: Real Gross Domestic Product Growth Rate

FDIgr: Foreign Direct Investment Growth Rate

GEXP: Government Expenditure

EXC: Exchange Rate

The model above is restated explicitly as below:

$$GDPgr = \alpha_0 + \alpha_1 FDIgr + \alpha_2 GEXP + \alpha_3 EXC + U_t \dots\dots\dots (3.2)$$

Therefore, the equation specification in its logarithm form is then:

$$= \beta + \beta + \beta + \beta + \varepsilon \dots\dots\dots(3.3)$$

Where:

$\beta_0, - \beta_4$ = parameters estimate in the model $\varepsilon =$

Stochastic error term

4.0 RESULTS 4.1 Descriptive Statistics

Descriptive statistics are used to describe data in a meaningful way. In this study, descriptive statistics such as mean, standard deviation, minimum, maximum, skewness, and Kurtosis statistics of each variable were considered.

	GDPgr	FDIgr	EXCH	LGEXP
Mean	4.341822	1.662131	129.3244	7.200046
Std. Dev.	4.081692	1.205851	97.16654	1.521349
Maximum	15.32916	5.790847	358.8108	9.226663
Minimum	-2.035119	0.195183	8.038285	4.098805
Skewness	0.413103	1.824741	0.685839	-0.582262
Kurtosis	3.180687	6.716303	2.839454	2.206516

Source: Author’s Computation

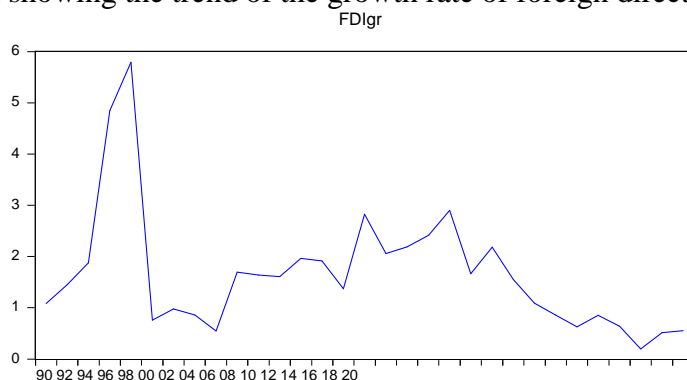
Where GDPgr is the Gross domestic product growth rate, FDIgr represents the Foreign direct investment growth rate, EXC stands for exchange rate and GEXP is government expenditure.

Table 4.1 shows the summary of all the variables under consideration in this study in both their raw form and natural logarithmic form for the sake of uniformity. The mean value of GDPgr is given to be 4.341822. This shows the average value for 30 years under study. In the same vein, the mean values of FDIgr, EXC, and GEXP are 1.66213, 129.3244, and 7.200046 respectively. The standard deviation values shown in Table 4.1 indicate the dispersion or spread in the data series. The higher the value, the higher the deviation of the series from its mean, and the lower the value, the lower the deviation of the series from the mean. The variable with a higher degree of dispersion from the mean is EXC. The maximum values of GDPgr, FDIgr, EXC, and GEXP stand at 15.32916, 5.790847, 358.8108, and 9.226663 respectively. In the same vein, -2.035119, 0.195183, 8.038285, and 4.098805 are the minimum values of GDPgr, FDIgr, EXC, and GEXP respectively. The skewness statistic

shows that all the variables are positively skewed except LGEXP which is negative. The Kurtosis statistic shows that all the variables except FDIgr have thin-tailed distribution and are leptokurtic.

4.2 Trend analysis

Figure 4.2.2 A graph showing the trend of the growth rate of foreign direct investment between 1990 - 2020



From the figure above, foreign direct investment increased greatly from 1990 to 1994 indicating a significant increase in cash flow in Nigerian foreign direct investment before falling from 1994 to 1995 and started skyrocketing till 2004 where there was a brief increase till 2006 in a wave manner before nose-diving till 2018 where there was a slight increase till 2020.

4.3 Unit Root Test Table 4.3: ADF Unit Root Test Results

Variable	Level		First difference		Order of Integration
	Test statistic	p-value	Test statistic	p-value	
GDPgr	-3.258038**	0.0263	-8.787228	0.0000	I(0)
FDIgr	-3.003292**	0.0460	-5.140537	0.0003	I(0)
EXC	1.351686	0.9983	-3.787521***	0.0077	I(1)
GEXP	-4.212177***	0.0028	-3.008991	0.0467	I(0)

Source: Author’s Computation (2022).

Note: *** denotes stationarity at a 1% level of significance while ** denotes a 5% level of significance

Table 4.3 shows that GDPgr, FDIgr, and GEXP are stationary at a level while the remaining variable, EXCH is stationary at first difference. This implies that the simple linear regression estimate is not the appropriate estimation technique as the series are in different order of integration, thus, a bounds co-integration the test is performed.

4.4 Co-integration Test

Since the series under review are in different order of integration as stated in Table 4.3, the bounds co-integration test as proposed by Pesaran, Shin, and Smith (2001) is conducted in this section. To perform this test, the Auto-Regressive distributed Lag (ARDL) model is estimated for the model, and a bounds co-integration test is performed thereafter

Table 4.4: Bounds Test Result

F-statistic	Significance level	Critical value bounds	
		Lower bound	Upper bound
	1%	4.29	5.61

3.240428	5%	3.23	4.35
	10%	2.72	3.77

Source: Author’s Computation (2022)

Table 4.4 shows the bounds test and it reveals that f-statistics value of 3.240428 is lesser than critical value bounds for the upper bound I(1) at 5% level of significance, thus, there is absence of co-integration as such there is no long-run relationship among the variables.

4.5 Vector Autoregressive (VAR) Estimation Result Table 4.5 Vector Autoregressive Estimation Result

	GDPgr	FDIgr	EXC	LGEXP
GDPgr(-1)	0.519920	0.104428	-2.180970	0.006185
FDIgr(-1)	-0.356532	0.486278	-4.205785	-0.051634
EXC(-1)	0.028750	-0.006685	0.950464	-0.000528
LGEXP(-1)	2.062448	2.480199	-14.39933	0.389143
C	-3.009114	2.672559	-3.598698	1.257376
R-Square	0.480929			

Source: Author’s Computation (2022)

From the VAR result presented in the table above using the gross domestic product growth rate (GDPgr) as the targeted variable, it can be deduced that GDPgr has a 51.99% influence on itself. This indicates a strong endogenous power of GDPgr on itself. The VAR result also depicted that there is a negative effect of an increase in past realizations of foreign direct investment growth rate (FDIgr) on gross domestic product growth rate as a 1% increase in foreign direct investment will account for 0.356532 decreases in GDPgr on average ceteris paribus assumption.

Also, the result shows that the past realization of the exchange rate (EXC) has a positive impact on GDPgr going by the t-statistics of 0.028750. This indicates that a unit increase in exchange rate will lead to 0.028750 increases in GDPgr. Furthermore, it was revealed that the previous level of government expenditure (GEXP) has a positive influence on GDPgr going by the t-statistics of 2.062448. This indicated that a unit increase in government expenditure would account for 2.062448 increases in GDPgr.

Lastly, it was revealed that when all these variables (foreign direct investment, exchange rate, and government expenditure) are held constant, the past realization of GDPgr under study has a negative influence (-3.009114) on the current GDPgr on average ceteris paribus. In addition, the R-square of the VAR estimate indicated that 48.09% variation can be explained by the variables in the study. This depicted the explanatory power of the model.

4.6 Discussion of FindINGS

The discussion of findings would be based on the result of the vector autoregressive estimation of this research as it has been established through the result of the bound test that there is the absence of a long-run relationship among the variables. From the findings of the study, it was revealed that the past realization of gross domestic product growth rate accounts for about 51.99% variable on the current growth rate of gross domestic product. This is a result of the escalator movement that exists between the current growth rate and the past growth rates.

Also, it was deduced from the analysis that the growth rate in the level of previous foreign direct investment contributed negatively to the gross domestic product growth. This happened as a result that the net foreign direct investment of Nigeria is negative within the timeframe looked at within the context of this study. Furthermore, it was shown by the result that the past realization of the exchange rate has a positive effect on the growth rate of Nigeria's gross domestic product. This is in corroboration with the discovery and findings of Maji

and Achegbulu (2011) Lastly, it was revealed that the past activities of government spending on both recurrent and capital expenditures have a positive effect on the growth rate of Nigeria's gross domestic product. This is an indication that an increase in the level of government expenditure would necessitate an increase in the level of gross domestic product due to an increased flow of money in circulation.

5.0 CONCLUSION AND RECOMMENDATIONS

The empirical results show that there is a negative relationship between economic growth (GDP) and FDI contrary to the belief of authorities in charge of growth and development. This negative relationship could be a result of insufficient FDI funds invested into the Nigerian economy which has not been able to exert enough impact to make it positive or growth-enhancing. Despite the negative relationship between GDP and FDI, this does mean that FDI is not viable to the Nigerian government and private households because spillovers are different. This study recommended that FDI is an integral part of the trade, hence policies that promote foreign investment and at the same time protect, and supplement domestic production and investment, as well as complement the development goals of the host countries should be encouraged and Nigeria should encourage improved domestic investment to accelerate growth rather than relying on FDI as a prime mover of the economy.

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