Sapientia Global Journal of Arts, Humanities and Development Studies (SGOJAHDS), Vol.5 No.2 June, 2022; p.g. 119 – 127; ISSN: 2695-2319 (Print); ISSN: 2695-2327 (Online)

FOREIGN DIRECT INVESTMENT AND STRUCTURAL DEVELOPMENT: A CASE STUDY OF NIGERIA

OYEBANJI FIKAYO JEREMIAH
Distance learning center, ABU Zaria
Phone number: +2348133095357
Email: oyebanjifikayo@gmail.com

ABDULMALIK ABUBAKAR YUSUF
Department of Actuarial Science and Insurance, ABU Business School
Ahmadu Bello University Zaria
Phone number: +2348065346078
Email: abubakarabdulmalik1985@gmail.com

&
HALIMA SHUAIBU
Distance Learning Center
Ahmadu Bello University Zaria
Phone number: +2348069807220
Email: saasalimsuleiman@gmail.com

Abstract

Foreign direct investment (FDI) and economic growth as being a subject of controversies among scholars across the globe, while some scholar's studies shows there's direct relationship between the variables, others findings shows that reverse is the case. It is in lieu of this, that the study examines the effects of FDI on structural development (proxied by economic growth) in Nigeria. After considerable analysis using econometrics approach; ADF, Breusch-Pagan test; OLS estimate. The finding reveals that FDI is positively and significantly related to economic growth (GDP) while other variables used in the model such as exchange rate and inflation rate are negatively but significantly related to economic growth in Nigeria.

Keywords: Structural development; Economic growth (GDP), FDI, ADF.

1.0 Introduction

Studies have shown that in most developing or underdeveloped countries, foreign direct investment is seen as a means of means of earning foreign reserves via investments, businesses, and foreign aids from advanced countries etc. (Oyegoke and Aras, 2015). Thus, foreign direct investment is seen as a useful source of finance, capital formation, technical know-how and method of trade among countries (Oyegoke and Aras, 2015). In furtherance, the spill-over effects of foreign direct investment has enhanced or brought about innovation and invention which can there be transferable to the receiving countries.

From the foregoing, it is imperative and has become conditions that for any countries that want to accelerate growth in association with Sustainable Development Goals (SDG) in her

economies to experience sustainable and inclusive development, cross-border trade is of essence (UNCTAD, 2019).

However, in Sub-Saharan Africa, Nigeria is the first host economy of FDI and the third in the continent. Presently, Nigeria has witnessed different trade policies which dig at discouraging mono-economy that is over-dependent on crude oil but encourages diversification of the economy from oil revenue. These numerous policies, focused on improving the industrial sector, and of course, results in austerity. Moreover, year 2018 shows the total FDI inflow into the country and was estimated around USD 1.9 billion, while in 2017, FDI inflow was estimated around USD 3.5 billion, showing a decrease due to the consequence of the austerity measures imposed in 2018. At the third quarter of 2019, the FDI was only 3.37% (USD 200.08 million) of the total capital inflow for the period.

Hence, it is quite unfortunate that the efforts of most African countries to attract FDI have been futile. This is in spite of the perceived and obvious need for FDI in the continent. The development is disturbing, sending very little hope of economic development and growth for these countries (Morriset 2000; Asiedu, 2001).

Literally, FDI is designed to improve the recipient economies thereby boost or accelerate growth vis-a-vis development. However, it is in lieu of these benefits that many developing countries attract foreign investors with the expectation of boosting their economy by increasing the foreign investment portfolio. However, different empirical studies have shown that the impact of FDI on economic growth advises otherwise, hence, a controversies.

From the existing literature, some empirical findings shows that there's a negative relationship between FDI and economic growth, while others shows contrary that is FDI is positively related to productivity thereby increase output (Emmanuel, 2016). Thus, the study contributes to the existing literature by investigating the effects of FDI on economic growth using Nigeria as a case study.

Other sections of this study include; literature review; data and the methodology used to analyze the results; time-series econometric model; conclusion and recommendations of this study.

2.0 Literature review

Conceptual review

Foreign direct investment is a major component of international capital flows, refers investments by multi-national companies with head-quarter in developing countries (De Gregorio, 2013). This investment ranges from transfers of fund to whole package of physical capital, techniques of production, managerial and marketing expertise, products, advertising, and business practices for the maximization of profits.

Foreign direct investment is an investment in a business by an investor another country for which the foreign investors has control over the company purchased. The Organization Economic Cooperation and Development (OECD) defined control as owning 10% or more of business. Business that makes foreign direct investments is called multi-national companies or enterprises. A MNE can make a direct investment by creating new foreign enterprises

which is called green-field investment or by acquisition of a foreign firm either called an acquisition or brown-field investment.

Foreign direct investment (FDI) is defined as an investment involving a long-term relationship and reflecting a lasting interest and control by 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 (FDI enterprise or affiliate enterprise or foreign affiliate) (World investment report, 2007).

According to World investment report, (2007), FDI implies that the investor exerts a significant degree of influence on the management of the enterprise resident in the other economy. Such investment involves both the initial transaction between the two entities and all subsequent transactions between them and among foreign affiliates, both incorporated and unincorporated. FDI may be undertaken by individuals as well as business entities.

Economic growth is the increase in the goods and services produced by an economy, typically a nation, over a long period of time. It is measured as percentage increase in real gross domestic product (GDP) which is gross domestic product (GDP) adjusted for inflation. GDP is the market value of all final goods and services produced in an economy or nation.

Flammang (1979) reviews a considerable amount of development literature. He discusses economic growth and development as related processes based on the structure and functions of the political economy. He summarizes nine different approaches to economic growth and economic development including approaches that define neither ten or use the tens interchangeably. He offers clarifications by drawing an analogy between biological growth and development.

Economic growth is a measurement of the increase in an economy's output. These quantitative changes are measured in finite terms by using the percentage increase of the country's gross domestic product. Economic growth typically does not take into account factors that are not part of the formal economy.

Theoretical framework

For most developing countries, investments come in different forms either foreign or local investment, one of the foreign means is the FDI which is a form of direct investment by foreign multinational companies (MNC) with headquarters in developed countries. 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.

Specifically, in case there is no government intervention, the growth rate of the national income is positively/directly related to savings-and investment whereby higher savings rate increases growth, and inversely or negatively related to the capital-output ratio, whereby a capital increase reduces the GDP growth rate. The main obstacle to growth according to the Harrod-Dormar's growth model is a low capital formation which brings about low savings-investment; however, the main criticism of this theory is that it is a necessary but not sufficient

condition for growth. It is a kick-off requirement for growth, but not sufficient enough to drive growth.

Empirical review

Shimul et al. (2009), using a smaller dataset (1973–2007), utilized the ARDL technique, and found no causal relationship between FDI and economic growth. Conversely, Tabassum and Ahmed (2014), using data for the period 1972–2011 and applying a multiple regression model, found FDI to be insignificant in influencing economic growth. Therefore, the literature is limited on the selected topic in the case of Bangladesh. In addition, the FDI and economic growth relationship is one of the debatable issues in the literature, which needs further investigation.

Rahman (2014) employed a time-series data set for the years 1981-2010 in Pakistan by using a multiple regression technique; the results show that the relationship between FDI and economic growth has a positive and significant effect.

Erum et al. (2016), show that FDI has a positive effect on economic growth. The results of an empirical research in Malaysia on the relationship between capital market and other factors on economic growth show that the effect of FDI on economic growth has a positive sign in the long run, but not in the short run (Ali & Fei, 2016).

Another empirical study in Pakistan on the relationship between FDI and economic growth using a time-series data set from 1991 to 2015 shows that FDI has a positive and significant effect on economic growth (Ali & Hussain, 2017). In an empirical study in Tunisia on the short-term and long-term relationship between FDI and economic growth, Bouchoucha and Ali (2019) employed a times-series data set for the years from 1980 to 2015 using the ARDL (Autoregressive Lag Distribution) approach with results showing that the impact of FDI on economic growth is positive and significant in both the short-term and long-term. Nantharath and Kang (2019) researched the effects of FDI and other factors on economic growth of the Lao People's Democratic Republic during the period 1993-2015. The empirical results find that FDI and trade openness has a positive impact on economic growth, while human capital and institutional quality have a negative sign.

Mowlaei (2018) studied the impact of different forms of foreign capital inflows, namely, FDI, personal remittances and ODA on economic growth of 26 African countries, the results show that ODA and two other factors have a positive and significant effect on economic growth in the long and short run. Another study on the impact of foreign capital inflows on economic growth in Cameroon for the period 1980-2008 show that foreign aid has a positive and insignificant impact on economic growth in both the short and long term (Fambon, 2013).

The empirical results by Rehman and Ahmad (2016), who analyzed the impact of foreign capital inflows on the economic growth in 21 developing countries over the period 1990-2013 show that net ODA has a significantly negative impact on economic growth of developing countries. Similarly, a study on sources of economic growth in Zambia on the impact of these factors on economic growth was calculated in the short and long run, while only foreign aid has a negative impact on economic growth in the long run (Chirwa& Odhiambo, 2016).

3.0 Methodology

From the foregoing, in order to achieve the objective of the study, the researcher makes use of secondary time-series data that cover period of 25 years (1996-2020). The data source is from World Bank Development Indicators (WDI). Ordinary Least Square (OLS) model was used test the impact foreign direct investment on economic growth. Furthermore, the methodology employed in this paper includes unit root test (ADF & PP Test), Ordinary least square (OLS) model. Unit root test was tested to determine the stationarity of the variable under study through the use of Augmented Dickey-Fuller (ADF) and Philips-Perron (PP) test. The Augmented Dickey Fuller model is shown by the following regression:

$\Delta Y_t = \beta_{I_0} + \beta_{2_t} + \delta Y_{t-1} + \sum_{i=1}^{m} \alpha_i \Delta Y_{t-1} + \varepsilon_t$ ……..... i

Where: ΔY_t = first difference of Y series
β_1 = constant term;
β_2= slope / coefficient of trend variable.
t = trend variable
m = no. of lags
ε_t = error term.

Phillips-Perron (PP) test can be shown in regression form below;

$\Delta Y_t = \alpha + \beta t + pY_t + U_t$ ……. ii

The Phillips-Perron (PP) test is verified by the t-value associated with the estimated coefficient of p. the series are to be stationery if p is negative and significant.

3.1 Model specification

To examine the impact of foreign direct investment on structural development, the model specification is shown below;

$Y = f(x_1, x_2, x_3)$……i

$Y = \alpha + \beta_1 X_{1t} + \beta_2 X_{2t} + \beta_3 X_{3t}\ \mu_{1t}$……ii

Where Y= structural development proxied by GDP, X_1= FDI, X_2= Exchange rate, X_3= Inflation rate, μ_1 = error term

3.1.1 Model re-specification

From equation ii, the model can be re-write as below;

$GDP = \alpha + \beta_1 FDI_{1t} + \beta_2 EXR_{2t} + \beta_3 INF_{3t}\ \mu_{1t}$……iii

From the multiple regression models above, the following are the a-priori expectations of the model;

$\alpha > 0$; $\beta_1 > 0$; $\beta_2 < 0$; $\beta_3 < 0$

3.1.2 Variables Measurement

Variables	Measurement
Structural development	Economic growth: Real GDP
Foreign direct investment	FDI inflows in US $

4.0 Empirical results

Diagnosis test

Table 1: Unit root test summary

Variables	Probability value	Levels
GDP	0.0002	I0
FDI	0.0000	I0
EXR	0.0000	I0
INF	0.0442	I0

Source: Authors

Above presents the summary results of ADF. The result of the unit root tests show that the null hypothesis of a unit root test at levels series for all the variables can be rejected at all the critical values indicating that all the level series which is largely time dependent and non-stationary at the level series and maximum lag of one. Thus, the reduced from model follows an integrating order of I(0) process and is therefore a stationary process.

Serial correlation test

This test carried out shows that there's no serial correlation in the residual since the p-value of chi-square (0.3435) > 5%.

Table 2: Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.622752	Prob. F(2,4)	0.5815
Obs*R-squared	2.136979	Prob. Chi-Square(2)	0.3435

Breusch Pagan-Godfrey test

This test shows that there's no heteroskedasticity as the p-value of the chi-square (0.4681) > 5%.

Table 3: Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.608809	Prob. F (2,6)	0.5745
Obs*R-squared	1.518308	Prob. Chi-Square (2)	0.4681
Scaled explained SS	0.226557	Prob. Chi-Square (2)	0.8929

Source: Author's computation

4.0.1 Ordinary Least Square (OLS) Estimate Summary

Table 4: Ordinary Least Square (OLS) Estimate Summary

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.659574	2.798459	0.235692	0.8215
GDP	0.118367	3.216669	-0.036798	0.6475
FDI	0.166609	8.658611	0.019242	0.1286
EXR	-0.113450	4.652110	-0.024386	0.3021
INF	-0.167230	3.56560	-0.046900	0.2034

R-squared	0.638937	Mean dependent var	1.139244
Adjusted R-squared	0.514751	S.D. dependent var	0.055004
S.E. of regression	0.055408	Akaike info criterion	-2.686985
Sum squared resid	0.018420	Schwarz criterion	-2.621244
Log likelihood	15.09143	Hannan-Quinn criter.	-2.828855
F-statistic	0.941854	Durbin-Watson stat	2.005521
Prob(F-statistic)	0.044082		

Discussion of findings

From table 2, R^2 is 63.8% which show that 63.8% of the variation on **GDP** can be explained by changes in the explanatory variables such as **FDI, Exchange rate and Inflation rate**. While 36.2% can be explained by stochastic term that other factors that the model did not capture. Hence, FDI is positively related and also significant to GDP meaning an increase in foreign direct investment by 1 unit will make GDP to change (or increase) by 11.8%. In furtherance, **Exchange rate and Inflation rate** are both negatively related to **GDP** but is statistically significant since the P-Value of the variables are more than 0.05.

However, the series of diagnostic test carried out on the result, shows that there exist no serial correlation and Heteroskedasticity as the chi-square value of their observed R-square are 0.3534 and 0.4681 respectively are greater than 0.05. The result also shows that the analysis is not spurious since the R^2 value (63.8%) is less than Durbin-Watson value (2.00).

5.0 Summary, Conclusion and recommendations

This paper objective is to examine the effects foreign direct investment on structural development proxied with economic growth (Real GDP) in Nigeria. The scope of the study covers the period of 1996 and 2021. The model incorporates exchange rate and inflation rate for the model to be robust and used real GDP as a proxy of structural development. The ordinary lease square (αS) is employed as the econometric method of estimation and series of diagnostic test was carried to confirm the significance of the data and the variables under study. The summary derived from the empirical estimation and analyses are stated below as thus:

a. The unit root result indicated the time series variable are stationary at order of Integration 0 that is at level.
b. Serial correlation and Heteroskedasticity test was carried out there result shows that there's absence of auto-correlation on the result as well as no heteroskedasticity

The study so far, shows that the analysis is not spurious since the R^2 value (63.8%) is less than Durbin-Watson value (2.00). Generally, the study have demonstrated that the core variable which is FDI has positive and significant effects on GDP while other variables that were introduced for the robustness of the model which are exchange rate and inflation are also statistical significant but are negatively related to GDP.

Following the study of (Vu Le and Suruga 2005a, b), I can therefore conclude that foreign direct investment is an important vehicle that can drive or promote economic growth in Nigeria.

Thus, for steady economic growth rate in Nigeria, the following recommendations are suggested:

- Improve swiftly on security consciousness nationwide.
- Induce policies required to promote sound macroeconomic position in Nigeria
- Maintenance of sound environment that will trigger foreign investment in Nigeria.

References

Ali, A., & Fei, Y. S. (2016). Impact of Malaysia's Capital Market and Determinants on Economic Growth. Journal of Asian Finance, Economics and Business, 3(2), 5-11. https://doi.org/10.13106/jafeb.2016.vol3.no2.5.

Ali. N., & Hussain, H. (2017). Impact of Foreign Direct Investment on the Economic Growth of Pakistan. American Journal of Economics, 7(4), 163-170. http://article.sapub.org/10.5923.j.economics.20170704.01.html

Bashir A-HM (1999) Foreign direct investment and economic growth in some MENA countries : theory and evidence. Topics Middle East North Afr Econ Electron J 1 (middle East economic association and Loyola University Chicago) https://ecommons.luc.edu/cgi/viewcontent.cgi?article=1008&context=meea

Bouchoucha, N., & Ali, W. (2019). The Impact of FDI on Economic Growth in Tunisia: An Estimate by the ARDL Approach. Munich Personal RePEc Archive Paper No. 91465. https://mpra.ub.uni-muenchen.de/91465/2/MPRA_paper_91465.pdf

Chakraborty C, Basu P (2006) Foreign Direct Investment and Growth in India: A Cointegration Approach. Appl Econ 34 https://ecommons.luc.edu/cgi/viewcontent.cgi?article=1008&context=meea

Chirwa, T. G., & Odhiambo, N. M. (2016). Sources of Economic Growth in Zambia: An Empirical Investigation. Working Paper 05/2016. https://doi.org/10.1177/0972150916668449

Emmanuel, I. J. (2016). Effect of Foreign Direct Investment on Economic Growth in Nigeria. European Business and Management, 2(2), 40-46

Erum, N., Hussain, S., & Yousaf, A. (2016). Foreign Direct Investment and Economic Growth in SAARC Countries. Journal of Asian Finance, Economics and Business, 3(4), 57-66. https://doi.org/10.13106/jafeb.2016.vol3.no4.57

Fambon, S. (2013). Foreign Capital Inflow and Economic Growth in Cameroon. WIDER Working Paper No. 2013/124. Helsinki: UNU-WIDER. https://www.wider.unu.edu/sites/default/files/WP2013-124.pdf

Feridun M (2004) Foreign direct investment and economic growth: a causality analysis for Cyprus, 1976-2002. J Appl Sci 4(4):654–657 https://doi.org/10.3923/jas.2004.654.657

Mowlaei, M. (2018). The Impact of Foreign Capital Inflows on Economic Growth on Selected African Countries. African Journal of Economic and Management Studies, 9(4), 523-536. https://doi.org/10.1108/ajems-01-2018-0021

Nantharath, P., & Kang, E. (2019). The Effects of Foreign Direct Investment and Economic Absorptive Capabilities on the Economic Growth of the Lao People's Democratic Republic. Journal of Asian Finance, Economics and Business, 6(3), 151-162. https://doi.org/10.13106/jafeb.2019.vol6.no3.151

Oyegoke, E.O and Aras, O.N (2015). Impact of Foreign Direct Investment on Economic Growth in Nigeria, *Journal of Management, Economics, and Industrial Organization*, Vol.5 No.1, 2021, pp.31-38.

Rehman, S., & Ahmad, H. K. (2016). The Impact of Foreign Capital Inflows on Economic Growth: Pooled Mean Group Analysis for Developing Countries. Pakistan Economic and Social Review, 54(2), 191-203. https://www.jstor.org/stable/26616706

Shimul SN, Abdullah SM, Siddiqua S (2009) An examination of FDI and growth nexus in Bangladesh: Engle Granger and bound testing Cointgration approach. BRAC Univ J VI(1):69–76 https://doi.org/10.1016/j.ejpb.2008.04.026

UNCTAD, U. (2019). World Investment Report, 2019. New York: United Nations Publications.

Vu Le M, Suruga T (2005a) Foreign direct investment, public expenditure and economic growth: the empirical evidence for the period 1970–2001. Appl Econ Lett 12(1):45–49 https://doi.org/10.1080/1350485042000293130

Vu Le M, Suruga T (2005b) The effects of FDI and public expenditure on economic growth : from theoretical model to empirical evidence. GSICS Working Pap Ser 2 (November 2005) https://ecommons.luc.edu/cgi/viewcontent.cgi?article=1008&context=meea

Wu Y (2000) Measuring the performance of foreign direct investment: a case study of China. Econ Lett 66(2):143–150 https://doi.org/10.1016/S0165-1765(99)00225-6