Humanities, Management, Arts, Education & the Social Sciences Journal

Vol 6, No. 4 December, 2018

Effect of Foreign Direct Investment on the Growth of Nigeria Economy

[1]Williams, Adekunle, C., [2]Odumosu, A.A. & [3]Oko-Potefa Oladele S.
[1&2]Economics Department, School of Arts and Social Sciences.
[3]Business Education Department, School of Vocational and Technical Education
Adeniran Ogunsanya College of Education
Otto-Ijanikin, Lagos State, Nigeria
E-mail: Potefadelegmail.com

ABSTRACT

This study investigated the effect of Foreign Direct Investment (FDI) on the economic growth of Nigeria economy for the period of 2012 to 2016 quarterly data. It evaluated the Gross Domestic Product (GDP) Performance and the trend of FDI performance over six years especially as it operates in Nigeria. In its methodology, secondary data was used as key macroeconomic variable were captured to demonstrate the relationship between Nigeria's Gross Domestic Product (GDP) and Foreign Direct Investment (FDI) as Gross Fix Capital Formation (GFCF) Multiple-Regression-Model was applied alongside it's various econometrics techniques such as Unit-Root Test, Dewey Test and Ordinary Least Square (OLS). GDP in this model is used as dependent variable whereas FDI, INT, EXT and INF are measured as independent variables. The findings according to the results reveals that every other variable except for inflation and exchange rate does not follow apriori expectation since they both have negative coefficient which means they both have negative relationship with the dependent variable (i.e. the affect sustainable development negatively). While Foreign Direct investment and Interest rate conform to apriori expectation which gives empirical backing to the theory. Also, amongst all the explanatory variables, only exchange rate is not statistically significantly different from zero. This is so because, using the 2T-Rule of thumb and a sample size of at least 30 at 5% level of significance, a t-statistics of at least 2 shows statistical significance of a particular variable. So, given a t-statistics of -1.54635 corresponding to the coefficient of exchange rate while, foreign direct investment, inflation rate and balance of payment has t-statistics greater than or equal to two in absolute term. At 1% increase in INFL will cause RGDP (sustainable development) to decrease by 5% while, a unit change in Interest rate will cause RGDP or sustainable development to move in the same direction by 6.75units. Exchange rate does not have any significant impact on RGDP given the result of this research. Given the R2 value of 0.87564, it means that the combination given as the dependent variable jointly explains 87.6% of the changes that occur in RGDP or sustainable development. Based on the empirical result of this paper, policy recommendation proposed that for Nigeria to generate more foreign direct investment, hard work should be made at solving problems of government involvement in business; relative closed economy; corruption; weak public institutions; and poor external image, and political instability.

Keywords: Gross Domestic Product; Foreign Direct Investment; Interest rate, Inflation, Exchange rate, Economic Growth and Development

Journal Reference Format:
Williams, Adekunle, C., Odumosu, A.A. & Oko-Potefa Oladele S. (2018): Effect of Foreign Direct Investment on the Growth of Nigeria Economy. Humanities, Management, Arts, Education & the Social Sciences Journal. Vol. 6. No. 3, Pp 33-42

1. INTRODUCTION

In Nigeria, FDI is viewed as an investment undertaken by an enterprise that is either wholly or partly foreign owned. The Investment Code that created the Nigerian Investment Promotion Commission (NIPC) (Decree No. 16 of 1995) and the Foreign Exchange (Monitoring and Miscellaneous Provision) Decree, also enacted in 1995, gives full backing for FDI in Nigeria (Olukoyo, 2012). Nigeria has a high potential to attract significant foreign private investment inflow. Most countries strive to attract FDI because of its acknowledged advantages as a tool of economic development. Africa and Nigeria in particular, joined the rest of the world in seeking FDI as evidenced by the formation of the New Partnership for Africa's Development (NEPAD), which has the attraction of foreign investment to Africa as a major component. Countries all over the world need some form of networking as no country can survive in isolation most especially when trades between and among countries is inevitable today. Literally, Foreign direct investment (FDI) is when a company owns another company in a different country. FDI is different from when companies simply put their money into assets in another country, what economists call portfolio investment. With FDI, foreign companies are directly involved with day-to-day operations in the other country. This means they aren't just bringing money with them, but also knowledge, skills and technology (Johnson and Macs, 2010).

Assertions exists that Foreign Direct Investment is deemed to have a positive impact on the economic growth of any nation through direct and indirect ways. It increases a countries domestic investment, which is claimed to have crucial role on the sustainability of growth and development. As a result, many developing countries, such as Nigeria have also created an enabling and attractive environment that can encourage and attract FDI inflow. Various classifications have been made of foreign direct investment (FDI). Policymakers believe that FDI produces positive effects on host economies. Some of these benefits are in the form of externalities and the adoption of foreign technology. Externalities here can be in the form of licensing agreements, imitation, employee training and the introduction of new processes by the foreign firms (Alfaro, 2006). When FDI is undertaken in high risk areas or new industries, economic rents are created accruing to old technologies and traditional management styles.

These are highly beneficial to the recipient economy. In addition, FDI helps in bridging the capital shortage gap and complement domestic investment especially when it flows to a high risk areas of new firms where domestic resource is limited. Foreign direct investment (FDI) is starting to shift more and more towards services; these services are also becoming more traditional. Foreign investment has provided a lot of opportunities such as employment opportunities, infrastructure and technology transfer, increased productive efficiency, etc. Considering the wide range of critical empirical studies on how foreign direct investment in Nigeria affects its economic growth and development, one cannot draw conclusions from it with minimal acceptable level of confidence. The idea of sustainable development has received great attention from various groups of people of the world. It has also been a challenge for policy makers to design a development system that is not only focused on economic growth. Moreover, sustainable development should be focused on three elements known as the three pillars of sustainable development, namely economic development, social and environmental (Fortainer & Maher, 2001 and Strange & Bayley, 2008). Fundamentally, ideas about sustainable development that could not only limited economic growth was also expressed by Peet and Hartwick (2009): "In development, all the modern advances in science and technology, in democracy and social organization, in rationalized ethics and values, fuse into the single humanitarian project of deliberately and cooperatively producing a far better world for all".

FDI has also been argued to act as a catalyst for inward investment by complementing local resources and providing a signal of confidence in investment opportunities (Agosin and Mayer, 2000). New projects may invite complementary local private investments that provide inputs to, or use outputs of the foreign firms. It is also likely that private investment increases by more than the FDI flows because foreign equity capital finances only part of the total investment project. A substantial part of foreign investment projects is usually financed from local financial markets as well. It should be noted that the foreign capital inflows, by themselves, can lead to increase in domestic credit supply (Jansen, 1995) in Olokoyo (2012).

2. LITERATURE REVIEW

A variety of theoretical and empirical studies are presented on the impact of Foreign Direct Investment and Economic Growth in both developed and developing countries. Countries have identified that the determination of a country's GDP goes a long way to give direction as to the extent of growth or development perceived in such an economy. Majority of these studies have been done on the international level. In context of Nigeria, there is dearth of empirical studies regarding these types of economic subject. A numerous of important researches have been critically reviewed to build up objectives in the perspective of Nigeria and further to analyse it to draw important conclusion and policy recommendations. Laura Alfaro et al., (2012) checked up the various links among FDI and GDP growth. They explore whether countries with better financial systems can exploit FDI more efficiently. The empirical analysis used data between 1975 and 1995. Result shows that FDI alone plays an ambiguous role in contributing to economic growth. However, countries with well developed financial markets gain significantly from FDI in their economic growth Alfaro, Chanda, kalemi-ozcan and Sayek (2004).

Frimpong and Oteng-Abayie (2006) explored the relationship between FDI and GDP growth for Ghana for the pre and post structural adjustment program (SAP) periods and the direction of the causality between two variables. Annual time series data covering the period from 1970 to 2005 was used. The study finds no causality between FDI and growth for the total sample period and the pre-SAP period (Frimpong and Oteng-Abayie, 2006); Ayanwale (2007) examine the empirical relationship between non-extractive FDI and economic growth in Nigeria. The study applied Ordinary Least Square (OLS) technique. Result indicates that FDI had a positive impact on economic growth (Ayanwale, 2007).

Another work by Herzer et al., (2006) used a bi-variate Vector Autoregressive (VAR) Model to figure out the impact of FDI in some developing countries. The study discovered evidence of a positive FDIled growth for Nigeria, Sri Lanka, Tunisia, and Egypt and based on weak exogeneity tests, a long-run causality between FDI and economic growth running in both directions was found for the same countries (Herzer et al., 2006); Alfaro, (2006) was interested in checking whether the FDI promote the economic growth by using threshold regression analysis. The empirical analysis revealed that FDI alone play a vague role in contributing to economic growth based on a sample of 62 countries covering the period from 1975 to 2000 and find that initial GDP and human capital are important factor in explaining FDI. FDI is found to have a positive and significant impact on growth when host countries have better level of initial GDP and human capital. Kashif and Muhammed (2013) also went further to explore the effect of FDI on the Economic Growth of Pakistan. She collected the data that covers the period 1980 to 2006 from the Handbook of Pakistan Economy-2005 published by the State of Pakistan and the World Bank Development Indicators. Variables of domestic capital, foreign owned capital and labour force were used in this study with the help of endogenous growth theory and applying the regression analysis.

The finding revealed a negative statically insignificant relationship between GDP and FDI inflows in Pakistan; Adeleke, Olowe and Fasesin, (2014) found that in SAARC FDI from outside is more important than in intra regional investments in most the countries (the only exception is Nepal) where Indian investments dominated. The concept of some region can be applicable to increase intra regional FDI. The FDI has a significant impact on GDP of SAARC countries; Abel and Nikki (2011) investigated the effect of macroeconomics variables on the foreign direct investment of 30 Sub-Sahara African (SSA) countries between 1995 and 2008. Result, showed that financial development, the size of market and infrastructural development and urban accumulations are important factors that measure the inflows of FDI to the SSA region.

Behname (2012) used random effects model to determine the impact of foreign direct investment on economic growth in Southern Asia. The study concluded that foreign direct investment has positive and significant effect on economic growth; Onakoya (2012) disaggregated the economy and employed a structural macro- econometric model consisting of four blocks namely: supply, private demand, government and external sectors to measure the impact of FDI on economic growth. The findings showed that FDI has a significant impact on output of the economy, however, the growth effects of FDI differs across sectors in Nigeria. Abbas et al. (2011) investigated the influence of FDI and CPI on the GDP's of SAARC member nations. The findings indicated that the general model in these countries developed a positive relationship between Foreign Direct Investment and GDP while negative relationship between Consumer Price Index and GDP. This conclusion was tested using the multiple regression models.

The data of the SAARC countries ranged from the year 2001 to 2010 (Abbas et al. 2011). Esther and Folorunso (2011) explored the relationship between FDI inflows and economic growth of Nigeria. The findings reported that FDI influence economic growth positively to limited human capital; A study by Zakia and Ziad (2007) investigated the impact of FDI on the economic growth of Jordan. The empirical results revealed that there is existence of bidirectional relationship between FDI and output Zakia and Ziad (2007). Kashif and Muhammad (2013) investigated the impact of FDI on Pakistan economic growth. The study developed an auto regressive distributed lag (ARDL) model. The model examines long run relationship between the variables and found absence of long run relationship between FDI and economic growth.

However, Alfaro *et al*, (2003) affirmed that the contribution of FDI to growth depends on the sector of the economy where the FDI operates. He claimed that FDI inflow to the primary sectors tends to have a negative effect on growth, however, as for the service sector, the effect of DFI inflow is not so clear. Durharm (2004) for example, failed to establish a positive relationship between Foreign Direct Investment (FDI) and growth but instead suggests that the effects of Foreign Direct Investment (FDI) are contingents on the absorptive capability of host countries. Nwankwo *et al*, (2013) investigated the impact of globalization on foreign direct investment in Nigeria-since the world has become a global village; Adelegan (2000) also explored the seemingly unrelated regression model to examine the impact of FDI on economic growth in Nigeria and found out that FDI is pro-consumption and pro-import and negatively related to gross domestic investment. In the same line, Ogiogio (1995) reported negative contributions of public investment to GDP growth in Nigeria for reasons of distortions. Oyinlola (1995) also conceptualized foreign capital to include foreign loans, direct foreign investments and export earnings. Using Chenery and Stout's two-gap model (Chenery and Stout, 1966), he concluded that FDI has a negative effect on economic development in Nigeria.

Developing economies are often times confronted with the challenges of increase in unemployment, over dependence on foreign produce, price instability, inflation, brain drain among others as some of the problems often associated with foreign direct investment. This study is designed to identify how FDI, Interest rate, Inflation and Exchange rate as viable macroeconomic variables can contribute significantly to the GDP of an economy thereby ensure growth and development.

2.1 Purpose of the study

This study is designed to investigate how FDI, Interest rate, Inflation and Exchange rate contribute significantly to the GDP of an economy.

2.2 Research hypothesis

Ho: There is no significant relationship between FDI, Interest rate, Inflation and Exchange rate on GDP of an economy.

3. METHODOLOGY

This study made use of secondary data as its main source of data. These data were sourced from various national agencies like Annual publications of Central Bank of Nigeria and Statistical Bulletin respectively. The data are assumed to be clean data because it has passed through all forms of psychometric cleaning certified by these government agencies. The models used in this study are estimated using data on Direct Foreign Investment (DFI) and other macro-economic indicators like Gross Domestic Products (GDP), Exchange Rate (EXR) and Export (Exp) for the period of 1999 to 2017. The regression analysis of the ordinary least square (OLS) is the estimation technique that is being employed in this study to determine the relationship between and impact of the Direct Foreign Investment on economic growth proxy by Gross Domestic Product (GDP).

Table 1: Domestic Products (GDP), Exchange Rate (EXR) and Export (EXP) for the period 2012– 2016.

EAR	FDI	GDP	Exchange rate	Interest rate	Inflation
2012	5, 304.112	90I, 300	146.680	8.89	9.46
2013	3, 199 .89	261, 855	150,20	12.04	8.92
2014	6, 740.564	285,432	156.00	12.16	8.05
2015	6,856.6814	296,463	198.47	13	8.508
2016	7,534.654	298,352	193.44	13.21	12.23

Source: Central Bank of Nigeria Statistical Bulletin (2017).

3.1 Model Specification.

The model try to examine the relationship between FDI as it affects the economic growth and sustainable development of Nigeria between 2012 to 2016. RGDP which is the dependent variable was measured as a function of independent variables which are FDI, INFL, INT and EXR. This statement is written in functional form as;

$$RGDP = F(FDI, INFL, INT, EXR) \quad \text{——————} \quad (1)$$

The OLS linear regression equation based on the above functional relation is;

$$Y = \alpha 0 + \alpha 1x1 + \alpha 2x2 + \alpha 3x3 + a4x4 + \mu \quad \text{——————} \quad (2)$$

The equation can further be written in linear form as;

$$RGDP = FDI + INFL + INT + EXR + \mu \text{ ———————— } (3)$$

Where:
RGDP = Real Gross Domestic Product
FDI = Foreign Direct Investment
INFL = Inflation Rate
INT = Interest Rate
EXR = Official Exchange Rate
μ = Error Term

$$RGDP = \alpha 0 + \alpha 1FDI + \alpha 2INFL + \alpha 3INT + a4EXRT + \mu \text{ ——— } (4)$$

Where; α = intercept

The model was logged so as to break them into a smaller digits and to avoid problem of large numbers.

The t-1 is the past time period, hence the dependent variable, independent variables and the error term carry the t-1.

$$LogGDP(t-1) = \alpha 0 + Log\alpha 1FDI\ (t-1) + \alpha 2INFL(t-1) + \alpha 3INT(t-1) + a4EXRT(t-1) + \mu \text{ –}(5)$$

The a priori expectations are α1>0 α2, >0 and α3> 0 a4>0, which means we expect a positive relationship between the dependent variable and the independent variables.

4. ANALYSES OF DATA AND FIDINGS

The variables presented below include gross domestic product, foreign direct investment, interest rate, balance of payment and exchange rate in Nigeria covering a period of 6 years (2012 to 2016). The model specified was estimated using the Ordinary Least Square (OLS) estimation.

4.1 Results Interpretation

Table 2: Ordinary Least Square Estimation Method where (Dependent Variable = RGDP)

Variables	Coefficient	Std. Error	T-Stat	Prob	R2	Adjusted R2	D.W. Stat
Log(fdi(-1))	0.10432	0.04606	3.86543	0.0017			
Log(infl(-1))	-0.08765	0.03787	-2.65432	0.0869			
Int(-1)	6.75E-11	1.76E-11	5.67543	0.0004			
Log(exrt(-1))	-0.07654	0.03564	-1.4532	0.02768			
C	36.5436	0.7641	58.7654	0.0009	0.87564	0.65473	2.43532

For a swift interpretation, a Newey-West test was applied in the multiple regression analysis. It was carried out in a bid to correct any form of autocorrelation or heteroscedasticity that could be a problem in the error term from the regression result. This method was adopted from Gujarai (2004) where he noted that, one could still use OLS but correct the standard errors for auto-correlation by a procedure developed by Newey and West. The corrected standard errors are known as HAC-(heteroscedasticity-and autocorrelation-consistent) standard errors. Below is the table for the output of the work:

Table 3: Ordinary Least Square Estimation (Dependent Variable = RGDP)
HAC standard errors and covariance (None Kemel)

Variables	Coefficient	Std. Error	T-Stat	Prob	**R2**	**Adjusted R2**	D.W. Stat
Log(fdi(-1))	0.09872	0.10789	3.37657	0.0009			
Log(infl(-1))	-0.08765	0.04352	-2.54356	0.06754			
Int(-1)	6.75E-11	1.45E-11	5.53423	0.00097			
Log(exrt(-1))	-0.07654	0.06453	-1.54635	0.07984	0.87564	0.65473	2.43532
C	36.5436	0.83982	55.5436	0.0009			

Also from the above table, it can be seen that every other variable except for inflation and exchange rate does not follow apriori expectation since they both have negative coefficient which means they both have negative relationship with the dependent variable (i.e. the affect sustainable development negatively). While Foreign Direct investment and Interest rate conform to apriori expectation which gives empirical backing to the theory.

Secondly, amongst all the explanatory variables, only exchange rate is not statistically significantly different from zero. This is so because, using the 2T-Rule of thumb and a sample size of at least 30 at 5% level of significance, a t-statistics of at least 2 shows statistical significance of a particular variable. So, given a t-statistics of -1.54635 corresponding to the coefficient of exchange rate while, foreign direct investment, inflation rate and balance of payment has t-statistics greater than or equal to two in absolute term. Given the above, 1% increase in FDI will result to a 10% increase in RGDP (i.e. sustainable development). In the same way, a 1% increase in INFL will cause RGDP (sustainable development) to decrease by 5% while, a unit change in Interest rate will cause RGDP or sustainable development to move in the same direction by 6.75units. Exchange rate does not have any significant impact on RGDP given the result of this research. Given the R2 value of 0.87564, it means that the combination given as the dependant variable jointly explains 87.6% of the changes that occur in RGDP or sustainable development.

From the above findings it reveals that foreign direct investment plays a very important role in achieving sustainable development in Nigeria and this justifies the need for the government to improve and develop on strategies geared towards encouraging an increase in FDI since, if this increase can be achieved, it will further lead to sustainable development for Nigeria. Another point to note from the result above is that, inflation and balance of payment also play important role in achieving sustainable development since they make negative and positive contributions respectively to growth in sustainable development. Exchange rate on its own is statistically insignificant in terms of its contribution to sustainable development but in terms of a combined contribution of all the explanatory variables, exchange rate makes a significant contribution in achieving the 87.6% explanation of the variation in the dependant variable (i.e. sustainable development).

The implication of the above is that for any economy to expect any tangible development in her economy, key macro-economic variables like interest rate, inflation and exchange rate must be carefully reviewed by economic planners and relevant stakeholders with regards to the prevailing dynamics obtainable in the economy. FDI can only strive in an economy where manpower development and functional economic indicators and principles are duly maximized under conducive economic situations. Based on the empirical result of this paper, policy recommendation proposed that for Nigeria to generate more foreign direct investment, hard work should be made at solving problems of government involvement in business; relative closed economy; insecurity, faulty economic planning, corruption; weak public institutions; and poor external image, and political instability.

REFERENCES

1. Abbas, Q, Akbar, S., Nasir, A., Amanullah, H. and Naseem, M. (2011). Impact of Foreign Direct Investment. Global Journal of Management and Business Research 11.
2. Abel, E.E. and Nikki, C.(2011). FDI flows to Sub-Saharan Africa: The Impact of Finance Institution and Natural Science Endowment, Department of Economic and Economic Policy.
3. Adeleke, K. M., Olowe, S.O. and Fasesin, O. O. (2014). Impact of Foreign Direct Investment on Nigeria Economic Growth. International Journal of Academic Research in Business and Social Sciences. August 2014, Vol. 4, No. 8 ISSN: 2222-6990
4. Agosin, M. & Mayer, R. (2000), "Foreign Investment in Developing Countries: Does it Crowd in Domestic Investment?" UNCTAD Paper, No.146.
5. Alejandro, D. (2010). Bautista Conference on Foreign Direct Investment in Mexico, United States, Canada NAFTA, Presentation Transcript.
6. Alfaro, C. A., Chanda, S., Kalemi-Ozean and Sayek, S. (2004). "FDI and Economic Growth: The role of local and financial markets." Journal of International Economics forth Edition.
7. Alfaro, L. (2006). "How Does Foreign Direct Investment Promote Economic Growth? Exploring the Effects of Financial Markets on Linkages." NBER working paper, No. 12522.
8. Ayanwale, A.B. (2007). FDI and Economic Growth Evidence from Nigeria, Edited by AERC Research paper 165, African Economic Research Consortium.
9. Beehman, M. (2012). Foreign Direct Investment and Economic Growth. Evidence from Southern Asia, Atlantic Review of Economics 11.
10. CBN (2017): Statistical Bulletin. Central Bank of Nigeria.
11. Chenery, H. B. and Stout, A. (1966). "Foreign Assistance and Economic Development". American Economic Review.55, pp.679-733.
12. Durham, J.B. (2004): Absorptive capacity and the effect of foreign direct investment and equity foreign portfolio investment on economic growth. European Economic Review, 48 (2): 285 – 306.
13. Esther, O. A. and Folorunso, S. A. (2011). The Role of Foreign Direct Investment in Economic Development: A study of Nigeria, Journal of Entrepreneurship, Management and sustainable Development.
14. Fortanier, F. and Maher, M. (2001). "Foreign Direct Investment and Sustainable Development." OECD. Global Forum on International Investment: New Horizons and Policy Challenges for Foreign Direct Investment in the 21st Century. Mexico City.
15. Frimpong, J. M. and Oteng-Abayie, E. F. (2006). Bivarite Causality-analysis Between FDI inflows and Economic Growth in Ghana.
16. Herzer, D., Klasen, S. and Nowak-Lehmann, D. F. (2006). In Search of FDI Led Growth on the Developing Countries. The way forward, Ibero American Institute for Economic Research. 25: 793-810.
17. Johnson, C.B., and Macs, O. (2010). The Role of FDI in Developing Countries. A Snopsis approach. Walter Prints, California.
18. Kashif, Y. and Muhammed, R. (2013). The Impact of Foreign Direct Investment on Pakistan Economic Growth. Interdisciplinary Journal of Contemporary Research in Business4: 287-296.
19. Limam, O. (2015). Direct Investment on Economic Growth: A Case Study of Mauritania. Faculty of Economics and Management Sciences, International Islamic University Malaysia,Selangor, Kuala Lumpur 53100, Malaysia.

20. Nwankwo, O. G, Ademola, O. and Kehinde, O. (2013). Effects of Globalization on Foreign Direct Investment in Nigeria. Lorem Journal of Business and Economics (LJBE) Volume 1 No 1 pp 11-17.
21. Ogiogio, G. O. (1995). "Planning Horizon, Government Expenditure and Economic Growth in Nigeria." In Ariyo, A. ed., Economic Reform Macroeconomic Management in Nigeria. Ibadan: The Centre for Public Private Cooperation.
22. Olokoyo, F. O. (2012). Foreign Direct Investment and Economic Growth: A Case of Nigeria. bvimere's Journal of Management Research, Vol. 4, No 1.
23. Oyinlola, O. (1995)."External Capital and Economic Development in Nigeria (1970-1991)." The Nigerian Journal of Economic and Social Studies, 37 (2&3): 205-22.
24. Peet, R. and Elaine, H. (2009). Theories of Development: Contentions, Arguments, Alternatives. Second Edition. The Guilford Press. New York.
25. Todaro, M.P. (1994). Economic Development (5th Edition). New York and London: Longman.
26. Zakia, M. and Ziad, A. (2011). The Impact of Foreign Direct Investment and Imports on Economic Growth. The case of Jordan Journal of Economic and Administrative Sciences.