

**THE IMPACT OF FOREIGN DIRECT INVESTMENT ON NIGERIA
ECONOMY**

BY

**MR. OJUKWU CHUKWUEMEKA SYLVESTER
DEPARTMENT OF ACCOUNTING AND FINANCE
COLLEGE OF MANAGEMENT AND BUSINESS SCIENCES
SAMUEL ADEGBOYEGA UNIVERSITY, OGWA, EDO STATE
TEL. NO. 08066921071; E-MAIL: ojukwuchukwuemeka100@yahoo.com**

ABSTRACT

Promoting the growth and development of the Nigeria economy can be influenced by trends of gross fixed domestic investment or indirectly through policies aimed at stimulating the flow of foreign direct investment into the country. This study analyzed the impact of foreign direct investment on Nigeria economic growth from the period of 1990 - 2013. Data used in this study is secondary; sourced from various publications of the Central Bank of Nigeria, such as; Statistical Bulletin, Annual Reports and Statement of Accounts. The regression analysis of the error correction model is the estimation technique employed in this study to determine the relationship between Direct Foreign Investment on economic growth. The findings showed that the ECM is significant and correctly signed. Foreign direct investment has significant relationship with economic growth. The paper recommended that government should create macroeconomic policies that would attract and retain FDI in the country. Also, financial markets and institutions should be strengthened and effectively regulated.

Key words: Foreign Direct Investment; Economic Growth; Multinational Corporation; Gross Domestic Product; Development financing.

1.0 INTRODUCTION

Since the attainment of independence in 1960, various policies of the Nigeria government have been geared essentially towards promoting the growth and development of the Nigeria economy by influencing the trends of gross fixed domestic investment or indirectly through policies aimed at stimulating the flow of foreign direct investment into the country. This is so given that in the literature there are divergent views on the nature of effects of foreign direct investment on host economy. Bonojour (2003) support the spillover channel of technological transfer by arguing that most important benefit of FDI and multinational co-operation on the host country is the increase of domestic firms' productivity. Aitken and Harrison (1999) argue that increased local competition caused by multinationals may crowd out domestic firms. Those that are of the view that foreign direct investment produce positive effects on host economy argue that some of the benefits are in the form of externalities and the adoption of foreign technology, staff training and the introduction of new technology and processes by the foreign firms.

Over the last four decades, the macroeconomic performance of Nigeria can be described as being chequered. The average GDP growth rate of 3.95% achieved between 1970 and 2008 translate into a low growth rate of 1.5% in per capita income terms. During the period, this rate of growth in per capita income was insufficient to significantly reduce the level of poverty which constitutes one of the primary goal of development policy in Nigeria. Ajayi, (2006) notes that the savings rate in Nigeria is lower than that of most other countries and far lower than the required investment that can induce growth rates that are capable of alleviating poverty.

Evidence have shown that Foreign Direct Investment (FDI) is what is needed to bridge that savings-investments gap that exist in Africa in general and Nigeria in particular. Prior to the 1970s, Foreign Direct Investment (FDI) was not seen as an instrument of economic

development. The perception of FDI as parasitic and retarding the development of domestic industries for export promotion had engendered hostility to multinational companies and their direct investments in many countries. However, the consensus now is that FDI is an engine of growth as it provides the much needed capital for investment, increases competition in the host country industries and aids local firms to become more productive by adopting more efficient technologies or by investing in human and/or physical capital. According to Ajayi (2006), foreign direct investments contribute to growth in a substantial manner because it is more stable than other forms of capital flows. Against this background, this study seeks to examine the empirical relationship between FDI and economic growth in Nigeria or FDI growth-nexus and in particular, investigate the impact of FDIU on the Nigerian economy.

2.0 LIERATURE REVIEW

2.1 THEORETICAL ISSUES

Generally, academics and policy makers have never been in complete agreement on the FDI growth-nexus.. Early explanations of multinational production were based on neoclassical theories of capital movement within the Hecksher-Ohlin framework, founded on the assumption of existence of perfect factor and goods market. These were criticized for being deficient in providing clear explanations of the nature and patterns of the FDI. In the absence of market imperfections, these theories presumed that FDI will not take place.

Kojima (1978) studies the theory of comparative advantage, where trade-oriented and anti-trade oriented models of investment decision-making are subject to the comparative production costs and profits. He used different terms to explain the models and argued that FDI works either as a compliment to or a substitute to foreign trade.

According to neo-classical theory, development is dependent on use of land, labour and capital. Since LDCs have underutilized land and labour as well as low savings rate, productivity of capital is likely to be greater. The theory assume that interdependence between countries benefited the developing countries more than the developed ones. This is based on assumption that capital will normally flow from rich to poor areas where the returns on capital investments will be highest, helping to bring about a transformation of the backward economies. The theory predicts that poor nations grow faster because of diminishing returns on capital and that pomyoor countries would converge with richer ones over time because of their higher capacity for absorbing capital. In reality, empirical evidence has shown that divergence has been the case; the gap between the rich and poor has continued to increase, and the volume of capital flow to the poorer countries relative to richer ones has continued to be low.

Critics of this theory argue that FDI is associated with a group of people who live together and share responsibilities and possessions, income inequality and high external dependency. The argument regarding the potential harmful impact of FDI on growth point to the importance of certain conditions that will make FDI beneficial to the host economy. The consensus seems to be that there is positive association between FDI inflow and growth, provided the enabling environment is created. Given the fact that growth is associated with increased productivity, FDI inflow is well suited to affect growth positively (Dunning, 1995).

The investment theory model is adapted from the Harold-Domarø growth model which differentiates two gaps in any economy, namely the foreign exchange and the domestic savings gaps. The former is the amount by which imports required for a given output exceeds exports likely to be associated with the output whereas the later is the difference between the investment necessary for a given flow of goods and services that will be forthcoming given those incomes.

The model recognizes deficiency in the domestic economy and the need for stimulating this demand from external sources. The theory justifies the need for developing and transitional economies, deficient in domestic savings to look outwards for investment in their quest for economic growth.

The integrative theory accounts for the multiplicity of heterogeneous variables involved in the FDI process. The theory approaches contemporary thinking on FDI by analyzing it from the perspectives of the host countries as well as investors. Having to face development challenges after the end of the cold war brought the development community to realize that neither the developed nor the developing world is monolithic. Each problem must be evaluated on its own terms, although it is possible to derive lessons from similar processes

2.2 EMPIRICAL EVIDENCE

Ugwuegbe, Modebe & Onyeanu(2014) investigate the impact of FDI on capital accumulation in Nigeria for the period of 1986-2012. . Their findings showed that FDI, TCR, and INTR positively but insignificantly effect capital formation in the short-run whit GEXP exerting negative affect on GFCF. In the long-run all the variables included in the model has a positive impact on GFCF with only FDI and TCR exerting a significant impact on capital accumulation in Nigeria for the period under review. The results show that there is bidirectional causality between FDI and GFCF. They recommended that effort should be made by government to attract more FDI into the country as it has the potential to improve the capital formation in the economy which in the other hand leads to growth in the economy at large. They also said that it is also important that government should improve the infrastructural facility in the country as this has a great potential for attracting more FDI into the country.

Umoh, Jacob & Chuku (2012) empirically investigate the relationship between foreign direct investment and economic growth in Nigeria between 1970 and 2008. In particular, they assumed the existence of a bi-directional relationship between FDI and economic growth in Nigeria. Employing single and simultaneous equation systems, the findings show that FDI and economic growth are jointly determined in Nigeria and there is positive feedback from FDI to growth and from growth to FDI. The overall policy implication of the result is that policies that attract more foreign direct investments to the economy, greater openness and increased private participation will need to be pursued and reinforced to ensure that the domestic economy captures greater spillovers from FDI inflows and attains higher economic growth rates.

Ehimare (2011) empirically examined the impact of the following growth-determining variables on FDI in Nigeria - Balance on current account (Balance of payment), inflation and exchange rate. Employing various tools to investigate the relationships., the results reveal that foreign direct investments has positive and significant impact on current balance of payments while inflation was seen to have an insignificant impact on foreign direct investment inflows. The impact of exchange rate was found to have positive effect on foreign direct investment. He thus recommended that for Nigeria to attract the desired level of FDI, there must be investor-friendly economic policies in the area of political stability, sound economic management and well developed infrastructure.

3.0 METHODOLOGY

3.1 THEORETICAL FRAMEWORK

This study is based on Harold-Domar's growth model. The motivation for the Harold-Domar's model is because of its explicit cognizance of the existence of two gaps in the economy namely, the foreign exchange and the domestic savings gaps. The model recognizes constraint in

the domestic economy and the need for stimulating this demand from external sources such as FDI. Given the gap-filling role of FDI in the face of foreign exchange and domestic resource gaps, the model for this study becomes important.

3.2 SOURCES OF DATA

This study relied basically on secondary annual data sourced by the Central Bank of Nigeria statistical bulletin, publications, journals, reports and statement for the 1990 to 2013. .

3.3 MODEL SPECIFICATION

Functional relationship is presented thus:

$$RGDP = f(FDI, EXT, EXR) \quad (3.1)$$

where:

RGDP = real GDP

FDI = foreign direct investment

EXT = export trade

EXR = exchange rate

OPN= Trade openness

MON= Manufacturing capacity utilisation

f = functional relation

Therefore, equation 3.1 is presented in econometric model below

$$RGDP_t = \alpha_0 + \alpha_1 FDI_t + \alpha_2 EXP_t + \alpha_3 EXR_t + \alpha_4 OPN_t + \alpha_5 MON_t + \mu_t \quad (3.2)$$

α_0 = intercept

μ_t = Stochastic error term

The a priori expectations of the model are $\alpha_1, \alpha_3, \alpha_4, \alpha_5 > 0$ and $\alpha_2 < 0$.

3.4 METHOD OF ESTIMATION

The unit root test was conducted using Augmented Dickey Fuller (ADF) test. The ADF test has the following model:

$$\Delta X_t = \lambda_0 + \lambda_1 X_{t-1} + \lambda_2 T + \sum_{i=1}^n \varphi_i \Delta X_{t-i} + \epsilon_t, \epsilon_t \sim \text{IID}(0, \sigma^2) \quad (3.3)$$

In equation (3.5), Δ is the difference operator, X is the natural logarithm of the series, T is a trend variable, and φ are the parameters to be estimated and ϵ is the error term. Then, the cointegration test was carried out using Johansen's approach. The model for estimating cointegration is specified as follows:

$$\Delta Z_t = \varphi_0 + \pi Z_{t-p} + \sum_{i=1}^{p-1} \varphi_i \Delta Z_{t-i} + \epsilon_t, \epsilon_t \sim \text{IID}(0, \sigma^2) \quad (3.4)$$

Following Granger (1987), who says that if two variables are cointegrated, then they have an error correction representation, we estimated both long run and short run regression for the series. Therefore, the following error correction model was estimated:

$$\begin{aligned} \Delta RGDP_t = & \alpha_0 + \sum_{i=1}^p \alpha_1 \Delta RGDP_{t-1} + \sum_{i=1}^p \alpha_2 \Delta FDI_{t-1} + \sum_{i=1}^p \alpha_3 \Delta EXP_{t-1} + \sum_{i=1}^p \alpha_4 \Delta EXR_{t-1} \\ & + \sum_{i=1}^p \alpha_5 \Delta OPN_{t-1} + \sum_{i=1}^p \alpha_6 \Delta MON_{t-1} + \beta_8 ECT_{t-1} + \varepsilon_t \end{aligned} \quad (3.5)$$

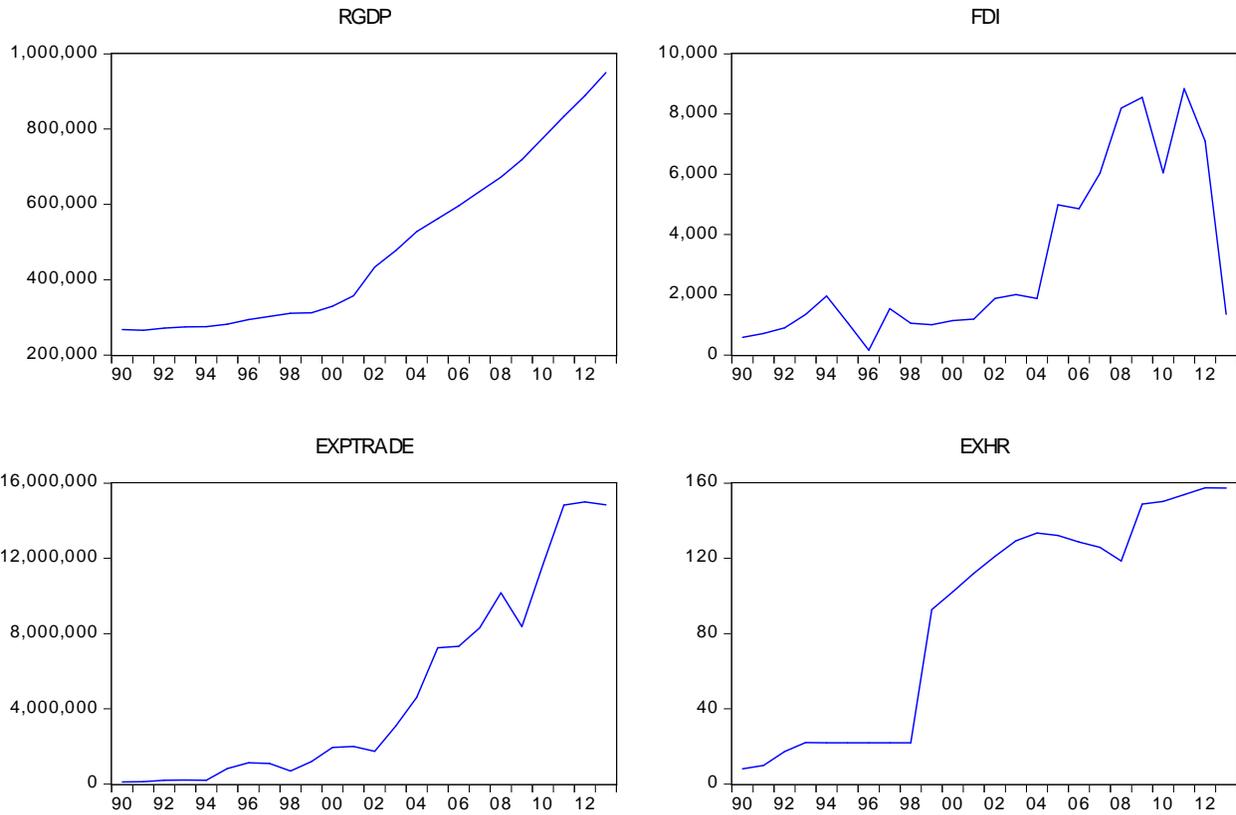
Where is the coefficient of the ECT_{t-1} = ECM.

4.0 DATA PRESENTATION, RESULTS AND ANALYSIS

4.1 Trend Analysis

From figure 4.1, the trend movement of real GDP, export trade and exchange rate are upward rising during the period under study, while Foreign Direct Investment (FDI) fluctuates upwards and downwards. The steady rise in real GDP is associated with many factors depending on the current business cycle. The graph of real GDP shows an upward movement from 1999 which is as a result of the reforms that were implemented by both the monetary authority and federal government during the period. The graph of FDI shows a sharp rise in 2004 and a decline in 2010 with some level of persistence in 2012 and 2013. The decline is associated to civil unrest and insecurity challenges Nigeria experienced during those periods.

Figure 4.1: Trend Analysis of Variables



Source: Author's computation, 2016. Where, RGDP is real GDP, FDI is Foreign Direct Investment, EXP is export trade and EXR is exchange rate.

4.2 Unit Root Test

The Unit root test conducted for the series is presented in Table 4.1. The augmented Dickey Fuller (ADF) technique was employed to test the stationarity of the series.

Table 4.1: Unit root test

Variables	Level/Difference	Critical Value (ADF)	ADF	ORDER
lnRGDP	Level	-3.6220	-2.0431	
	First Diff.	-3.6329	-3.6732*	1(1)
lnFDI	Level	-3.6220	-1.7786	
	First Diff.	-3.6329	-4.5461*	1(1)
lnEXP	Level	-3.0049	0.0383	
	First Diff.	-3.0207	-3.2553*	1(1)
lnMON	Level	-3.0049	-0.8935	

lnOPN	First Diff.	-3.0049	-3.0199*	1(1)
	Level	-2.9919	-2.6233	
lnEXC	First Diff.	-2.9981	-6.7467	1(1)
	Level	-3.5844	-2.9981	1(0)

* indicates significance at 5% level.

Source: Author's Regression Output, 2016

Table 4.1 shows the stationarity test for the series using both intercept and trend. A critical observation from the table reveal that foreign direct investment and export trade were stationary after first difference at 5% level of significance while the exchange rate was stationary at level.

Table 4.2: Trace Test Results of Cointegration Test

Null Hypothesis	Alternative Hypothesis	Statistics	Critical Values	P- Values
SERIES: RGDP, FDI, EXP, EXC				
$r = 0$	$r \times 1$	68.8566	47.8561	0.0002
$r \leq 1$	$r \times 2$	37.7219	29.7971	0.0050
$r \leq 2$	$r \times 3$	11.9354	15.4947	0.1601

Source: Author's Regression Output, 2016

Table 4.2 shows the cointegration test of the series. The trace statistic shows that there are two cointegrating equations among the series. This means there is a long run relationship among the series and ECM can be employed.

4.3 Long Run Relationship

In Table 4.3, the results showed that FDI and export trade have positive and significant relationship with real GDP at 1% level of significance. However, exchange rate exerts negative and non significant effect on real GDP. This implies that FDI has influence on Nigeria real output because of the huge investment of multinational firms. . A 10% increase in foreign direct investment leads 0.8% increases in real GDP. The result of export trade implies that an increase in

merchandize export will increase GDP by 0.3% which supports the a priori expectation. Trade openness is both negative and insignificant while the manufacturing capacity utilisation is positive but not significant.

Table 4.3: Long Run OLS Analysis

Dependent Variable: lnRGDP

Variable	Coefficient	Std. Error	t-Statistic
lnFDI	0.0846***	0.0256	3.3089
lnEXP	0.2769***	0.0595	4.6549
lnEXC	-0.0106	0.0108	-0.9852
lnOPN	-0.0005	0.0024	-0.2223
lnMON	0.1211	0.1656	0.7308
Constant	24.6061***	0.5375	45.7777

R-squared 0.9484

Adjusted R-squared 0.9341

F-statistic 66.1942***

Durbin-Watson stat 1.3953

Source: Author's computation, 2015. Note that *, **, and *** are 10%, 5% and 1% level of significance respectively.

Given the Adjusted R-squared value of 0.934 the net variation in the dependent variable (RGDP) that is explained by the independent variables is 93.88%. This is a high goodness of fit. The F-statistic of 118.6123 is highly significant at 1% level indicating the overall significance of the model. This suggests that the specification of effect of FDI, export trade and exchange rate is

relevant on real GDP. The Durbin Watson (1.395) result showed that there is presence of autocorrelation.

Table 4.4: Short Run OLS Estimation

Variable	Coefficients	Std	t- Statistics
C	0.022585	0.011020	2.049442
D(RGDP(-1))	0.586636	0.170772	3.435197
D(DFI(-1))	-0.022514	0.011021	-2.042931
D(DFI(-2))	-0.021675	0.011211	-1.933336
D(DFI(-3))	0.028118	0.013462	2.088617
D(OPN)	-0.001062	0.000340	-3.128646
ECM(-1)	-0.121890	0.059122	-2.061657

R-squared	0.777200
Adjusted R-squared	0.674369
F-statistic	7.558040
Prob(F-statistic)	0.001199
Durbin-Watson stat	2.323916

Source: Author's computation, 2015. Note that *, **, and *** are 10%, 5% and 1% level of significance respectively

An examination of the results showed that export trade and lag of RGDP are positive and significant. It related with real GDP at 1% level of significance in the short run. The error correction model, which captures the speed of adjustment, is positive and insignificant contrary to expectation. The value of Adjusted R-squared is 0.7772, it shows that the variation in dependent variable in this model is explained by the independent variables by 77.72% and showed a high goodness of fitness of the model. The F-statistic at 7.5580 is a significant at 1% level and indicates that the overall model is significant. This suggests that the specification of effect of FDI, export trade and exchange rate is relevant on real GDP. The Durbin Watson statistic of (2.323) result showed that there is no autocorrelation in the estimated model. The parsimonious ECM showed that RGDP is significant and positive in its first lag at 1%. Foreign

direct investment is positive and significant at 10% in its first, second and third lags. Trade openness is significant at 1% but it is negatively sign. The ECM is correctly specified and significant at 10%. The rate of adjustment to equilibrium is 12.19%.

5.0 SUMMARY, CONCLUSION AND RECOMMENDATION

This study examined the impact of FDI in economic growth in Nigeria between 1990 and 2013. Secondary data covering the period were obtained from the CBN and analyzed and analyzed using dynamic framework involving co-integration and ECM between FDI and RGDP in Nigeria. Export is found to have a significant positive effect on economic growth in line with a priori expectation. The relationship between exchange rate and economic growth was found to be insignificant.

Based on this findings, it is recommended that the government should intensify efforts towards creating effective macroeconomic policies that would attract and retain FDI in the country. This can be achieved by establishing economic measures that would address the increasing wave of capital flight in the economy. Furthermore, financial markets and institutions should be strengthened and effectively regulated for optimal performance. Finally, the issue of repatriation of profits and income by foreign investors should be balanced to avoid negative externalities.

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