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Foreign Direct Investment and the Issues of Poverty in Nigeria: A Critical Evaluation

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ABSTRACT

The work investigated the relationship between foreign direct investment (FDI) and poverty in Nigeria between 1981 and 2015 using Vector Error Correction Model (VECM) approach. The unit root result from Augmented Dickey-Fuller (ADF) test revealed that all the variables were only stationary first difference at 5% level of significance. The Johansen cointegration test equally revealed the presence of long run relationship among the variables. Finally, the vector error correction mechanism (VECM) results revealed that foreign direct investment significantly result in decline in poverty. The result further indicated that exchange rate significantly bring about reduction in poverty while unemployment rate significantly resulted in rise in poverty. Also, it revealed that government expenditure has positive impact on poverty. however, based on these findings, the study concluded that for a nation to achieve meaningful and sustainable development, adequate attention must be given to a wide spread of economic activities through various means with its foreign sector activities given a priority consideration, government should leverage on the market size of the economy and imbibe trade openness as this will attract more inflow of FDI in the economy. These measures will effectively result in significant decline in poverty in Nigeria.

Keywords: Foreign Direct Investment, Unemployment, Government expenditure, poverty,

INTRODUCTION

The importance of foreign capital, most especially FDI, to developing countries cannot be over emphasized. It serves as a supplement to their domestically mobilized savings and it is often accompanied with technology and managerial skills which set the pace for economic development. Foreign direct investment (FDI) can contribute in various ways to economic development in developing nations, most importantly breaking the vicious circle of poverty. The trends of the flows of Foreign Direct Investment (FDI) globally and the distribution of its attendant effect across the regions of the world have been a subject of empirical decisions over the past decades [1]. Several studies have provided evidence of upsurge and increasing degree of the international

capital mobility among the developed and developing economies of the world.

Despite how desirable the inflow of FDI to developing nations, critics allege that multinational companies tend to locate production in countries or region with low wages, low taxes and weak environmental and social standards. They argue that FDI thus contributes to a "race to the bottom", where countries are forced to lower their standards so as not to lose investments and jobs. It is certainly true that these features of the business environment play a significant role in the decisions of multinationals. However, these items are all first part of the cost side of a business. In the end it is not cost that matter, but profit [2]. Foreign investors balance cost considerations with others that determine the productivity of operations in a

particular country. Overall, FDI flows to places where costs are lowest. This is reflected in the basic fact that about three-quarters of FDI flows to developed countries and not to low cost developing nations. It is the priority of investors to locate business where productivity is high, thus FDI will only flow into countries with low productivity when wages and other costs are low enough to offset the productivity disadvantage.

[3] explained that the effects of FDI on the host economy result to increase in employment enhance productivity, boost in exports and transfer of technology. According to [4], foreign direct investment (FDI) has emerged as the most significant source of external resource flows to developing countries over the years and has become an important part of capital formation in these countries, though the global distribution of FDI has continued to decline. Government of these developing should encourage foreign direct investment in order to attain a level of development. Foreign direct investment into the Nigeria according to [5], had quadrupled, increasing from N2.3 million in 1975 to N10.4 million in 1990, and thereafter, FDI inflows have been rosy and increasing at a modest rate. Presently, the country is the most favoured destination of foreign capital in Africa, gulping more than 15% of total FDI flows into the continent [6].

However, it is quite disheartening that the country still remains underdeveloped and poor as result of its unattractiveness to foreign investors due to the lack of some major determinants of FDI. These may have resulted in widespread poverty despite Nigeria's enormous resources and potential. Basic economic indicators place it among the 20 poorest countries of the world (CIA World Fact book, 2008). Nigeria has been in stagnation and relative decline since 1981, from a per capita GDP of US\$1,200 in 1981 to about

US\$300 in 2000. No fewer than 112 million Nigerians now live below poverty level in 2016, as global poor hit one billion mark, this is according to the latest poverty report by the national Bureau of Statistics, NBS, stating that about 112 million Nigerians (representing 67.1 percent) of the country's total population of 167 million (National Bureau of Statistics, 2016).

For many Nigerians, the quality of life has declined rather than improved. In contrast, the standard of living for a few privileged Nigerians has improved substantially. The average worker salary cannot earn enough to support a family because of inflation and rises in food prices and transportation costs. The national minimum wage of N18, 000 (about US\$118. 00) Per month, adopted by the federal government, falls far short of what is needed to cover housing, food, education, health care and transportation. The report further confirmed that life expectancy which was 54 years in 1990 had dropped to less than 50 years in 2005 [6]. Access to adequate shelter, water and sanitation facilities as well as communication had been very low while income inequality had also worsened during the same period. The worsening situation had affected vulnerable groups and women in rural areas the most in particular are the individuals with limited or no formal education, large families' farm communities and groups engaged in informal sector activities. This study was therefore informed by the observed rising poverty incidence in Nigeria despite the enormous foreign direct investment (FDI) flows into the country aimed at improving the economy and consequently reducing poverty. Against this backdrop, this paper broadly examines the relationship between foreign direct investment and poverty reduction in Nigeria between 1981 and 2015.

LITERATURE REVIEW

Conceptual Review

Foreign direct investment (FDI) is the official action of a country to acquire the ownership of assets in another country

with the different business oriented purposes like production, distribution, advertisement etc. According to [7], FDI is simply an investment involving a long-

term relationship reflecting a lasting interest and control of 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, affiliate enterprise or foreign affiliate). [8] is of the opinion that attracting more FDI is based on the fact that FDI impact positively on the developmental challenges of host economies. [9] see FDI as investments by multinational corporations in foreign countries with the aim of controlling assets and managing production activities in those countries. [10] offers an expanded explanation of the operational meaning of FDI as ownership of at least 10% of the ordinary shares or voting stock in a foreign enterprise. Thus, ownership of 10% ordinary shares is the criterion for the existence of a direct investment relationship while ownership of less than 10% is recorded as portfolio investment.

There are four types of FDI derived from ownership location and internalization (OLI) theory according to Dunning. These are market-seeking FDI, resource-seeking FDI, efficiency seeking FDI and strategic asset seeking FDI. The primary aim of the market-seeking FDI is to penetrate the local markets of host countries in respect to market size and per capita income, market growth, access to regional and global markets, consumer preferences and structure of domestic market. The resource-asset seeking FDI seek and secure natural resources, for example, raw materials, lower unit labor cost of unskilled labor force and the pool of skilled labor, physical infrastructure (ports, roads, power, and telecommunication), and the level of technology. The efficiency-seeking FDI is motivated by creating a source of competitiveness for firms and it goes where the costs of production are lower. And lastly, strategic asset seeking FDI aims at advancing firm's global or regional strategy on how to operate in the internalization market.

[11] [12] poverty is a condition in which a person is deprived of, or lacks the

essentials for minimum standard of living. It is also the inability to attain a minimum standard of living. According to [13], [14], poverty can be defined in terms of three distinguishable degrees. These are: Extreme poverty, moderate poverty and relative poverty. Extreme poverty means the household cannot meet basic needs for survival. Such people are perpetually hungry, unable to access health care; they lack amenities of safe drinking water and sanitation. They cannot afford education for their children and cannot shelter their families. Moderate poverty on the other hand generally refers to conditions of life in which basic needs are met, but just barely. Relative poverty is construed as a household income level below a given proportion of average national income. In high income countries, they lack access to cultural goods, entertainment, recreation, quality health care, education and other prerequisites for upward social mobility. According to [15], the World Bank has been defining poverty in statistical terms of income of one US dollar per person per day, measured at purchasing power parity to determine the number of extreme poor around the world. Going by the World Bank definition of poverty adopted by most researchers whereby poverty measurement is based on income which is used as a baseline for poverty level measured at less than US\$1 per day or US\$1.25 per day [16], we conclude that both the quantitative and qualitative measurements attest to the growing incidence and depth of poverty in the country.

Theoretical Literature

Various theories were reviewed to aid the understanding of the role of foreign direct investment on poverty. The theories reviewed include modernization theory, dependency theory and integrative theory. They are reviewed as follows:

Modernization Theory: Modernization theory is used to explain the process of modernization within societies. Modernization refers to a model of a progressive transition from a 'pre-

modern' or 'traditional' to a 'modern' society. This theory originated from the ideas of German sociologist Max Weber (1864-1920), which provided the basis for the modernization paradigm; developed by Harvard sociologist Talcott Parsons (1902-1979). It both attempts to identify the social variables that contribute to social progress and development of societies and seeks to explain the process of social evolution. Modernization theorists proclaimed that there is a natural order through which countries ascend to what is seen as higher developmental stages. The theorists recommend that developing countries follow in the footsteps of developed countries and overcome endogenous barrier to exogenous motivated development through industrialization, liberalization, and opening up the economy. The ability to overcome these barriers will depend on how endowed the country is with production factors such as labour, capital, and natural resources. The modernization school views FDI as a prerequisite and catalyst for sustainable growth and development. The theory stresses not only the process of change but also the responses to that change. It also looks at internal dynamics while referring to social and cultural structures and the adaptation of new technologies. The theory maintains that traditional societies will develop as they adopt more modern practices. Proponents of the theory claim that modern states are wealthier and more powerful and that their citizens are freer to enjoy a higher standard of living. Developments such as new data technology and the need to update traditional methods in transport, communication and production are very essential; it is argued that, modernization is necessary or at least preferable to the status quo.

Dependency Theory: The dependency theory states that the dependence of less developed countries (LDCs) on developed countries (DCs) is the main cause for the underdevelopment of the former. This theory of underdevelopment originated in the writings of a few Latin American

economists whose translations began to appear in English in the mid-1960s and early 1970s. The prominent among them are Frank, Sunkel, Furtado, Santos, Emmanuel and Amin [17]. The explanations of dependency given by the various writers differ in degree only. Each tries to pinpoint and specify certain factors which have been responsible for the underdevelopment of LDCs by DCs. Furthermore, the dependency theorists also focused on the several ways by which, FDI of multinational corporations distort developing nation economy. Some scholars of this theory believed that, distortive factors include the crowding out of national firms, rising unemployment related to the use of capital-intensive technology, and a marked loss of political sovereignty [18]. It has also been argued that FDI are more exploitative and imperialistic in nature, thus ensuring that the host country absolutely depends on the home country and her capital [19]. This theory from its points of analysis could be discovered that it creates negative relationship between FDI and economy growth of the developing countries. The theory is of great belief that the economy involvement of developed countries into developing nations under multinational companies and FDI will surely resort to economy disadvantages of developing nations.

Intervention/Integration

The theory calls for a mixture of intervention and openness in dealing with foreign investment. It supports neither too much openness nor excessive regulation/intervention [20]. The theory recognizes that there are instances where the market is better placed to act and other instances where government intervention is essential. What is needed therefore is a balancing act between those activities that can best be handled by the market and those that can best be done by the government. It conjectures that foreign investment must be protected but only to the extent of the benefits it brings the host state and the extent to which foreign investors have behaved as good corporate citizens in promoting the

economic and social objectives of the host country [21]. In many ways, the middle path/integration theory represents a convergence between Adam Smith's case in favor of a laissez-faire approach and Keynes' argument in favor of government intervention in the market. Whilst Adam Smith in his *Wealth of the Nations* believed that except for intervention in providing public works and institutions, the role of the state in the market must be minimized [22], Keynes, who was greatly influenced by the effects of the US Great Depression of the 1930s, strongly believed that government participation in the market was crucial to stimulate the economy.

Empirical Review

Empirical evidence regarding what impact FDI has had on poverty reduction in developing countries is limited, only a few studies tried to analyze empirically this relationship. However, an expanding empirical literature exists on the growth-elasticity of poverty. Thus, this subsection focus on reviewing empirical literatures that link FDI to economic growth, growth to poverty reduction and FDI to poverty reduction. To do this, only current literatures will be considered, specifically from 2000 to date.

[23] investigated the relationship between FDI and poverty reduction using secondary data spanning through the period 1980-2012. The model was estimated using the Ordinary Least Square Estimation Approach. The results showed that FDI has a positive but not significant impact on real per capita income and hence does have the potential of reducing poverty in the country. [24] examined the impact of Foreign Direct Investment inflow and economic growth in a pre and post deregulated Nigerian economy from 1970 - 2010 using a Granger causality test. The result of the causality test showed that there is causality relationship in the pre-deregulation era that is (1970-1986) from economic growth (GDP) to foreign direct investment inflow (FDI) which means GDP causes FDI, but there is no causality relationship in the post-deregulation era. However, it showed

that is causality relationship between economic growth (GDP) and foreign direct investment inflow (FDI) that is economic growth drive foreign direct investment inflow into the country and vice versa.

[25] investigated the relationship between Foreign Private Investment, Capital Formation and Poverty reduction in Nigeria using co-integration and Error correction Mechanism (ECM) and Granger Causality tests with annual time series data covering the period between 1978 and 2008. The various tests demonstrated that the inflow of foreign Private Investment in Nigeria has not significantly contributed to poverty alleviation in Nigeria. The study also showed that government investment on health and education has not helped to reduce poverty in Nigeria. [26] investigated the impact of domestic investment on FDI inflows in Nigeria. Adopting a decomposed, single-linear econometric model estimated by the OLS methodology within four decade 1970-2009, the findings revealed that private and public domestic investments as well as human capital and market size were negatively related to FDI inflows, while trade openness and natural resource were positively linked to FDI.

[27] examined the effects of foreign private investment on poverty in Nigeria using regression analysis for the period 1975 to 2003. The test demonstrated that the inflow of foreign private investment and foreign loan into Nigeria significantly alleviates poverty. The paper maintained that government expenditure and the continuous increase in petroleum profit tax would aggravate the poverty level in Nigeria.

[28] carried out a study to examine the long-run and the short-run relationships between foreign direct investment and economic growth in Ireland. Using an augmented aggregate production function growth model and bounds testing approach to cointegration, the results indicate that foreign capital (FDI), domestic capital, and trade are statistically significant in both the long-run and the short-run, having positive

effects on economic growth in Ireland. The causality analysis also suggests that there is a bi-directional Granger causality between GDP and FDI, and thus, they conclude that the FDI-led growth hypothesis is valid for the Irish economy. In a more recent study, [29] conducted a study aimed at identifying the impact of foreign direct investment on poverty reduction and whether there exists a causal relationship between FDI and economic growth and poverty reduction in Ethiopia. The study was based on time series data which were collected from secondary sources and cover the period from 1970-2009. Co integration and Vector Error Correction approaches have been applied for the growth model. Estimated results reveal that real per capita GDP responds negatively to FDI in the long run in Ethiopia. He pointed out that it may be a result of profit repatriation of foreign firms, crowding out of domestic investment because of FDI or low level of human capital in the country. However, in the short run, FDI was found to be insignificant in explaining real per capita GDP.

[30] conducted a study to explore empirically the relationship between FDI and GDP growth in Nigeria and also to ascertain the long-run sustainability of the FDI-induced growth process. Using the ordinary Least Square estimation technique and an augmented Solow production function, his results revealed that FDI in Nigeria induces the nation's economic growth. Although the overall effect of FDI on the whole economy may not be significant, the components of FDI positively affect economic growth and therefore FDI needs to be encouraged. [31] also conducted a similar study to investigate the impact of FDI on poverty reduction in Nigeria. Using per capita GDP as a proxy for poverty and an ordinary

least square regression method, their findings revealed a satisfactory performance of FDI on per capita GDP in Nigeria.

The argument against some of the studies is that the scope of the studies may have been overtaken by events and as such a recent work needed to update the current literature. Also some important variables like unemployment, per capita income, gross domestic product were excluded in some of the works such variables, thus the need for this study to accommodate these variables [32].

The decision of a study such as [33] to use Granger Causality test when the variables were stationary at level form instead of Ordinary Least Square is skeptical. Some studies failed to include some important variables such per capita income, what was the Exchange Rate as of the time of the research? Rate of Unemployment was as well ignored [30]; these and more triggered the further research of the work.

Generally, few studies that focused on foreign direct investment and poverty reduction were carried out using data spanning through 1980-2010. A more recent one that spanned through 1980-2012 did not focus on FDI and poverty reduction in Nigeria. Also previous work done is either important variables are omitted or the period of the research has already dated back as to confidently determine the impact of FDI in the country. However, as a missing gap in the literature which this study intends to fill, this study gives credence to examining the influence of some selected macroeconomic variables or indicators like foreign direct investment, exchange rate, unemployment rate, per capita income and gross domestic product in Nigeria from 1981-2015.

METHODOLOGY

Model Specification

The specification of the model is based on [12] who investigated FDI on poverty reduction in Nigeria. The study referred to Poverty Reduction (POVT) as a function of Foreign Direct Investment (FDI),

External Earning (EXE), Trade Openness (TOP), Market Seize (MKZ) measured by market growth rate, Exchange Rate (ERT) External Debt (XDT), Foreign Aids (FAD), Technology (TEC), However, this present study was modified to specifically

incorporate to the following variables, real per capita income, foreign direct investment, unemployment rate, government expenditure and exchange Rate where RPCI is a proxy for poverty rate serving as the dependent variable. Therefore, the model of this study is specified as follow:

$$\text{RPCI}_t = F(\text{FDI}_t, \text{URP}_t, \text{GEX}_t, \text{EXR}_t) \dots\dots\dots 1$$

In order to capture the influence of the stochastic or random variable, the equation is explicitly transformed as follows:

$$\text{RPCI}_t = b_0 + b_1 \text{FDI}_t + b_2 \text{URP}_t + b_3 \text{GEX}_t + b_4 \text{EXR}_t + U_t \dots\dots\dots 2$$

$b_1 > 0, b_2 < 0, b_3 > 0$ and $b_4 < 0$

Where is RPCI is Real per capita income, FDI is Foreign direct investment, URP is Unemployment Rate, GEX is Government expenditure, EXR is Exchange Rate, b_0 is Constant, b_1, b_2, b_3, b_4 are the Parameter Estimates while U_t is Error Term. These data were obtained from Central Bank of Nigeria Statistical Bulletin and International Monetary Fund (IMF) and World Bank from the period between 1981- 2015.

Estimation Procedure

The specified multiple regression models will be estimated using the Ordinary Least Squares (OLS) technique. The following econometric and statistical diagnostic tests will be performed in order to ascertain the validity of the regression results:

Unit Root Test

It is used to test for the stationary of the time series data. This involves testing of the order of integration of the individual time series under consideration to avoid the problem of spurious results. The most popular ones are Augmented Dickey-Fuller (ADF) test due to Dickey and Fuller (1979, 1981). Augmented Dickey Fuller (ADF) test statistics shall be compared with the critical values at 5% level of significance. A situation whereby the ADF test statistics is greater than the critical

values with consideration on absolute values, the data at the tested order will be said to be stationary. Augmented Dickey-Fuller test relies on rejecting a null hypothesis of unit root (the series are non-stationary) in favour of the alternative hypotheses of stationarity. The tests are conducted with and without a deterministic trend for each of the series.

The general form of ADF test is estimated by the following regression:

$$\Delta y_t = \alpha_0 + \alpha_1 y_{t-1} + \sum \alpha \Delta y_t + e_t \dots\dots\dots 3$$

$$\Delta y_t = \alpha_0 + \alpha_1 y_{t-1} + \sum \alpha \Delta y_t + \mu_1 + e_t \dots\dots\dots 4$$

Where: Y is a time series, t is a linear time trend, Δ is the first difference operator, α_0 is a constant, μ is the optimum number of lags in the dependent variable and e is the random error term.

If the null hypothesis is $\alpha_1 = 0$, we conclude that there is no unit root in the series under consideration and therefore stationary. If the null hypothesis $\alpha_1 = 1$, then we conclude that the series under consideration $\Delta(y_t)$ has unit root and is therefore non-stationary. If the ADF test fails to reject the test in levels but rejects the test in first differences, then the series contains one unit root and is of integrated order one I(1). If the test fails to reject the test in levels and first differences but rejects the test in second differences, then the series contains two unit roots and is of integrated order two I(2).

Cointegration Test

[8] state that if several variables are all I(d) series, their linear combination may be co-integrated, that is, their linear combination may be stationary. This means that the variables exhibit long-run relationship. The hypothesis is rejected if t- statistic is greater than asymptotic critical - value or if the p - value is less than the level of significance and accepted if otherwise.

Vector Error Correction Mechanism (VECM)

Having ascertained whether or not co-integration exist, then the next step requires the construction of error correction model to model dynamics

relationship. The purpose of the error correction model is to indicate the speed of adjustment from the short-run equilibrium to the long-run equilibrium state. If co-integration is accepted, it suggests that the model is best specified in the first difference of its variables with one period lag of the residual {VECM (-1)} as an additional regressor. To this effect a regressions will be done on their first difference. By taking the first difference, we may lose the long run relationship stored in the data which suggests that we

Results of Unit Root Test

One of the implicit assumptions that underlie regression analysis involving time series data is that such a data series is stationary. In this context, testing for stationarity or otherwise of the employed

have to use the variables at both their levels and first differences. The advantage of using error correction models (VECM) is that it incorporate the variables at both side levels and first differences and thus VECM captures the short run disequilibrium situations as well as the long-run equilibrium adjustments between variables [6]. Co-integration is a test for equilibrium between non-stationary variables integrated of the same order.

RESULTS

data sets becomes of essence in this analysis. The Augmented Dickey-Fuller (ADF) formular was employed to test for the existence of unit roots in the data using trend and intercept. The test results are presented in table 1- 2 below:

Table 1: Augmented Dickey Fuller Unit Root Test Results @ level form

Series	ADF Test Statistic	5% critical values	Order	Remarks
RPCI	-1.853720	-3.552973	1(0)	Not Stationary
FDI	-3.142473	-3.548490	1(0)	Not Stationary
UR	-1.320437	-3.548490	1(0)	Not Stationary
GEX	0.166960	-3.557759	1(0)	Not Stationary
EXR	-1.857271	-3.548490	1(0)	Not Stationary

Sources: Researchers' compilation from E-view (version 9.0)

Table 2: Augmented Dickey Fuller Unit Root Test Results @ First Difference

Series	ADF Test Statistic	5% critical values	Order	Remarks
RPCI	-3.864750	-3.552973	1(1)	Stationary
FDI	-7.325394	-3.552973	1(1)	Stationary
UR	-4.687904	-3.552973	1(1)	Stationary
GEX	-4.443668	-3.557759	1(1)	Stationary
EXR	-3.940554	-3.552973	1(1)	Stationary

Sources: Researchers' compilation from E-view (version 9.0)

Table 1 and 2 above shows the summary of unit root test results using Augmented Dickey-Fuller methods. The result shows that none of the variables is stationary at level. This is because the absolute value of ADF test statistics of all the variables is less than their critical value at the 5 percent level of significance. However, all the variables considered became stationary after first difference since their ADF test statistics were greater than their critical values in absolute value. The results show that the series are integrated of the same order; I (1) with the application of ADF test. Therefore, the variables are fit to be used for the analytical purpose for which they were gathered.

Results of Co-integration Test

[24] argue that although the individual series may not be stationary, a linear combination of the series will produce a cointegrated series. The linear combination of series integrated of the same order are said to be co-integrated. The level of their integrations indicates the number of time series have to be differenced before their stationary is induced. For this purpose, the Johansen co-integration test was adopted. The model with lag 1 was chosen with the linear deterministic test assumption and the result summary is shown in table 3 below:

Table 3: Johansen Cointegration Results of Trace Statistics Test

Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	CriticalValue	Prob.**
None *	0.700050	103.4354	69.81889	0.0000
At most 1 *	0.633213	63.69877	47.85613	0.0008
At most 2 *	0.359764	30.60065	29.79707	0.0403
At most 3 *	0.286514	15.88533	15.49471	0.0437
At most 4 *	0.133923	4.744799	3.841466	0.0294

Sources: Researchers' compilation from E-view (version 9.0)

Table 4: Johansen Co-integration Results of Eigenvalue Test

Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	CriticalValue	Prob.**
None *	0.700050	39.73658	33.87687	0.0089
At most 1 *	0.633213	33.09812	27.58434	0.0088
At most 2	0.359764	14.71532	21.13162	0.3093
At most 3	0.286514	11.14053	14.26460	0.1473
At most 4 *	0.133923	4.744799	3.841466	0.0294

Sources: Researchers' compilation from E-view (version 9.0)

Under the Johansen Cointegration test, Cointegration is said to exist if the values of computed Eigen values are

significantly different from zero or if the trace statistics is greater than the critical value at 5 percent level of significance.

The results of the co-integration in table 3 and 4 above indicate 5 and 2 cointegrated equations respectively. This is because trace statistics is greater than the critical value at 5 percent level of significance in 5 of the hypothesized equations. Similarly, the computed Eigen values are significantly different from zero in only two out of the 5 hypothesized equations. Hence, this satisfies the condition for long run relationship and therefore the null hypothesis of no cointegration among the variables is rejected in at least two equations. The test result shows the existence of a long-run equilibrium relationship among the variables.

Results of Vector Error Correction Model (VECM)

Having satisfied the condition for long run relationship as was revealed by the Johansen co-integration which indicated five and two cointegrating equations in accordance with the result of trace statistics and Eigen value test, the next step is to construct a vector error correction mechanism (VECM) in order to estimate the speed of adjustment from short run disequilibrium to long run equilibrium condition. The choice of VECM is informed by the fact that it has cointegrating relation built into the specification so that it restricts the long run behaving endogenous variables to converge to their cointegration relationship while allowing for short run adjustment dynamics. The VECM result is presented in table 5 below:

Table 5: Results of Vector Error Correction Mechanism (VECM)

CointegratingEq:	CointEq1				
RPCI(-1)	1.000000				
LFDI(-1)	57.22572 (9.67958)				
URP(-1)	-23.36595 (2.55111)				
LGEX(-1)	78.86232 (16.2058)				
REXR(-1)	0.950930 (0.19199)				
Error Correction: CointEq1	D(RPCI)	D(LFDI)	D(URP)	D(LGEX)	D(REXR)
	-0.048621 (0.04309)	-0.010887 (0.01219)	-0.000108 (0.01501)	0.003618 (0.00093)	-0.899687 (0.33831)
	[-1.12841]	[-0.89324]	[-0.00723]	[3.90943]	[-2.65938]
R-squared	0.712649	0.469399	0.350777	0.781318	0.697943
Adj. R-squared	0.384248	-0.137001	-0.391191	0.531395	0.352736
F-statistic	2.170055	0.774075	0.472766	3.126240	2.021808

Sources: Researchers' compilation from E-view (version 9.0)

Table 5 above shows the VECM result obtained when real gross domestic product (RGDP) is regressed against Foreign Direct Investment (FDI), Unemployment Rate (URP), government expenditure (GEX) and Exchange Rate (EXR). As shown in the empirical results, both foreign direct investment, unemployment rate and government

expenditure conforms to the a priori expectation while exchange rate does not conform to a priori expectation. Accordingly, a small increase in foreign direct investment (FDI), government expenditure (GEX) and exchange rate (EXR) increases real per capita income (RPCI) by 57.22572, 78.86232 and 0.950930 respectively. That is to say that foreign direct investment (FDI), government

expenditure (GEX) and exchange rate (EXR) are positively related to per capita income (PCI) while unemployment rate with a coefficient of -23.36595 is negatively related to per capita income equally in line with apriori expectation.

On whether the estimated coefficients are statistically significant or not, the standard error values of the estimated coefficients were used such that if the

estimated standard error is smaller than half of the estimated coefficient value, we accept that the coefficient is statistically significant and vice versa. From result estimate, FDI has a standard error value of 9.67958, while URP, GEX and EXR have standard error values of 2.55111, 16.2058 and 0.19199 respectively. With estimated coefficients of 57.22572, 57.22572, 78.86232 and 0.950930 for FDI, URP, GEX and EXR respectively, it could be seen that when the coefficients are divided by two, the resultant value would still be greater than the standard error. Therefore the estimated coefficients are all statistically significant.

The above result indicates that the R² is 0.712649 indicating that the explanatory variables explain about 71% of the total

CONCLUSION

The main objective of this research work is to evaluate the long run impact of foreign direct investment on poverty reduction in Nigeria, from 1981-2015. Empirically, this study succeeds in providing further analysis of these objectives in Nigeria. Considering various theories with postulates that foreign direct investment has either positive or negative impact on poverty in Nigeria, the VECM estimate of the true impact and

RECOMMENDATIONS

Based on the findings made in the course of this study, particularly the results of the regression models, it is clear that the development of the Nigerian economy is highly dependent on the provision of the right environment for investment, which will in no doubt encourage economic growth and development. The study therefore recommends thus:

variations in RPCI during the period under consideration. This implies that about 71 % variation in Nigeria's real per capita income is explained by changes in foreign direct investment (FDI), government expenditure (GEX) and exchange rate (EXR), while the remaining 29 % is caused by other factors not included in the model.

Furthermore, the ECM (-1) coefficient equals -0.048621. This shows that the speed of adjustment between the short-run and long-run equilibrium is approximately 4 percent annually. This means that the system corrects its previous period disequilibrium at a speed of 4 % annually. The sign of cointegrating coefficient is negative and a standard error value of 0.04309 which is greater than $0.048621/2$ shows that the coefficient is not statistically significant. Hence, Granger Representative Theorem (GRT) which holds that a negative and statistically significant error correction coefficient is a necessary condition for the variables to be co-integrated is not completely satisfied. The negative speed of adjustment satisfies the first condition but unfortunately the second condition of statistical significance was not satisfied.

relationship between foreign direct investments in Nigeria was developed. Following from the findings stated above, this study concludes that for a nation, irrespective of its economic ideology, to achieve meaningful and sustainable development, adequate attention must be given to a wide spread of economic activities through various means with its foreign sector activities given a priority consideration.

1. To ensure the inflow and sustenance of FDI in Nigeria, government should leverage on the market size of the economy and imbibe trade openness. This will attract more inflow of FDI in the economy.
2. Government and policy makers in Nigeria should ensure proper channelling of foreign aids, stabilize its exchange rate, reduce

unemployment rate and increase her expenditure. This is because these variables have been found to be statistically significant in reducing poverty in the country.

3. The government of Nigeria should as a matter of priority consider the interest of the economy in making policies that guide the activities of the foreign investors rather than the interest of the politicians.

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