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The Short-Run Impact of FDI on Nigerian Economy

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Abstract: **Nigeria is one of the economies with great demand for goods and services and has attracted some foreign direct investment over the years. The amount of foreign direct investment inflow in to Nigeria has reached US $ 2.23 billion in 2003 and it rose to US $ 5.31 billion in 2004 (a 138 % increase), this figure rose again to US $ 9.92 billion (an 87% increase) in 2005. The figure however declined slightly to US $ 9.44 in 2006 while it has been on astronomical fall since 2006 till date. (CBN, 2011). The question that comes to mind is, do these for actually contribute to economic growth in Nigeria? If foreign direct investment actually contribute to growth, then, the sustainability of foreign direct investment is a worthwhile activity and a way of achieving this sustainability is by identifying the factors contributing to its growth with a view to ensuring its enhancement. The nose driving this research is to determine the short run impact of FDI on economic growth, OLS with ward test analysis was employed to determine the short run analysis of impact of FDI on economic growth. The result shows that all the explanatory variables such as Gross Fixed capital formation (GFCF), Total labour force (TLBF), Foreign Direct Investment (FDI) Lending rate and Average Manufacturing Capacity Utilization (AMCU) grossly affect economic growth in Nigeria. The result also implies that there exist a singleton (short run) impact of FDI on economic growth, recommendation was made that government must put in place all the pull factors such as good road, stable power supply and most essentially security of life and property of foreign investors in order to reduce the level of unemployment which serves as impediment to sustainable development in the Nation Nigeria.**

Keywords: **Foreign Direct Investment (FDI), Nigerian Economy.**

1. INTRODUCTION

1.1 Background of the Study:

With the environment of domestic and foreign policies narrowing towards a common international economic order induced globalization, foreign direct investment and now represent a major form of cross border resources flow among countries. More than before, more firms, in numerous industries and in many countries are expanding abroad through foreign direct investment (either private or portfolio). The magnitude of foreign direct investment (FDI) with the past few years has compelled discussions as to the desirability of a multinational investments agreement (MIA).

Developing countries in Africa, Asia, and Latin America has come increasingly to see that foreign Direct Investment is a source of economic development, modernization, income growth and employment and poverty reduction. These countries are successfully developing their economies under outward oriented policies, albeit in varying degrees.

Globally, economist tends to favour the free flow of capital across national borders because; it allows capital to seek out the highest rate of returns. Nigeria is reputed to be buoyantly blessed with an enormous minerals and human resources, but believed to be at high risk market for investment. Foreign direct investment can also be a veritable booster to kick starts an economy.

Nigeria in the past and present, have a large population and enlightened market; a real potential market, an investment conscious society, as well as a conducive sustainable environment for foreign private investment to thrive in the development of the economy.

Over the past two decades, Nigeria have implemented broad ranging economic reforms, including the liberalization of foreign trade and investment regimes domestic market and privatization of state companies which has had an effect on the flow and nature of foreign investment.

Nigeria especially since the African financial crisis has become much more liberal in its' economic policies to attract more foreign direct investment to increase its economic growth and development. Hence, (though not mentioned explicitly in official policy statement), to alleviate poverty in the country.

Foreign direct investment can be described as investment made so as to acquire a lasting management interest (for instance, 10% of voting stocks) and at least 10% of equity shares in an enterprise operating in another country other than that of investors' country (M.Willima 2003; World Bank 2007). Policy makers believe that foreign direct investment (FDI) produces positive effect on host economies. Some of these benefits are in the form of externalities and adoption of foreign technology. Externalities here can be, in form of licensing agreement, limitation, employee training and the introduction of new processes by the foreign firms. (Alfaro 2006).

According to Tang, Selvanathan and Selvanathan (2008), Multinational Enterprises (MNES) diffuse technology and management know –how to domestic firms. When foreign direct investment (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 recipient countries or economy. In addition (FDI) help in bridging the capital shortage gap and complement domestic investment especially when it flows to a high risk areas of new firms where domestics resources are limited. (Noorzoy, 1979).

Nigeria is one of the economies with great demand for goods and services and has attracted some foreign direct investment over the years.

The amount of foreign direct investment inflow in to Nigeria has reached US $ 2.23 billion in 2003 and it rose to US $ 5.31 billion in 2004 (a 138 % increase), this figure rose again to US $ 9.92 billion (an 87% increase) in 2005. The figure however declined slightly to US $ 9.44 in 2006 (Loco Monitor. Com.). The question that comes to mind is, do these for actually contribute to economic growth in Nigeria? If foreign direct investment actually contribute to growth, then, the sustainability of foreign direct investment is a worthwhile activity and a way of achieving this sustainability is by identifying the factors contributing to its growth with a view to ensuring its enhancement.

In recent times, the government of Nigeria has embarked on economic policies to check the flow of foreign private investment in certain sectors of the economy. Admittedly, how to achieve rapid economic development through foreign investment has proved to be one of the economic problems facing Nigeria.

Therefore, this work tends to analyze critically the following

A: The determinants of Foreign Direct Investment (FDI) in the Nigerian economy.

B.The impact of foreign investment on the growth of the Nigerian economy.

2. LITERATURE REVIEW

This chapter highlights some relevant theoretical and empirical studies on the impact of Foreign Direct Investment on economic growth in Nigeria. The review enlightens us on determinant of FDI, and its impact on economic growth. Also, it reviews the relationship that exists between the variables under consideration and provides theoretical and empirical background for the methodology adopted in section three.

Foreign direct investment (FDI) is a major component of foreign investment. FDI is generally investment made to acquire lasting interest in an enterprise operating in an economy other than that of the investor, the investor's purpose being an effective voice in the management or control of an enterprise (IMF, 1977). FDI, which is mostly carried out by multinational corporations, differs from portfolio investment in that the former does carry control over the borrowing entity while the latter may not involve any direct control over the use of lending funds. In recent years, FDI has gained

renewed importance as a vehicle for transferring resources and technology across national borders. As the developing world's access to international capital in the form of official development assistance and commercial bank borrowing is shrinking due to a massive flow of funds from the Western world to the newly emerging market-based economies of Central and Eastern Europe, the poor countries are intensifying their efforts to attract FDI. To succeed in this venture, Nigeria must identify the major factors determining the inflow of FDI.

Nigeria as a country, given her natural resource base and large market size, qualifies to be a major recipient of FDI in Africa and indeed is one of the top three leading African countries that consistently received FDI in the past decade. However, the level of FDI attracted by Nigeria is mediocre compared with the resource base and potential need (Asiedu, 2003). Although some FDI promotion efforts are probably motivated by temporary macroeconomic problems such as low growth rates and rising unemployment, there are also more fundamental explanations for the increasing emphasis on investment promotion in recent years. In particular, it appears that the globalization and regionalization of the international economy have made FDI incentives more interesting and important for national governments. Foreign direct investment has been proved in the literature to be an important promoter of growth in its own right. In effect, FDI is argued to increase the level of domestic capital formation. This also implies producing on large scale which in turn results in benefits of economies of scale and specialization and also increasing export and employment opportunities.

As for the instruments, FDI capital comprises the capital provided (either directly or through other related enterprises) by a direct investor to a direct investment enterprise and the capital received by a direct investor from a direct investment enterprise. Firms pursuing international business opportunities analyze a number of factors regarding the FDI location decision (Porter, 2000). At the same time, countries compete to attract foreign firm's FDI inflows.

2.1 Theoretical review:

2.1.1 Heckscher-Ohlin Export Theory:

Two Independent Swedish Economists: Eli Heckscher and Bertil Ohlin in 1933, postulated a theory called ***Heckscher - Ohlim theory*** of export (trade). The theory states that the main determinant of the pattern of production, specialization and export among regions is the relative availability of factor supplies. Regions or countries have different factor endowments and factor supplies. Therefore, some countries that are rich in capital will export capital-intensive goods and countries that have much labour will export labour-intensive goods. Hecksher - Ohlim theory presents the issue that international and interregional differences in production costs occur because of the differences in the supply of production factors (Ball, McCullock,

1999). Those goods that require a large amount of the abundant, that is, less costly, factor will have lower production costs, enabling them to export for less in international markets (Salvatore, 1995). The theory of export is also known as the international trade theory as it is known today sprang from the works of Adam Smith, precisely from his "An Enquiry into the Nature and causes of Wealth of Nations", published in 1776. Nevertheless, before Adam Smith, the prevailing idea that surrounded export was that of the mercantilist school of thought which was based on the belief that the total wealth of the world was fixed. Hence, as countries would involve in trade freely, material gains achieved by some nations would be at the expense of, at least, some other nations.

The mercantilists maintained that a country's wealth was measured by its holdings of gold and silver (Mahoney, Trigg, Griffin and Pustay 1958). This required the countries to maximize the difference between its exports and imports by promoting exports and discouraging imports. Precisely, the mercantilists posited that a nation, which imported more goods than it exported abroad, would lose gold and silver, which were the measures of wealth then, in paying for the imported goods. Succinctly, the mercantilists restricted trade policy was refuted by Adam Smith (1776) in his work "An Enquiry into the Nature and Causes of the Wealth of Nations", which became the basis for export trade postulate of the classical and neoclassical economists, (Essien, 2006).

External reserves according to IMF (1993) "consist of official public sector foreign assets that are readily available to and controlled by the monetary authorities fordirect financing of payment imbalances, and directly regulating the magnitude of such imbalances, through intervention in the exchange markets to affect the currency exchange rate and/or for other purposes".

The Central Bank of Nigeria (CBN) Act 1991 vests the custody and management of the country's external reserves in the CBN. The Act provides that the CBN shallat all times maintain a reserve of external assets consisting of gold, balance at any bank outside Nigeria where the currency is freely convertible; treasury bills; securities of or guarantees by a government of any country outside Nigeria, securities of or guarantees by international financial institutions of which Nigeria is a member; Nigeria's gold tranche at the international monetary fund and allocation of special drawing rights made to Nigeria by the International Monetary Fund.

Though the management of foreign exchange reserves of a country is the exclusive responsibility of the central bank, the quantum of reserves to be held at any point in time depends on several exogenous factors, depending on its development objective and the prevailing economic management challenges.

The literature suggests that reserves are held for both transaction and precautionary motives (Mendoza, 2004). In principle, countries hold reserves in order to meetunexpected and temporary fluctuations in international payments. In this context, the optimal size of reserves depends on the balance between the macroeconomicadjustment costs that result if reserves are exhausted and the opportunity cost of holding reserves (Heller, 1996). According to Gosselin and Parent (2005), there isa relatively stable long run reserve demand function that depends on five categories of explanatory variables; economic size, current account vulnerability, capital account vulnerability, exchange rate flexibility, and the opportunity cost.

Reserve holding is expected to increase with economic size and the volume of international transactions. Thus, in view of the nature of commodity base production and oil export in Nigeria, both the level and growth rate of output are expected to influence reserve accumulation.

Increased current and capital account vulnerability should motivate central banks to hold more reserves, while exchange rate flexibility reduces demand for reserves.

Economic theory predicts that the higher the opportunity cost of holding reserves the lower the demand for reserves. In their own contribution, Burkee and Lane (2001) opine that, apart from trade openness, financial depth and external indebtedness also influence the demand for international reserves. Aizenman and Marion (2004) point out that the size of international transactions; their volatility, exchange rate arrangement and political stability are some of the key determinant of international reserve holdings in most East Asia. Focusing on Korea, Aizenman et al. (2003) found evidence of a structural break in the pattern of reserve holding post-Asian crisis after which financial openness and external indebtedness have become significant and a strong predictor of reserve holdings, while trade openness loses some significance after the crisis.

Transversely, according to Adam and Leonce (2007), to investigate the crowding out effect of external reserves on both public and private investment, Real GDP growth, domestic credit to public sector (for public investment) and interest rate and exchange rate expectations (for private investment) served as additional variables to external reserves. The same authors considered monetary variables such as interest rates, inflations rate, as additional variables to external reserve in exchange rate equation and finally, only the lag value of inflation rate was added for inflation equation.

There is no doubt as to the usefulness of foreign reserves as a tool to avoid crises as argued by Fischer (2001), but there is a limit to the amount of foreign reserves needed to prevent the financial crisis, going by the fact that holding large foreign reserves can imply costs. If foreign reserves accumulation is driven, for instance, by precautionary motives, it should stop at the stage where the optimal level has been reached. This, however, does not happen in the present circumstance. This thus raises the question about what constitutes an adequate foreign reserve.

FrenkelandJovanovic (1981) states that most of the rules for a country's demand for foreign exchange reserves consider real variables, such as imports, exports, foreign debt, severity of possible trade shocks and monetary policy considerations. Similarly, Shcherbakov (2002) states that, there are some common indicators that are used to determine the adequate level of foreign reserves for an economy. According to him, some of these indicators determine the extent of external vulnerability of a country and the capability of foreign reserves to minimize this vulnerability. These indicators includes: import adequacy, debt adequacy and monetary adequacy.

The traditional and most prominent factor considered in determining foreign reserves adequacy is the ratio of foreign reserves to imports (import adequacy). This represents the number of months of imports for which a country could

support its current level of imports, if all other inflow and outflow stops. As a rule of thumb, countries are to hold reserves in order to cover their import for three to four months. According to the International Monetary Fund, 2000), the guideline of three months of imports has been in force for a few years now.

However, with the Asian crisis of the late 1990s this measure has been questioned by experts. Currently some are of the view that twelve months of imports is adequate, while others argue that the number of months of coverage is of limited importance, since the focus is on the external current account. This group argued that foreign reserves adequacy should focus on the vulnerabilities of capital accounts. Countries that are vulnerable to capital account crisis should hold foreignreserves sufficient enough to cover all debt obligations falling due within the succeeding year.

Foreign direct investment is therefore supposed to serve as a means of augmenting Nigeria's domestic resources in order to carry out effectively her development programmes and raise the standard of living of her people (Shiro, 2005).

Ayanwale (2007) investigated the empirical relationship between non-extractive FDI and economic growth in Nigeria. Using OLS estimates, he found that FDI has a positive link with economic growth but cautioned that the overall effect of FDI on economic growth may not be significant. Herzer et al (2006) using a bivariate VAR modeling technique, found evidence of a positive FDI-led 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 set of countries. A slight difference from this result is observed in Okodua (2009) who examined the sustainability of the FDI-growth relationship in Nigeria. Using the Johansen cointegration framework and a multivariate VAR within a vector errorcorrection model, found evidence of a long-run equilibrium relationship between economic growth and FDI inflows. The study also revealed a unidirectional causality from FDI to economic growth.

2.2 Theoretical framework on Foreign Direct Investment:

A number of theories have been developed to explain the determinants of FDI. Extensive reviews of the main FDI theories and determinants of FDI range from the economic theories of Vernon (1966), the internationalisation theories of Rugman (1981) and Dunning's (1993) eclectic paradigm. However, the main theory adopted in this paper are drawn from Dunning (1977; 1993) who suggested that the main factors that drive FDI inflows have been the need to secure market access, the opportunities presented by large scale privatization processes and the degree of political and economic stability.

The eclectic paradigm of Dunning, also known as OLI, proposes that the undertaking of FDI is determined by the realization of three groups of advantages and they are:

- Ownership – specific advantages – these arise from the firm's size and access to markets and resources, the firm's ability to coordinate complementary activities like manufacturing and distribution and the ability to exploit differences between countries.
- Locational advantages – this includes differences in country natural endowments, transport costs, macroeconomic stability, cultural factors and government regulations. These help to determine which countries are host to MNEs foreign production.
- Internationalisation incentives – this arises from exploiting imperfections in external markets. These include the reduction of uncertainty and transaction costs in order to generate knowledge more efficiently and the reduction of state – generated imperfections such as tariffs, foreign exchange controls and subsidies.

Considering the objective of the research, an emphasis has been placed on the locational determinants of FDI. According to Erdal and Tatoglu (2002), the locational determinants of FDI can therefore be summarized as market size and market growth, raw materials and labour supply, political and legal environment, host government policies, geographical proximity and host country infrastructure.

However, additional research needs to be conducted to examine the empirical link between FDI and Economic Growth leakages in Nigeria in greater detail.

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3. METHODOLOGY

This section deals with the procedure and method used in carrying out the study, "The impact of Foreign Direct Investment on economic growth in Nigeria". It entails the research design, population of the study, sample and sampling techniques, instrument for data collections, validity and reliability of the instrument and method of data analysis.

Time Series data were collected over a period of time from 1981-2013 on five variables which are Real Gross Domestic Product (RGDP), Foreign Direct Investment (FDI), Gross Fixed Capital Formation (GFCF) Exchange Rate (ER) and Interest rate (IR).

3.1 Model Specifications:

In order to achieve the objectives of this work, a linear regression model was formulated. The model is stated as follows:

GDP=f(FDI,GFCF,INTR,EXR)……..... (l)

This equation can be transformed into a linear function thus:

$GDP= b_0 + b_1INTR+ b_2FDI + b_3GFCF + b_4EXR + Ut$ ..... (2)

Theoretically, the coefficients of equation (2) are expected to take these signs:

b1 <0, b2>0, b3>0, b4 >0

Where:

GDP = Gross Domestic Product

GFCF= Gross Fixed Capital Formation

FDI = Foreign Direct Investment

INTR = Interest Rate

AMCU = Average Manufacturing Capacity Utilization

TLBF = Total Labour Force

b0 = the constant

b1- b4 = the coefficients of the explanatory variables

Ut = Error term

Meanwhile, we introduced log in the equation to improve the linearity of the equation.

$LnGDPt=b_0+b_1LnFDIt+b_2LnINTRt+b_3LnGFCFt+b_4LnTLBFt+Ut$..... (3)

3.2 Method of Data Analysis:

This work used OLS multiple regressions to determine the effect of the independent variables on the dependent variable. And so, to improve on the linearity of the model we introduced log in the model. The choice of OLS is mainly because it minimizes the error sum of squares and has a number of advantages such as unbiasedness, consistency, minimum variance and efficiency; it is widely used based on its property of BLUE (Best, Linear, Unbias, Estimate), simple and easy to understand. (Koutsoyannis: 1971; Gujarati: 2004).

The study specifically used the multiple regression (OLS) ordinary least square method to analyze the data. This model was employed in an attempt to determine the impact of FDI on Economic Growth in Nigeria.

3.3 Method of Evaluation:

The evaluation consists of deciding whether the estimates of the parameters are theoretically meaningful and statistically satisfactory. For this purpose the three basic criteria ('a priori'. Statistical, econometrics) are used to evaluate the model specified.

The 'a priori' criteria: This refers to the signs and magnitude of the coefficients of the variables.

Statistical Criteria: This study makes use of statistical criteria like standard error, t-statistics, probability value and coefficient of determination. Higher standard errors imply inefficient estimates while low standard errors imply efficient estimates.

Econometrics Criteria: The econometrics criteria aimed at investigating whether or not the assumptions of the econometrics method is satisfied. The econometrics criteria make use of the F-test in testing the overall significance of model and the stability of coefficients.

4. DATA ANALYSIS AND DISCUSSION OF FINDINGS

This chapter deals with the presentation and analysis of the data, interpretation of results collected from different publications, and implication of the Results.

4.1 Presentation and Analysis of Results:

The result obtained from the regression analysis carried out on the equation specified in the previous chapter will be used to draw up the conclusions and possible recommendations for the study.

4.1.1 Unit Root Tests:

Prior to the estimation of OLS, the characteristics of the data have to be examined. Testing the stationary of economic time series data is important since standard econometric methodologies assume stationarity in the time series while they are in the real sense non-stationary. Hence, the usual statistical tests are likely to be inappropriate and the inferences drawn are likely to be erroneous and misleading. For example, the ordinary least squares (OLS) estimation of regressions in the presence of non-stationary variables gives rise to spurious regressions if the variables are not co-integrated (Granger & Newbold, 1974).

The trends of all the variables were used to conduct unit root tests to determine the stationarity of the variables using both the Augmented Dickey-Fuller (ADF) test. The results of the unit root tests are presented in tables 1. The results in Table 1 show that all the variables are stationary in their first differences otherwise issues were stated in the table.

Table 1: Results of Unit Roots Tests using Augmented Dickey Fuller (ADF) for the time series data used in the empirical analysis.

Table 1: Stationarity of the Time Series Data

Variables	ADF Statistical with Intercept	Probability	Order of Integration
GDP	-3.2939*	0.0239	I(1)
FDI	-3.499*	0.0087	I(1)
GFCF	-4.1177*	0.0032	I(1)
TLBF	-3.5755*	0.0187	I(1)
LEND	-4.5341	0.0014	I(1)
AMCU	-2.9374	0.0453	I(1)

**significant at 5 percent level*
Source: Author's Computation

The empirical evidence, from many literatures, has shown that most of the time series data are not stationary, this research work makes use of Augmented Dickey fuller test due to the problem of autocorrelation associated with the original Dickey Fuller using the model $\Delta Y_t = k\,\beta_1 + ZY_t + ai + et$ (Intercept Only). The null Hypothesis stated that the times series variables are not stationary or have unit root. The test in the above table reveals that the entire variables are stationary in their first difference without any exception of any variables.

4.2 Empirical Analysis of Data:

The estimate of stocastic model and relevant statistics for FDI and Economic growth is shown below. The co-efficient of explanatory variables are estimates of the model parameters. The estimations are based on data in the table while evaluations are based on relevant statistics.

In the study linear multiple regression [OLS] techniques were used to analyze the data which is given as follow:

$GDP = \alpha_0+\alpha_1 (FDI) +\alpha_2 (GFCF) +\alpha_3 (LEND) + \alpha_4 (TLBF) +\alpha_4 (AMCU) +U$

Where:

GDP = Real Gross Domestic product proxy for Economic growth

FDI = Foreign Direct Investment proxy Foreign Asset in Nigeria

GFCF = Physical capital formation proxy gross fixed capital formation

TLBF = Total Labour Force proxy for Working Human capital in the economy

LEND= Lending rate proxy by Interest rate

α_0, α_1, α_2, α_3, and α_4 were parameters

μ = Error Term

Time series data were used for the analysis. E-view7 Windows econometric package was used to process the data obtained.

The OLS Result of the data is shown below:

Dependent Variable: GDP

Method: Least Squares

Date: 02/20/15 Time: 04:51

Sample (adjusted): 1981 2012

Included observations: 32 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-257.0895	42.10319	-6.106178	0.0000
FDI	0.015544	0.003880	4.006361	0.0005
GFCF	0.569205	0.158653	3.587722	0.0014
LEND	2.029359	0.858022	2.365159	0.0258
TLBF	1.54E-05	1.12E-06	13.70976	0.0000
AMCU	0.496128	0.425139	1.166978	0.2538

R-squared	0.990820	Mean dependent var	432.9719
Adjusted R-squared	0.989055	S.D. dependent var	186.3428
S.E. of regression	19.49475	Akaike info criterion	8.945528
Sum squared resid	9881.173	Schwarz criterion	9.220353
Log likelihood	-137.1284	Hannan-Quinn criter.	9.036625
F-statistic	561.2763	Durbin-Watson stat	0.911609
Prob(F-statistic)	0.000000		

The numbers in parenthesis under the parameter estimate of the corresponding standard errors. This establishes that the degree of error terms is considerably minimized and hence the estimates are reliable. The parameter estimates comply with a priori expectations which explain that Economic growth is grossly dependent on the level of Foreign Direct Investment and other explanatory variables.

Considering the magnitude 1% increase in GDP (proxy Economic growth) is brought about by 1.5% increase in Foreign Direct Investment (FDI), 57% increase in (GFCF) gross fixed capital formation, 202% increase in (LEND) Lending rate proxy for interest rate, 154% increase in (TLBF) Total labour force, 49% increase in Average Manufacturing Capacity Utilization. This postulates that an increase in FDI and other related variables will lead to astronomical increase in GDP, proxy for economic growth in Nigeria. The estimated value of R^2 (goodness of fit) of 0.99 or 99% shows that 99% systematic variation in GDP is caused by variation in total labour force, FDI, LEND, AMCU and gross fixed capital formation. This equally ascertains that apart from the parameters or outside the scope of this analysis accounts for about 1% variation in the Economic Growth which is covered by the error terms (μ).

The adjusted R^2 when the degree of freedom is considered with the number of explanatory variable also explain the 99% variation in Real GDP. However, the analysis is statistically significant.

The overall significance of the entire model or the goodness of fit of the model as measured by the F-statistic shows that the F-statistic calculate (F^*) is greater than the F-statistic tabulated (F) at 5% level of significance, hence we accept the alternative hypothesis that variation in, total labour force, Lending rate, Average Manufacturing Capacity Utilization, gross fixed capital formation, and Foreign Direct Investment grossly affect Economic Growth in Nigeria and ultimately affect sustainable development in Nigeria. However, the analysis applies with econometrical criteria and shows that the model has overall significance and the coefficients are stable.

Gross Fixed Capital Formation (GFCF) which is also an important variable in the model, shows a positive relationship with Real GDP and is also very significant. From the result it shows that a 1 percent increase in gross fixed capital formation (GFCF) will lead to 107% rise in Real GDP which is referred to as an astronomical increase or rise in RGDP [Economic growth]. This explains that when the government starts investing in fixed capitals such as plants and machinery, Factory, land and its buildings, patients, copyrights, goodwill, computing and communication infrastructure that mostly include work station, servers, data storage, facilities, local area network, the internet, telephone fax e.t.c., it would result in the existence of these things for long term needs. Gross fixed capital formation has shown a good and positive relationship with Real GDP and Economic growth in Nigeria which if invented in would help improve the real gross domestic products of Nigeria.

Labour force [TLBF] which is positively related to Economic growth is a significant factor that determines economic growth in Nigeria since $P<0.05$ it was significant at 5% level of significance. This implies that a 1percent rise or increase in labour force will surely lead to about 0.00091% increase in Real GDP as well as (Economic growth) in the Nigerian Economy which shows an astronomical rise. When the Nigerian government invests in the quality of labour force, unemployment rate will reduce, for example formal labour which is a sort of employment that is structured and paid in a formal way, contributes greatly to the Nigerian Gross National Product which yields higher income and great benefits and securities for both men and women. From the result above it is shown that investment in the Nigerian labour force would improve the Real GDP (Economic growth) of the economy and would lead Nigeria into being a Developed Nation.

The F-statistic shows a value of approximately 561.2 which indicates that the overall model is significant with the probability value being $P=0.00$ which indicates a significance at 1 percent level.

The Durbin-Watson statistics shows a value of approximately 0.912 which shows the presence of positive serial correlation.

The Akaike information criterion and Schwarz criterion shows about 8.94 and 9.22 respectively which indicates that the model selection is good.

The Hannah-Quinn criterion also shows about 9.03 consequently the conformity with the expected sign indicates that there is a direct relationship between each of the variables and Economic growth.

For the Reliability of the result, whiteheteroskedacity-consistent standard errors & covariance with the HAC standard errors and covariance test were used simultaneously which gives the result pasted below:

White heteroskedasticity-consistent standard errors & covariance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-257.0895	48.10200	-5.344675	0.0000
FDI	0.015544	0.004641	3.349492	0.0025
GFCF	0.569205	0.170443	3.339551	0.0025
LEND	2.029359	0.629378	3.224390	0.0034
TLBF	1.54E-05	1.16E-06	13.24306	0.0000
AMCU	0.496128	0.373652	1.327780	0.1958

R-squared	0.990820	Mean dependent var	432.9719
Adjusted R-squared	0.989055	S.D. dependent var	186.3428
S.E. of regression	19.49475	Akaike info criterion	8.945528
Sum squared resid	9881.173	Schwarz criterion	9.220353
Log likelihood	-137.1284	Hannan-Quinn criter.	9.036625
F-statistic	561.2763	Durbin-Watson stat	0.911609
Prob(F-statistic)	0.000000		

HAC standard errors & covariance (Bartlett kernel, Newey-West fixed bandwidth = 4.0000)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-257.0895	67.38712	-3.815114	0.0008
FDI	0.015544	0.006743	2.305341	0.0294
GFCF	0.569205	0.176426	3.226312	0.0034
LEND	2.029359	0.644476	3.148849	0.0041
TLBF	1.54E-05	1.69E-06	9.066106	0.0000
AMCU	0.496128	0.327069	1.516889	0.1414

R-squared	0.990820	Mean dependent var	432.9719
Adjusted R-squared	0.989055	S.D. dependent var	186.3428
S.E. of regression	19.49475	Akaike info criterion	8.945528
Sum squared resid	9881.173	Schwarz criterion	9.220353
Log likelihood	-137.1284	Hannan-Quinn criter.	9.036625
F-statistic	561.2763	Durbin-Watson stat	0.911609
Prob(F-statistic)	0.000000		

From both results above, R^2 remains the same and also with other statistical method of evaluation. However the model is reliable. This simply implies that the result is reliable for policy recommendation.

The above regression result has the consistent problem of auto-correlation which is shown by Durbin-Watson autocorrelation evaluation method with the result 0.96 for all three ways of statistical evaluation that shows consistent problem of auto-correlation.

However, the study makes use of different procedure to ensure that the results of the regression results are reliable. Durbin Watson *d* test had some draw because of it inconsistence. Breusch-Godfray tests are used to detect fitness of model.

Durbin-Watson *d* test is simply the ratio of sum of the squared difference in successive residuals to the RSS. This test is used to find problem of autocorrelation in the model. To avoid some of the drawbacks of the Durbin Watson d test of the autocorrelation, Breusch and Godfray have constructed a test of autocorrelation that allows for: non stochastic regressors, such as the lagged values of the regressends; and higher order auto regressive schemes such as AR1, AR2.(Gujrati, 2004). The null hypothesis state that there is problem of auto-correlation while alternative hypothesis against it.

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	5.511653	Prob. F(2,24)	0.0107
Obs*R-squared	10.07175	Prob. Chi-Square(2)	0.0065

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 02/20/15 Time: 04:56

Sample: 1981 2012

Included observations: 32

Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-15.02120	37.18554	-0.403953	0.6898
FDI	-0.002121	0.003449	-0.614931	0.5444
GFCF	0.006905	0.136871	0.050448	0.9602
LEND	-1.027887	0.809058	-1.270474	0.2161
TLBF	1.03E-06	1.04E-06	0.992684	0.3308
AMCU	-0.008344	0.367846	-0.022683	0.9821
RESID(-1)	0.551556	0.210531	2.619833	0.0150
RESID(-2)	0.223042	0.226748	0.983653	0.3351

R-squared	0.314742	Mean dependent var	1.84E-14
Adjusted R-squared	0.114875	S.D. dependent var	17.85350
S.E. of regression	16.79677	Akaike info criterion	8.692568
Sum squared resid	6771.153	Schwarz criterion	9.059002
Log likelihood	-131.0811	Hannan-Quinn criter.	8.814030
F-statistic	1.574758	Durbin-Watson stat	1.571096
Prob(F-statistic)	0.190884		

The result gives the probability values of Pro F(2 26)= 0.0107, and Prob chi-square(2)=0.0065 which is significant at 5% significant level and move against the Durbin Watson d test of presence of positive serial correlation. However the Breusch and Godfray test shows absence of serial correlation.

The wald test of significant impact of explanatory variable is presented below to show the single impact of FDI on economic growth, the null hypothesis of the test indicates that FDI is equal to zero c(4)=0, while alternative hypothesis is against it.

Wald Test:
Equation: Untitled

Test Statistic	Value	Df	Probability
t-statistic	2.305341	26	0.0294
F-statistic	5.314596	(1, 26)	0.0294
Chi-square	5.314596	1	0.0211

Null Hypothesis: C(2)=0
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(2)	0.015544	0.006743

Restrictions are linear in coefficients.

Since the t-stat, f-stat and chi-square statistics probability value are less than 0.05 or 5%. Therefore, we conclude that FDI has a singleton significant impact on economic growth.

4.3 IMPLICATION OF THE RESULT:

The Economic Implication of this result is that all the explanatory variables such as Gross Fixed capital formation (GFCF), Total labour force (TLBF), Foreign Direct Investment (FDI) Lending rate and Average Manufacturing Capacity Utilization (AMCU) grossly affect economic growth in Nigeria. The result also implies that when the government does not employ in order to increase total labour force or show concern about gross fixed capital formation by investing heavily on infrastructural facilities both social and physical which are pull factors to Foreign Investors and also create enabling environment for growth of private sector both in education and other sector it would lead to an astronomical fall in the real GDP of Nigeria which will hinder economic growth, but if the governments formulates policies and inaugurate empowerment programs in order to reduce the level of unemployment rate, increase its expenditure on infrastructural facilities which will have a positive impact on the country's welfare, there is bound to be an increase in the real GDP and eventually, the economic growth of the country.

5. SUMMARY, CONCLUSION AND RECOMMENDATIONS

Having reviewed some of the related literatures and collected all necessary data's, which have been analyzed and discussed in chapter four. This chapter therefore provides a summary, and conclusion. Recommendations were also made in line with the results and suggestions for further research studies were provided.

5.1 Summary:

The study focused on the impact of FDI on economic growth in Nigeria. It set out a conceptual framework for analyzing the terms involved in the study such as economic growth, determinant of FDI, IS LM frame work of FDI. The research also examines policies and problems of FDI in the country and solutions to the highlighted problems.

Effort were made to explains the impact of FDI on economic growth as it is. Times series data were collected from 1981 to 2013 on Real Gross Domestic Product, FDI, Gross Fixed Capital Formation, Lending rate, Total Labour Force and

Average Manufacturing Capacity Utilization to show the relationship empirically with the use of multiple regressions [OLS] method. It was fund that 99% systematic variation in GDP (Economic Growth) is caused by variation in FDI and other related variables.

5.2 Conclusions:

The study shows the impact of FDI on Economic growth. The finding concludes that there is a clear cordial relationship between Total Expenditure on Education, Gross Fixed capital formation, total labour force expenditure on health, per capital income and economic growth in Nigeria. The data shows that when or if government refuses to invest in the variables that serves as pull factor for foreign investors, it would lead to a great fall in RGDP [Economic growth] of the country. Economic growth is achieved through sound manufacturing capacity of the Nation. If FDI is believed to be the singular key that can unlock the door of development, there must be a change of attitude by the government functionaries in Nigeria as to keep up with the global trend of world Industrialized Nations BRICS (Brazil, Russia, India, China and South Africa)

The study reveals that any improvement in level of FDI will bring about a rise in RGDP (Economic growth). The study showed that FDI does not only contribute positively to economic growth in Nigeria, but the impact is strong and statistically significant.

5.3 Recommendation:

The following recommendations are made to improve the level of Economy in Nigeria:

1. The government should embark on policies that will encourage curriculum builders, teachers and students towards educational development.
2. The government should increase budgetary allocations to the Infrastructural facilities as Capital Expenditure that serves as pull factor to foreign Investors.
3. The donor agencies like the world Bank, IMF [international monetary fund's], UNDP, UNESCO etc should also be encouraged to inject funds in creating enabling environment to foreign investors.
4. The Nigerian finance system has been known to be exposed to large scale corruption, and gross inefficiencies. Corruption and mismanagement of fund should be adequately checked among educational stakeholders and to give more autonomy in financial management in public sector. The autonomy will improve their financial situation by improving the efficiency and effectiveness of resource use and cutting costs. Besides, PPP should be encouraged in the provision of enabling environment in order to generate revenue by them. For this purpose.

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