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FOREIGN PRIVATE INVESTMENT AND ECONOMIC GROWTH IN NIGERIA (1980 – 2010)

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ABSTRACT*: The study examined the impact of foreign private investment on Nigeria economic growth between 1980 and 2010. The empirical analysis was based on multiple regression technique. Economic growth was proxied by Gross Domestic Product and the result showed that foreign private investment, gross fixed capital formation and net export are positively related with economic growth while inflation rate has a negative relationship with economic growth. Hence increased inflow of foreign private investment into the country enhances economic growth in Nigeria. It is recommended that government should therefore strive to provide a conducive environment for foreign private investment in Nigeria through appropriate fiscal, monetary and general economic policies and stable macroeconomic environment.*

KEYWORDS*: Investment, Economic Growth, Foreign Private Investment and Inflation rate.*

INTRODUCTION

According to the neo-classical and endogenous growth models, the most functional factor influencing economic growth in any country is investment. It is seen as the main key to increase level of growth. Also economic theory shows that economic growth can be achieved basically in two ways: increase in the amount of factors of production and increase in the efficiency with which these factors are used. Thus, growth is induced by increase in investment (De-Gregorio, 1998). In the 70's and really 80's, most developing countries of Africa including Nigeria experienced unprecedented severe economic crisis. These crisis manifested in several ways such as persistent macro economic imbalances, high rate of domestic inflation, huge budget deficit, widening savings – investment gap and chronic balance of payment problems (Akpokodje, 1998). Presently,

population in poverty and related statistics show unemployment and income inequality in Nigeria is quite unacceptably high. In 2012, the country has unemployment rate of 21.35% broken down into 17.1% in the rural areas and 25.6% in urban (NBS, 2012).

Studying the impact of foreign financial flow such as foreign private investment and aid on economic growth or domestic savings of a country has been a topic of considerable economic as well as practical interest in policy arena. In fact considering the expected decline using the 1970s in the supply of commercial flow particularly to the developing countries. The question of the impact of foreign capital on economic growth and other important macro-economic variables such as savings and investment assumes a renewed significance. More especially when the present Civilian Administration was searching for policy strategy to be adopted for transforming the Nigerian economy.

Foreign private investment could play an important role in the economic development of a country especially a developing one like Nigeria. Although foreign private investment is made up of Foreign Direct Investment and Foreign Portfolio Investment, according to the world latest development report. In 1988, direct Foreign Investment, surpasses all other forms of lending as a source of foreign capital to developing countries because it disseminates advanced technology and managerial practices through the host country and thereby exhibit greater positive externalities compared to foreign portfolio investment which may not involve positive transfer but just a change in ownership. In addition, available data suggests that foreign direct investment flows tend to be more stable compare to foreign portfolio investment (Lipsey, 1999).

Feldstein (2000) emphasized that international flow of capital reduces the risk faced by owners of capital by allowing them to diversify their lending and investment. Also, the global integration of capital market can contribute to the spread of best practices in corporate governance, accounting rules and legal traditions. In addition, the global mobility of capital limits the ability of government to pursue bad policies. Furthermore, foreign investment through foreign direct investment allows for the transfer of technology particularly in the form of a new variety of capital inputs that cannot be achieved through financial investment or trade in goods and services.

Nigeria is one of the few countries that have benefitted from the inflow of foreign private investment to Africa. Nigeria's share of foreign private investment inflow to Africa average around 10% from 24.19% in 1990 to a low level of 5.88% in 2001 up to 11.65% in 2002 (CBN, 2004). UNCTAD (2004) showed Nigeria as the continent's second top foreign private investment recipient after Angola in 2001 and 2002. Foreign private investment forms a small percentage of the nation's GDP, however, making up to 2.47% in 1970, -0.81% in 1980, 6.24% in 1989 and 3.93% in 2002 (CBN). Despite al these huge inflow of capital into the country, much can not be said about economic growth in Nigeria. This study therefore attempts to find out if a significant long-term relationship exists between the flow of foreign private investment and economic growth

in Nigeria, to ascertain the viability of foreign private investment for promoting growth in Nigeria and to analyze the trend of foreign private investment in Nigeria economy.

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Many authors have in one way or the other investigated the theoretical framework on the linkage between foreign private investment and economic growth. Sethi (2007) examined the impact of international capital flows on economic growth in India by using time series analysis for the period of 1995-2007. Various variables were taken into consideration in the study namely; real Gross Domestic Product (GDP), Foreign Direct Investment (FDI), Foreign Portfolio Investment (FPI) and Foreign Indirect Investment (FII). All the variables are statistically significant. The finding shows that FII has shown negative impact on economic growth while FDI and FPI showed positive impact. Borensztein et al (1998) used panel data for 69 developing countries over two periods, 1970-79 and 1980-89 to investigate the impact of FDI on growth. They found that FDI has a positive impact on growth but it is only realized when their measure of schooling is above some critical level (estimated at 0.52). Neanidios and Varvarigos (2005) used Generalized Method of Moment (GMM) to examine the impact of foreign aids on economic growth for 74 recipient countries by using panel data over the period of 1972-1992. Their results showed that when foreign aids is used productively, it will have positive effect on economic growth.

In Africa, foreign private investment has been found to enhance economic growth although it crowds out domestic investment. Fedderke and Romm (2005) were concerned with the growth impact and the determinants of foreign direct investment in South Africa. Their estimation is in terms of a standard spillover model of investment, and in terms of a new model of locational choice in FDI between domestic capital and foreign alternatives. They find complementarities of foreign and domestic capital in the long run, implying a positive technological spillover from foreign to domestic capital. While there is a crowd-out of domestic investment from foreign direct investment, this impact is restricted to the short run. Gyapong and Karikari (1999) used correlation and causality test to examine the causal relationship between direct foreign investment (DFI) and economic performance in two Sub-Saharan African countries (Ghana and Ivory Coast), from the 1960s to 1980. Their results showed that the impact of higher economic performance on direct foreign investment depends crucially on the strategy of the investment. Specifically, in Ivory Coast, superior economic performances enhance the inflow of export-oriented DFI; but in Ghana, where DFI took the form of market-development in response to an import-substitution strategy, the effect is ambigious.

In Nigeria as well, several scholars have studied the role and impact of foreign private investment on economic growth in the country. Akinlo (2004) used Error Correction Model (ECM) to investigate the impact of FDI on economic growth in Nigeria for the period 1970-2001. The result established a positive and significant impact of export on growth. Eke et al. (2003) used causality test to analyze the impact of FDI on economic growth in Nigeria. The result indicated that causality

runs in both directions. They concluded that foreign direct investment is relevant and also significant in determining the real development in Nigeria. Ayashagba and Abachi (2002) also carried out an empirical investigation on the effects of foreign direct investment on economic growth in Nigeria from 1980-1997. The result showed that foreign direct investment had significant impact on growth in Nigeria.

This study is an improvement on the previous works on the relationship between foreign private investment and economic growth in Nigeria for two reasons. Firstly, the study considers inflation rate as an important variable that affects economic growth. Most studies like Akinlo (2004), Eke et al. (2003) did not include inflation rate as a variable in their models. Secondly, this research work covers up to period 2010.

DATA AND METHODOLOGY

This study involves the use of two quantitative techniques: unit root tests and Johansen Maximum Likelihood Test of Co-integration. The results obtained from data collected will help in achieving the stated objectives for the research. The model is specified in a way that establishes a functional relationship between economic growth and foreign private investment. The variables used are based on the Neo – Classical Growth Model.

The model specified for this research work is

$Gy = f(FPI, INF, GFCF, NEX)$……..……(i)

$Gy = \alpha_0 + \beta_1 FPI + \beta_2 INF + \beta_3 GFCF + \beta_4 NEX + e$…….. (ii)

Apriori Expectation: $\beta_1, \beta_3, \beta_4 > 0$, while $\beta_2 < 0$

Where Gy = Growth rate of GDP

FPI = Foreign Private Investment

INF = Inflation rate

GFCF = Gross Fixed Capital Formation

NEX = Net Export

α_0 = Constant parameter

$\beta_1 – \beta_4$ = Elasticity Co-efficient

e = Stochastic error term

Based on the nature of the study, data collection is mainly secondary. The source of the data includes: statistical Bulletin of the Central Bank of Nigeria (CBN), the Central Bank of Nigeria Annual Report and Annul Abstract of Statistics of the National Bureau of Statistics (NBS).

EMPIRICAL RESULTS AND DISCUSSION

Descriptive Analysis

The table 4.1.1 below shows the descriptive statistics of the variables involved in the analysis. For GDP, its average value from 1980 to 2010 gives a total of 5193812 while its maximum and minimum within the periods are given to be 24712670 and 47619.70. This shows that Nigeria has been experiencing growth over the years. The average value of FPI over the years is given to be 120770.5 while its maximum and minimum are given to be 441271.3 and 3620.100. This shows that Nigeria has greatly benefitted from the inflow of foreign private investment. However, the average value of inflation over the periods recorded 22.15667. This is delicate for any economy desirous of growth. Finally, the average value of net export recorded 1048220, while its maximum and minimum recorded 5537792 and -18449.40 over the periods. The period of negative value can be traced to the era of civil war of 1967-1970 when the entire country basically depended on importation.

Table 4.1.1: Descriptive Statistics of Explanatory Variables

	GDP	C	FPI	GFCF	INFLA	NETEX
Mean	5193812.	1.000000	120770.5	456218.2	22.15667	1048220.
Meadian	14165337.	1.000000	95053.10	141920.2	14.40000	135676.7
Maximum	24712670	1.000000	441271.3	2442704.	76.80000	5537792.
Minimum	47619.70	1.000000	3620.100	8799.500	0.200000	-18449.40
Std. Dev.	7672348.	0.000000	130049.9	681864.8	19.94689	1727664.
Skewness	1.527683	NA	0.996057	1.740496	1.302673	1.570087
Kurtosis	3.976178	NA	3.001466	4.826190	3.606065	3.854746
Jarque-Bera	12.86023	NA	4.960646	18.67149	8.943930	13.23910
Probability	0.001612	NA	0.083716	0.000088	0.011425	0.001334
Sum	1.56E+08	30.00000	3623114.	13230328	664.7000	31446592
Sum Sq. Dev.	1.71E+15	0.000000	4.90E+11	1.30E+13	11538.47	8.66E+13
Observation	30	30	30	29	30	30

Analysis of Econometric Model

The econometric analyses include the Unit not test and Johansen Maximum Likelihood Test of Co-integration.

The significance and long-run impacts of the relationship are assessed by the econometric techniques employed.

Unit Root Test Results

The result of the Unit root is used to test if the variables in the residuals are stationary or non-stationary. The existence of a stationary or a non-stationary time series determine if the variables have a long term or equilibrium between them.

The result of stationary (unit root) test is therefore shown in the table below:

Table 4.1.3 Result of Stationary (unit Root) test

Variables	ADF – Statistics	Critical Values	Order of Integration
GDP	-1.703489	1% = -3.699871 5% = -2.976263 10% = -2.627420	Stationary at level
FPI	3.766328	1% = -3.679322 5% = -2.967767 10% = -2.622989	Stationary at level
INF	-2.887244	1% = -3.679322 5% = -2.967767 10% = -2.622989*	Stationary at level
NEX	2.326195	1% = -3.769597 5% = -3.004861 10% = -2.642242	Stationary at level
GFCF	4.546374	1% = -3.724070 5% = -2.986225 10% = -2.632604	Stationary at level

Source: Authors' Computation, 2013.

From the unit root results obtained, all the variables are stationary at level except for inflationary rate which was non-stationary at 0.1 significance level. With the inclusion of one non-stationary time series, we further go ahead to carry out co-integration test to ensure that though there is non-stationary time series, the variables are co-integrated.

Johansen Maximum Likelihood Test of Co-integration

A co-integration test is performed to determine the existence of long-run relationship among the variables. This is to ensure that the regression of the variables will be meaningful and non-

spurious. It would also show if a long-run relationship exists among the variables. If the trace statistic and the max-Eigen statics are greater that the 5% critical values, the null hypothesis of no co-integration will be rejected in favour of the alternative hypothesis at that level. The trace statistic and the Max-Eigen statistic show that there is co-integration among the variables implying a long-run equilibrium relationship. Thus, this shows that there is a long-run equilibrium relationship between foreign private investment and economic growth in Nigeria (see table 4.1.4)

Table 4.1.4: Unrestricted Co-integration Rank Test (Trace and Maximum Eigen Value)

	Trace		Maximum Eigen Value	
Hypothesized No. of CE (s)	Statistic	0.5 Critical Value	Statistic	0.5 Critical Value
None*	132.6898	69.81889	68.03646	33.87687
At most 1*	64.65337	47.85613	32.92897	27.58434
At most 2*	31.72439	29.79707	20.72326	21.13162
At most 3	11.00113	15.49471	9.861176	14.26460
At most 4	1.139953	3.841466	1.139953	3.841466

Source: Authors' Computation, 2013.

From the results of co-integration test above, it is seen that both the trace statistic and the Max-Eigen statistic are greater than the 5% critical value of -2.9762. This means that there is a long-run relationship among the variables. The result is thus statistically significant. Therefore, the null hypothesis that there is no co-integration among the variables is rejected.

Generally, for estimation of the parameters of the econometric model, a multiple regression of the parameters of the econometric model, a multiple regression model was formulated to show the impact of foreign private investment on economic growth over the years (1980 – 2010)

The regression result is presented in table 4.1.5 below.

Table 4.1.5: Regression Analysis showing the Relationship between GDP and the explanatory variables.

Dependent Variable: GDP

Method: Least Squares

Date: 02/07/13Time: 09:47

Sample (adjusted): 1981 2010

Included observations: 30 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FPI	11.61244	2.620499	4.431386	0.0002
INFLATION RATE	-5195.348	5687.964	-0.913393	0.3701
NET EXPORT	1.716808	0.200643	8.556509	0.0000
GFCF	4.885050	0.607289	8.044026	0.0000
C	-51774.95	235476.1	-0.219873	0.8278
R-square	0.995262	Mean dependent var		5371197
Adjusted R-squared	0.994472	S.D. dependent var		7745292
S.E of regression	575852.1	Akaike info criterion		29.52067
Sum square resid	7.96E+12	Schwrz criterion		29.75642
Log likelihood	-423.0498	Hannan-Quinn criter.		29.59451
F-statistic	1260.344	Durbin-Watson stat		1.804528
Prob(F-statistic)	0.000000			

Source: Authors' Computation, 2013.

ECONOMIC INTERPRETATION OF FINDINGS

Gross Domestic Product (GDP) in the model is used to proxy economic growth. Therefore, the estimated results reveal that Foreign Private Investment (FPI), Net Export (NEX) and Gross Fixed Capital Formation (GFCF) have a positive relationship with real GDP, which is in line with the a'priori expectation. However, Inflationary Rate (INF) has a negative relationship with real GDP, which is conform to the theoretical basis.

The estimated results show that the variables FPI, NEX and GFCF are statistically significant in explaining changes in economic growth. However, INF is not significant in explaining economic growth. For instance, a unit increase in Foreign Private Investment, net export and gross fixed capital formation in Nigeria would bring about a more than proportionate increase in GDP by 11.61244, 1.716808 and 4.885050 respectively. While a unit in inflationary rate will bring about a more than proportionate decrease in GDP by 5195.348. Based on the rule of thumb that a variable

is said to be statistically significant if the absolute value of its t-statistic is approximately 2 or above, only INF among all the variables is not statistically significant.

Also, the result of the F-statistics reveals that the estimates simultaneously statistically significant because the F-calculated (1260.344) is greater than F-tabulated (2.37). Finally, the co-efficient of determination (R^2) shows that the explanatory variables jointly account for 96 percent changes in economic growth. This means that the regression result reveals about 96 percent of the variability in the real GDP is accounted for by FPI, NEX and GCFC over the years (1980-2010).

POLICY RECOMMENDATIONS AND CONCLUSION

Following the results of the analysis above, it is shown that there is a long-run equilibrium relationship between foreign private investment and economic growth and the relationship is elastic in nature meaning that a unit increase in foreign private investment will bring about a more than proportionate increase in GDP of Nigeria.

It is therefore recommended that for Nigerian Government in their efforts to achieve a sustainable economic growth, the following parameters need to be considered. These include creation of a conducive environment for increased foreign investment into the country. In addition, necessary steps should be taken by the government to reduce the rate of inflation in the country to enable a more stable macroeconomic environment. This will in turn accelerate economic growth. Also, the government should embark on favourable policies to improve exports in the country. This can be done by reducing export duties which in turn would encourage the production of export goods. Moreso, since capital formation is derived from savings accumulation, thus private savings should be encouraged in order to speed up capital accumulation and economic growth. This can be achieved by making interest rate attractive for both savings and investment. Lastly, it is recommended that government should invest in productive sectors of the economy and reduce wasteful spending and increase investment in infrastructure which would in turn stimulate productive activities in Nigeria.

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