

Institutional Quality, Investment and Economic Growth in Nigeria, 1990- 2017

¹Boma Cookey, ²Good Wilson, ³Monfred Baribor, ⁴Kuluma Beredugo

¹Department of Economics, Faculty of Social Sciences, University of Port Harcourt
^{2,3,4} Department of economics Faculty of social sciences Ignatius Ajuru University of Education,
Corresponding Author: +2348037779171, mcmorriscookey@gmail.com

Abstract: The objective of the study is to examine the effect of institutional quality on investment and economic growth in Nigeria from 1990 to 2016. The study used annual time series data collected from Central Bank of Nigeria (CBN) Statistical Bulletin, the Freedom House, and Heritage Foundation a. A functional model of the relationship between institutional quality, investment and Economic Growth was specified and estimated as Error Correction Model using Eigen Granger approach. The unit root test result reveals that all the variables were not stationary at level. However they all became stationary after first differencing. The co-integration analysis of the differenced variables shows that the variables are co-integrated. The result from the Error Correction Model revealed that institutional quality measured as corruption perception index has negative and significant effect on investment and economic growth; while the institutional quality measured as economic freedom and financial system efficiency has positive and significant effect on investment and economic growth. It is therefore recommended that the Nigerian government should put in place quality institutions to make the economy conducive for investment and economic growth.

Keywords: Institution, Corruption, Perception, Financial System Efficiency, Economic Growth, Investment.

1. INTRODUCTION

Nigerian economy is characterized by lots of macro-economic challenges such as high inflation, slow economic growth, unemployment, balance of payment disequilibrium and exchange rate instability, just to mention a few. The most pressing challenge of the Nigerian economy has been high unemployment rate, especially among youth. This situation is dangerous and miserable. In response to the dismal trend of unemployment in the economy, the Nigerian government has instituted different measures to stimulate economic growth in order to create employment opportunities for the teeming population. The basic assumption of the policy authorities in Nigeria is that there is a direct link between economic growth and job creation. Thus, economic growth becomes the principal objective of national policy.

In an effort to achieving this national objective and in recognition of the important role of investment to economic growth, the government rolled out policies and programmes to stimulate and attract investment into the economy. A lot of fiscal incentives, such as tax holiday, accelerated depreciation, establishment of export processing zones, and cheaper credit facility through the Bank of Industry were given to local and foreign investors (Nwankpa, 2011) It is equally noteworthy that Nigeria achieved relative price and exchange rate stability during the period 2012 to 2014(CBN,2015).

Nigeria has huge market and cheaper labour compared to South Africa, Egypt, and Kenya. In spite of the comparative advantages of Nigeria in terms of market size, labour cost, and favourable macro-economic environment over the other three countries, Nigeria could not attract appreciable foreign direct investment to stimulate economic growth as the other economies. Nigeria attracted less than 60% of the FDI to South Africa, and less than 65% of investment going into Egypt in 2013 (Bamson, 2015). In terms of growth, Nigeria's economy grew at an average of 2.7% during the period 2012 to 2014, while South Africa grew by 3.2%, Kenya 2.8%, and Egypt 2.9% respectively.

One thing is clear: classical approach to economic growth and policies geared at economic growth through investment has failed in Nigerian economy. Many theorists have put forward theoretical explanation for the marked difference in the ability of countries to attract investment and in growth rate of economies. Among the theories that have emerged as explanatory factors behind the cross-country differences in economic growth are three outstanding ones. These are the Neoclassical Growth Theory of Robert Solow (1956) and Romer (1986). The Neo-classical growth theory looks at the production function and emphasize on the importance of physical, human, capital and technology as the basic determinants of economic growth. The second theory developed by Sach (2011), Gallup (1998) and Diamond (1977) which is called Geographical/Location Theory assert that position/geography is an important determinants of economic growth such that countries in the temperate region have the potential, and can often develop more than countries in the tropics. The Third Theorist, the Institutionalist, which include Douglas C. North (1990), Robert Baro (1996), Hall and Sons (1990), admitted the importance of human and physical capital to economic growth. However, they stressed the necessary and sufficient complementary role of institutions to economic growth. According to this school of thought, institutional quality has significant role in economic growth.

Most of contemporary economic growth policies are fashion after classical and neo-classical growth paradym which place high premium on capital acquisition through investment and technological advancement (Solow, 1956; Romer, 1990, Rebelo, 1991; Mankiw 1992 Bouton and Sumlinski, 2000)..

It is apparent that Classical-Neoclassical Paradym is not effective in Nigerian economy or that the economy does not have the necessary paraphernalia to make it active. Okowa (2005) observed that institutional failure (systemic corruption) is a potent factor militating against economic growth and development in Nigerian economy.

Despite the importance of institutions to economic growth and development, only few studies in Nigeria have empirically investigated the role of institutions in economic growth. Examples of such studies include Esew and Yaroson, 2014, Adelopoet *al.* (2009) and Adeoye (2010). These studies considered only corruption and political stability on either investment or economic growth. There is the need to include more institutional measures and extend the analysis to other macro-economic variables.

The objective of the study, therefore, is to empirically analyze the effect of institutional quality on investment and economic growth in Nigerian economy.

A study of this nature is very significant to Nigerian economy. Specifically, The findings of the study will reveal the importance of institutional quality to investment and economic growth in Nigerian economy.

The remaining part of the paper is structured as follows:

Section two (2) is the Literature Review: Chapter three (3) is Method of Study and explained the method employed for collection and analysis of data. Section four (4) is the presentation of empirical result and discussion. Section five (5) was devoted to summary and conclusion from the study.

2. LITERATURE REVIEW

2.1 Theoretical literature:

The various economic theories that are relevant to growth and investment shall be treated in this section.

The International Monetary Fund (2009) states that economic growth is the increase in the amount of the goods and services produced in an economy over time. It is conventionally measured as the percent rate in real gross domestic product, or real GDP (RGDP). Growth is usually calculated in real term i.e. inflation-adjusted terms, in order to net out the effect of inflation on the price of the goods and services produced. The drivers of economic growth in an economy as posited by Dwivedi (2008), are the quality of the labour force, natural resources, capital formation, technological development and political and social factors; while Riley (2012), noted that the determinants are growth in physical capital stock; growth in the size of active labour force available for production; growth in the quality of human capital; technological progress and innovation; institutions including stable democracy, maintaining rule of law and macroeconomic stability.

Institutions refers to the collection of rules, beliefs, values and organizations which act together to encourage the proper behavior of individuals in the society. They are inter-temporary contracts which determine the actions of individuals in the society, and have also been referred to the collection of beliefs within a society with respect to the equilibrium of a game played repeatedly (Aoki, 2000; Greif, 2006). On the other hand, Levchenko (2006), defines institutions as the collection of structures which influence economic outcomes such as the safeguarding of property rights, the enforcement of contracts and investors. Institutions in the words of North (1990) “defines the choice set and therefore determine transaction and production costs and hence the profitability and feasibility of engaging in economic activity. An important institution is the level of freedom, both economic and political, that economic actors face in pursuit of their economic goals. When people are free from fear of expropriation and troubles inherent in market (information, agency, coordination, etc.) they have more incentive to invest in economic activities and do so with higher efficiency. With regard to investment the most important institution is the protection of property rights. Without secure property rights the incentives to invest will be reduced, especially in research and development activities that require large investment but, potentially, are very profitable. Corruption is an example of bad institutions and it is very harmful to investment. Investment will be lower when corruption level is high. . More seriously, corruption makes investment less profitable. Political and civil institutions are also very important for investment and economic growth. Rodrik (2000) noted that democracy is an important institution for building good institutions and said that participatory political system is the most important institution for processing and aggregating local knowledge essential for development. Dawson (1998) proved that political and civil liberties encourage investment in a cross section of 85 countries.

Harrod –Domar(1946), were interested in discovering the rate of income growth necessary for a smooth and interrupted working of the economy. Their theory assigned a key role to investment in the process of economic growth. Solow (1964) exogenous theory emphasized technology as an exogenous factor which determines growth. The crucial thing about this model is the fact that it explains the long-run per capita growth by the rate if technological progress, which comes from outside the *model*. The Solow Neoclassical growth model adds labour and technology to the argument of Harrod-Domar. Unlike the Harrod-Domar model, the Solow model assumes diminishing returns to each factor separately and constant returns to scale..Romer (1986), developed the endogenous growth theory as a reaction to the short-falls of the neoclassical (exogenous) growth theory. The theory explained the long-run growth by endogenizing productivity growth on technical progress. This asserts that economic growth is primarily a function of endogenous and not exogenous (external) factors. In other words, it holds that investment in human capital, innovation and knowledge as important contributors to economic growth. knowledge or technical advances are non-rival goods. This theory has been criticised on the assumption of diminishing returns to capital.

2.2 Empirical Literature:

Acemoglu (2001) observed that geography and institutions are the two fundamental root causes of the difference in the prosperity levels of developed and developing countries are. He opined that the geographical hypothesis is not the main cause of development. Though there is a correlation between geography and prosperity, but this correlation does not prove any causation.

Richard and Talbott (2001), in there study founda significant relationship between many institutional quality and gross national income per capita from 1995 through 1999. He found that Property rights, black market activity which was used as a proxy for enforcement of rules and regulation have the strongest effect on per capita income.The result showed that economic growth is positively related to political rights, civil liberties, freedom of the press and government expenditures, but negatively related to inflation and trade barriers.

Rodrik (2003), explains three important reasons of the differences in the average incomes of the rich and poor countries. And these are geography, international trade and institutions. He called these three factors as the ‘deep determinants of income’. According to his view, to sustain the development of an economy, there must be three types of institutions which might be called: market regulating, market stabilizing and market legitimizing.

Glaeser, Porta, Lopez-de-Silanes, and Shleifer (2004) examined whether political institutions cause economic growth, or alternatively, growth and investment in human capital lead to institutional improvement.. According to their findings, institutions have only a second order effect on economic performance. Investment inhuman and social capita shape both institutional and productive capacities of a society.

Pande and Udry (2005), found that long-run growth is faster in countries that have good quality contracting institutions, better law enforcement, increased protection of private property rights, improved central government bureaucracy, smoother operating formal sector financial markets, increased levels of democracy, and higher levels of trust.

Bosker and Garretsen (2008), explains cross-country income differences by studying the determinants of economic development, using institutions, geography and a sample of 147 countries. The results of the study showed that economic growth is not much related to a country's absolute geography, in terms of for instance its climate, but its relative geography in terms of its institutions that matters for economic development. They also observed that not only country's own institution that matter, institutions in neighboring countries are relevant as well

Siddiqui and Ahmed (2009) found a relationship between institutional quality and economic growth. They used three different measures of institutional quality and found them positively related with growth. They found strong support for the importance of anti-rent seeking institutions on economic outcome, but in contrast, indicated that the role of risk reducing institutions is more limited. The reason they give to this fact is, in absence of formal risk reducing institutions-contracting institutions

Betancourt and Bensyishay (2010) studied the relationship between institutions and growth through the role of civil liberties in economic activity. They collected data from Freedom House and disaggregated the civil liberties index and found that the sub category related to property rights institutions explains long term economic growth very well. Massa (2011, studied the relationship between development of Financial Institutions (DFIs) and economic growth using the Generalized Method of Moments (GMM) technique for panel data analyses in a sample of 101 countries from the period 1986 – 2009. The results proved that DFIs are playing a positive and significant role in promoting economic growth in recipient countries. Acaravci and Ozturk (2012), analyzed the long-term relationship between Foreign Direct Investment, Export, and Economic Growth rate using the ADRL and Granger causality test with quarterly data from 1994 to 2008 in ten eastern European countries. They point out that Foreign Direct Investment is a more important factor in driving economic growth than export in these countries

Nojkovic and Popovski (2013), investigated the institutional reform-economic growth link in the neighbouring countries of the European Union. The result of the study proved that level of political stability, government accountability, degree of press freedom and effectiveness of government have significant effect on growth. Iyoboyi and Pedro (2014) used the VAR technique to examine the relationship between institutional capacity and economic performance in Nigeria. The results of the generalized impulse response function revealed that one standard deviation innovation on institutional capacity reduced macro-economic performance, while variance decomposition showed that a substantial amount of the changes in macroeconomic performance in Nigeria macroeconomic performance is not due to changes in institutional capacity. Aga (2014) studied effect of foreign direct investment on economic growth in Turkey in ten eastern European countries from 1980 to 2012 and found that there is no relationship between foreign direct investment and economic growth in Turkey; he inferred that there is no Granger causal relationship between FDI and economic growth by means of a Granger test. .

Umoh, Jacob, and Chuku (2012), investigate the empirical relationship between economic growth rate and FDI in Nigeria between 1970 and 2008. Their results suggest that there is positive causal relationship between growth rate and FDI. Miankhel, Thangavelu, and Kalirajan (2009) performed a comparative analysis for the causality relationship among GDP, export, and FDI for six countries, namely India, Pakistan, Malaysia, Thailand, Chile, and Mexico. The results from comparative analysis of this study are not the same for all countries since each country is at a different level of development and followed different policies to attain their present level of development. In the case of South Asian countries, the export growth hypothesis holds either in the short or long term. However, it is GDP growth that attracts FDI in India in the long run. On the other hand, GDP has led to export growth in Pakistan. However, in Thailand there is a bidirectional relationship between GDP and FDI, which means that GDP attracts FDI and FDI further stimulates the growth of GDP.

Most of the literature reviewed focused extensively on developed economies. These studies neglected or failed to consider the nature of institutions in the developing economies, especially, Nigeria and the Sub-Sahara Africa. Considering how institutions and investment impact on economic growth in Nigeria will give a balance view of the role of institutions and investment in economic growth. It will provide opportunity to test the relationship between institutional qualities and economic growth via investment in the present Nigerian economy.

3. RESEARCH METHODOLOGY

This section explained the method employed in the collection and analysis of the study data.

3.1 Model Specification:

This study adopt the institutionalist framework which says that institutional quality matters for investment and economic growth. Following the theoretical and empirical literature reviewed above, the link between institutional quality and investment could be expressed thus:

$$FDI = f(CPI, EF, FSE) \dots\dots\dots(3.1)$$

The link between institutional quality, investment and economic growth is therefore expressed as follows:

$$RGDP = f(CPI, EF, FSE, FDI) \dots\dots\dots (3.2)$$

The implicit functions in equations 3.1 and 3.2 above are transformed into double log econometrics model as:

$$\text{LogFDI} = \text{Log}\alpha_0 + \alpha_1 \text{logCPI} + \alpha_2 \text{logEF} + \alpha_3 \text{logFSE} + U_1 \dots (3.3)$$

$$\text{LogRGDP} = \text{Log}\beta_0 + \beta_1 \text{logCPI} + \beta_2 \text{logEF} + \beta_3 \text{logFSE} + \beta_4 \text{FDI} + U_1 \dots (3.4)$$

Where:

FDI = Foreign Direct Investment (proxy for investment)

RGDP = Real gross domestic product (proxy for economic growth).

CPI = Corruption Perception Index

FSE = Financial System Efficiency

E.F = Economic Freedom

α_0, β_0 = Intercept or constant

$\alpha_1 \dots \alpha_3, \beta_1 \dots \beta_3$ = Coefficients

U = error term.

The empirical models contains two (2) types of variables. They are the dependent and the independent variables.

A. Dependent Variables:

The dependent variables in the model are foreign Direct Investment and economic growth The empirical model specifies foreign direct investment as a function of institutional quality and economic growth as a function of institution quality and investment.

1. Foreign Direct Investment: this has been defined as increase in capital stock or change in capital accumulation (Jhingan, 2005). Here investment is proxy by the foreign direct investment because there is no reliable data for investment. It is the total inflow of capital into the Nigerian economy. Increase in FDI will accelerates economic growth.

2. Economic Growth: Economic is the increase in a country's capacity to produce goods and services (Kuznet,1994). This is proxy by the growth rate of real gross domestic production per capita..

B. Independent Variables.

- **Institutional Quality.** Institutions according to North (1991) defines choice set which determines or governs actions. In this study, Institutional Quality is measured by three indexes:

- **Corruption:** This is evidence of had governed and weak Institution. Corruption is measured by Corruption Perception Index. This is an index which measures the corruption perception of a country. It is shows how the country is seen as corruption. Its value ranges from 1 the least corruption to 100 the most corruption. Corruption deter investment and economic growth. Hence, the *apriori* here is $\alpha_1, \beta_1 < 0$..

- **Economic Freedom (EF):** This is a composite index which is designed to measure the degree to which a country's institutions and policies support voluntary exchange of goods, the protection of property rights, open markets, and minimal regulations of economic activities. It ranges from 1 the lowest to 100 the highest. The *a priori* expectation to this variable is $\alpha_2, \beta_2 > 0$.
- **Financial System Efficiency (FSE):** This variable measures the extent to which the system facilitates the mobilization of financial resources and channels it to the end users. It measures the liquidity in the system. The *a priori* here is $\alpha_3, \beta_3 < 0$.

3.2 Nature and Sources of Data:

All data required for this study are secondary in nature and consist of annual time series of the variables of interest.

Data for RGDP and FDI were collected from the Central Bank of Nigeria Statistical bulletin (Various issues). Data for corruption perception index, economic freedom and financial system efficiency were collected from the Heritage Foundation and Freedom House websites. Supplementary materials were collected from text books, research Journals, published and unpublished works of other researchers, and newspapers. All data were collected between the from 1990 to 2016.

3.3 Method of Data Analysis:

The data analysis techniques employed was the Classical Linear Regression Model using the Ordinary Least Square method. The ordinary least square method was chosen because of the statistical properties of its estimates. We began the data analysis by examining the time series properties of the variables.

Unit Root Test:

There are many different types of unit root test in the literature. This study adopted the Augmented-Dickey-Fuller (ADF) method (Dickey and Fuller, 1979). There are three main forms of the ADF model. This study adopted the ADF model with constant and deterministic trend.

The null hypothesis for test is $H_0: \beta_1 = 0$ as against the alternative $H_1: \beta_1 < 0$.

Cointegration Analysis:

Cointegration test was conducted to examine the equilibrium relationship among the model variables. Here it was used to examine whether there exists a stable long run relationship between institution quality and investment in the first model, and institution quality, investment and economic growth in the second model. The Johansen Cointegration Approach was employed using both Trace and Maximum Eigen value statistics (Johansen, 1988). The co-integration equation is specified as follows:

$$\Delta y = \sum_{c=1}^{1=k} \Gamma_c \Delta X_{t-1} + \Pi X_{t-1} + U_0 + e \dots \dots \dots 3.6$$

Where:

Γ and Π are matrixes of variables

U_0 = is the constant term

e = error term

The rank of the matrix is the number of co-integrating equations in the model and the number of stationary relationship in the matrix π .

i. Error Correction Model:

According to Granger Representation Theories, if two or more non-stationary variables are co-integrated, then there is a valid error correction mechanism among them and their relationship can be expressed as error correction model (ECM). Therefore, the Error Correction Models of the equations 3.2 and 3.3 were estimated using the Engle –Granger one step method. Backward elimination method was applied on the over-paramaterized models to eliminate the highly insignificant lags and to arrive at the parsimonious error correction model

Model Diagnostic Test:

It is very important in any empirical study, to evaluate the model and the parameter estimates for robustness and in order to justify the empirical method and build confidence in the parameter estimates. In line with this, the following diagnostic analysis were performed on the model and the parameters estimates:

Model Specification Test: The Ramsey RESET was employed for examining the model for specification bias.

Normality Assumption: For normality assumption, the Jacque-Bera (JB) Test statistic was used.

Serial Correlation: To examine the incidence of serial correlation, the model, the Autoregressive Conditional Heteroscedasticity (ARCH) test statistic was applied.

Homoscedasticity: The assumption of Homoscedasticity test using ARCH-Test approach. All tests were carried out at 0.05 level of significance

4. EMPIRICAL RESULTS AND DISCUSSION

This section presents and discussed the empirical results:

4.1 Unit Root Test:

The results of the unit root test are presented as follows.

Table 4.1: Unit Root Analysis Result

Variable	Level	1 st difference	Order of Integration
RGDP	-0.3237 (0.9083)	-8.162 (0.0000)*	1(1)
FDI	-1.4278 (0.5532)	-5.7570 (0.0001)*	1(1)
CPI	-2.2272 (0.2022)	-5.3513 (0.0002)*	1(1)
EF	2.5450 (0.1175)	-3.7558 (0.0096)*	1(1)
FSE	-1.9739 (0.2955)	-4.6094 (0.0013)*	1(1)
Critical tau value	1% 3.7378	5%-2.9818	10%-2.6355

Source: E-view printout

Figures in parenthesis are the Mackinnon (1999) one sided P-values *Indicate rejection of null hypothesis at 0.05 level. All tests were carried out at 5% critical value.

Null Hypothesis: i has unit root.

From the unit root test results presented in Table 4.1 above, it is clear that all the time series variables were not stationary at level. They all have unit root. After 1st differencing, all the variables became stationary. Hence, they are all 1st difference stationary or simply 1(1) series.

Having established the order of integration of the study time series data, the analysis proceeded to examining if the series are co-integration using the Johansen (1998) co-integration techniques. The co-integration analysis results are presented as follows:

4.2 Co-integration Test Results:

Table 4.2: Cointegration Analysis Results for Model 1 (Institutional quality and FDI)

Hypothesized No of CE(s)	Trace Cointegration Rank			Maximum Eigen Value Rank Test		
	Eigen Value	Statistics	5% critical	Eigen Value	Statistics	5% critical
	None *	0.2064	61.7247 (0.0016)*	47.8561	0.2064	27.1690 (0.0185)*

At most 1	0.6014	36.5557 (0.0071)*	29.7970	0.6014	22.0797 (0.0367)*	21.1316
At most 2	0.3106	14.4760 (0.0708)	15.4947	0.3106	8.9276 (0.2922)	14.2646
At most 3	0.6496	5.5484 (0.0185)	3.8415	0.6496	5.5483	7.8415

Source: E-view computer printout. Figures in parenthesis are the Mackinown – Haug-Michells (1999) P-value, *Denotes rejection of the null hypothesis at 0.05level.

From the co-integration analysis results presented in Table 4.2, both the Trace and Maximum Eigen value statistics indicated at least 2 co-integrating rank equation in the model. Hence, there is a stable longrun equilibrium relationship among the variables. There is a long run relationship among the variable in model1; that is, between institutional quality and investment.

Table 4.3: Cointegration Result Model 2: Institutional quality, Investment, and Economic Growth

Hypothesized No of CE(s)	Trace Cointegration Rank			Maximum Eigen Value Rank Test		
	Eigen Value	Statistic	5% critical	Eigen Value	Statistic	5% critical
None *	0.903605	118.3964 (0.0000)	69.81889	0.903605	56.14320 (0.0000)	33.87687
,At most 1*	0.779735	62.25321 (0.0013)	47.85613	0.779735	36.31017 (0.0030)	27.58434
At most 2	0.403766	25.94304 (0.1304)	29.79707	0.403766	12.41091 (0.5076)	21.13162
At most 3	0.345160	13.53213 (0.0967)	15.49471	0.345160	10.16074 (0.2016)	14.26460
At most 4	0.131054	3.371396 (0.0663)	3.841466	0.131054	3.371396 (0.0663)	3.841466

Source: E-view computer printout. Figures in parenthesis are the Mackinown– Haug-Michells (1999) P-value *Denotes rejection of the null hypothesis at 0.05level.

The result presented in Table 4.3 above is the co-integration result of model 2 which is the model of institutional quality, investment and economic growth. From the results, both Trace and Maximum Eigen value statistics indicated at least 2 co-integrating rank equations in the model. This implies, also, that there is a long run relationship in the model. Thus, there is an equilibrium value to which the model gravitates in the long run.

Hence, the analysis proceeded to estimating and examination of the short run adjustment mechanism through the error correction models. The results are presented thus:

4.3 Error correction model: Institutional Quality and Investment:

Table 4.4: Error correction Model Result Institution and FDI

Dependent Variable: DLOG(FDI)

Included observations: 24 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(FDI(-1))	-0.029716	0.255831	-0.116155	0.9093
DLOG(FDI(-2))	0.292108	0.240429	1.214945	0.2460
DLOG(CPI)	0.113658	0.207558	0.547594	0.5932
DLOG(CPI(-1))	0.275464	0.234997	1.172205	0.2621
DLOG(CPI(-2))	-0.160541	0.021688	-7.241750	0.0018
DLOG(EF)	1.579320	1.755933	0.899419	0.3848
DLOG(EF(-1))	-3.104812	0.753990	-4.117842	0.0001
DLOG(EF(-2))	1.545225	1.290262	1.197605	0.2525
DLOG(FSE)	0.455945	0.311310	1.464599	0.1668

DLOG(FSE(-1))	-0.213480	0.082972	-0.230291	0.0027
ECM(-1)	-0.466745	0.055249	-8.448588	0.0305
R-squared	0.517637			
Adjusted R-squared	0.146589			

Source: E-view computer printout

The ECM result presented in Table 4.4 above shows the relationship between the variables in the model. The results show the relationship between investment and institutional quality. From the results, the relationship between investment and corruption perception index (CPI) is negative and statistically significant. The empirical sign of this variable conform with the *a priori* expectation for this variable.

The effect of economic freedom on FDI flow is positive and statistically significant. Hence, increase in economic freedom will lead to increase in the level of investment flow. The relationship conforms with the *a priori* expectation for this variable. Investment and financial system efficiency have positive relationship. This implies that increase in financial system efficiency has positive effect on investment inflow. The sign of this coefficient is in line with the *a priori* expectation for this variable.

The model has R^2 value of 0.5176. This implies that about 52% variation in the value of investment flow during the period under review could be attributed to changes in institutional quality. Other variables outside the model accounted for the remaining 48% variation.

The model ECM-1 coefficient is -0.4667 and is statistically significant at 0.05 level. The coefficient of this variable measures the speed of adjustment of the model to any disequilibrium. In this particular case, the speed of adjustment to any long run equilibrium is 0.4667. This implies that about 47% of whatever difference between the current value and the long run equilibrium value would be corrected within one year.

Error correction model 2: Institutional quality and Economic Growth

Dependent Variable: DLOG(RGDP)
Included observations: 24 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(RGDP(-1))	0.804552	0.173066	4.648821	0.0005
DLOG(RGDP(-2))	0.050896	0.049453	1.029180	0.3222
DLOG(FDI(-1))	0.214466	0.046797	4.502940	0.0021
DLOG(CPI(-1))	-0.121095	0.035811	-3.606046	0.0002
DLOG(CPI(-2))	-0.049813	0.034847	-1.429464	0.1765
DLOG(FSE)	-0.091457	0.062570	-1.461660	0.1676
DLOG(FSE(-1))	0.376993	0.052397	7.061133	0.0432
DLOG(FSE(-2))	-0.047625	0.059596	-0.799132	0.4386
DLOG(EF)	0.337107	0.346029	0.974216	0.3477
DLOG(EF(-2))	0.406961	0.293878	2.308164	0.0347
ECM(-1)	-0.084007	0.027920	-3.00859	0.0028
R-squared	0.484735			
Adjusted R-squared	0.088378			

The result presented in the Table 4.4 show the relationship between institutional quality, investment and economic growth. From the result, the relationship between investment and economic growth is positive and significant. Thus, increase in investment will stimulate economic growth. This is in agreement with the *a priori* expectation for this variable. The relationship between corruption perception index and economic growth is negative and also significant. The impact of economic freedom on economic growth was positive. The sign of the coefficient for this variable is positive and statistically significant and consistent with the *a priori* expectation for this variable. Efficiency and economic growth was equally found to be positive and significant. The sign equally conforms to the *a priori* expectation for this variable. The model R^2 is 0.4847. This implies that institutional quality and investment accounted for about 48.5% variation in the level of economic growth during the period under study.

The model ECM-1 coefficient is -0.0840 and with t-value of 3.00859 . The sign of the ECM-1 coefficient is appropriate and is statistically significant. Hence, there is a stable error correction mechanism in the model. The absolute value measures the speed of adjustment, how the model correct error in its value from the long run equilibrium value. In the present model, the speed of adjustment is 0.084 , meaning that about 8% of the disequilibrium or deviation is corrected within one year.

Diagnostic Test Results for Model 1.

The results of the diagnostic analysis are presented as follows.

S/N	Hypothesis	Test	Emperical statistic	P-value	Remak
1	Normality	Jacque-Bera (JB)	1.3015	0.52164	Maintained
2	serial correlation	Breusch-Godfrey (BJ)	3.7515	0.1532	Maintained
3	Homoscedasticity	ARCH	0.4127	0.8135	Maintained
4	specification error	Ramsey RESET	0.1252	0.8835	Maintained

Null Hypothesis: 1. Residuals normally distributed 2. No serial correlation among error terms 3. Variance of the error terms constant (Homoscedasticity). 4 Model correctly specified. All test were carried at 0.05 level.

Diagnostic Test Results Model 2.

Table 4.5 Diagnostic Test Results Model 2

S/N	Hypothesis	Test	Empirical Statistics	P-value	Remark
1	Normality	Jacque-Bera (JB)	1.1570	0.4602	Maintained
2	Serial correlation	BreuschGodfrey(BG)	1.1044	0.7760	Maintained
3	Homoscedasticity	ARCH	0.20500	0.9026	Maintained
4	Modelspecification	Ramsey RESET	0.8415	0.4570	Maintained

Source: E-view computer printout. Null Hypothesis; 1. Residuals normally distributed 2. No serial correlation among error terms 3. Variance of the error terms constant (Homoscedasticity). 4. Model correctly specified. All tests were carried at 0.05 levels.

The diagnostic results presented above shows that the error terms were normally distributed. There is no incidence of serial correlation among the error terms. Furthermore, there is no model misspecification and the variance of the error terms is constant over time. The above phenomenon could be summarized by saying that the error terms are independently and identically distributed with mean zero and variance constant. Thus, the estimates are the Best Linear Unbiased and Efficient (BLUE) estimators.

5. SUMMARY AND CONCLUSION

The study was conducted to analyze the effect of institution quality and investment on economic growth in Nigerian economy from the period 1990 to 2016. The motivation behind the study was that the government of Nigeria has over time pursued various policies to attract investment in the economy with the objective of promoting economic growth, yet no appreciable results and to verify the institutionalist thought which assert that institutional quality is the principal thing for attracting investment and for stimulating economic growth. . Secondary data were collected from various sources for the analysis. The data analysis method employed was the Engle-Granger (1978) Error correction approach. The results from the unit root test show that the variable were not stationary at level. However they became stationary after 1st differencing. The Johansen (1998) co-integration analysis revealed that there are at least two (2) co-integrating equation rank in the two models, while the parsimonious error correction model estimate revealed significant impact of the variables in both equations.

The analysis of data revealed that institution quality measured as corruption perception, economic freedom and financial system efficiency have significant impact on investment; also, investment and institution quality have significant impact on economic growth. Nigerian economy is in serious need of strong and sustainable economic growth to take care of her growing population. This study has identified some of the important elements necessary to put I place in order to be attractive to foreign investors and stimulate economic growth. The study identified the negative and significant impact of corruption on the flow of foreign direct investment and economic growth. The result implies that in the level of corruption in Nigeria are responsible for the unattractiveness of the Nigerian economy to the inflow of FDI irrespective of the huge market and cheap labour in the country.

The relationship between economic freedom and investment in the first model was positive and significant. In the second model economic freedom has positive and significant effect on economic growth. The implication here is that economic freedom is pivotal to attracting foreign direct investment and stimulating economic growth in the economy. Government presence in every aspect of the economy and weak regulatory frame work the economy is detrimental to a investment and economic growth. Financial system efficiency is very important in attracting foreign direct investment and for economic growth. A repressed financial system or undeveloped financial system is a clog in the wheel of investment and economic growth

In all, the results of this study have given the ground to conclude that effective and efficient institutions are essential prerequisite for investment and economic growth. The drive and effort for stimulating economic growth in the country cannot yield any results without building quality institutions for attracting investment both from the local and foreign resources. Policies geared at attracting investment would be ineffective and futile without building, first, quality institutions. There is little wonder why several policies in place have not attracted enough investment to stimulate the economy growth. Institutions, quality institutions, matter. Nigeria government should build and strengthen public institutions to make the economy attractive to investors and conducive for economic prosperity

REFERENCES

- [1] Acemoglu, D., Johnson, S. (2005) "Unbundling institutions", *Journal of Political Economy*. 113 (5): 949-995.
- [2] Aoki, M. (2001). Towards a comparative institutional analysis. MIT Press, Cambridge. In Garcimartin, J.A.C, The determinants of institutional quality: More on the debate. WP03/09.
- [3] Barro, R. (1991) "Economic growth in a cross section of countries". *Quarterly Journal of Economics*, 106: 407 – 443.
- [4] Barro, Robert J. (1996). Democracy and Growth, *Journal of Economic Growth*, 1:1-27.
- [5] Basu, S.R. & Das, M. (2010). Institution and development revisited: A nonparametric approach. Policy Issues in International Trade and Commodities Study Series, No. 42, United nations Conference on Trade and Development, United Nations, new York and Geneva.
- [6] Dollar, D., Easterly, W.R. (1999) "The search for the key: Aid, Investment and Policies in Africa", *Journal of African Economies*, 8 (4): 546-77.
- [7] Gillmont, P.S., Guillmont, J., & Brun, J.F. (1999). How instability Lowers African Growth. *Journal of African Economies*, 8 (1), 87 – 107.
- [8] Gwartney, J.D., Holcombe, R.G., & Lawson, R.A. (2004). Economic Freedom, institutional quality, and cross-country differences in income and growth. *Cato Journal*, 24 (3).
- [9] Gwartney, James D., Randall G. Holcombe and Robert A. Lawson (2004), Economic Freedom, Institutional Quality, and Cross-Country Differences in Income and Growth, *Cato Journal*, 24: 205 – 233.
- [10] Loayza, N., Schmidt-Hebbel, & Serven, L. (2000) "What Drives Private Saving Across the World?", *Policy Research Working Paper*, 2309, The World Bank.
- [11] North, D. (1990) *Institutions, Institutional Change and Economic Performance*. Cambridge University Press, Cambridge.
- [12] North, Douglass C. (1990). *Institutions, Institutional Change, and Economic performance*, Ambridge: Cambridge University Press.
- [13] Okoh, A.S. & Ebi, B.O. (2013). Infrastructure investment, institutional quality, and economic growth in Nigeria: An interactive approach. *European Journal of Humanities and Social Sciences*, 26 (1), 1342-1358. Retrieved from <http://www.journalsbank.com>.
- [14] Pesaran, B., & Pesaran, M.H. (2009). *Time Series Econometrics Using Microfit 5.0*. Oxford: Oxford University Press.
- [15] Pesaran, M.H., Shin, Y., & Smith, R.J. (2001). Bounds testing approaches to the analysis of level relationship. *Journal of applied econometrics*, 16, 289-326.

- [16] Rasche, R.H., & Tatom, J.A. (1977b). Energy Resources and Potential GNP. *Federal Reserve Bank of St. Louis Review*, 59(6), 10 – 24.
- [17] Rodrik, D. (1998). Trade Policy and Economic Performance in Sub-Saharan Africa. National Bureau of Economic Research Working paper 6562.
- [18] Rodrik, D. (2000) “Institutions for high quality growth: What they are and how to acquire them”, *Studies in Comparative International Development*, 35(3): 3 – 31.
- [19] Romer, Paul M. (1986). Increasing Returns and Long-run Growth, *Journal of Political Economy*. 94:1002 – 1037.
- [20] Sachs, Jeffrey D. (2003). Institutions Don't rule: Direct Effects of Geography on Per Capita Income. NBER Working Paper No. 9490.
- [21] Solow, Robert M. (1956). A Contribution to the Theory of Economic Growth, *Quarterly Journal of Economics*. 70: 65 – 94.
- [22] World Bank (2006) *Where is the Wealth of Nations? Measuring Capital for the 21st Century*. The World Bank, Washington, DC.
- [23] World Bank. (1998). *World Development Indicators* Washington DC: World Bank.
- [24] World Bank. (2012). *World Development Indicators on online (WDI) database*. Retrieved September 12, 2012, from World Bank: <http://www.worldbank.org>.