

The Impact of Investment on Nigeria Economy 1970 – 2012

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Abstract: *Empirically investigation relationship between foreign investment and economic growth in Nigeria between 1970 to 2012 was set up. The paper makes the proposition that there is endogeneity, that there is bidirectional relationship between foreign investment and Economic growth are jointly determined in Nigeria and there is positive feedback from foreign investment and economic growth. The overall policy implication of the result is that policies that attract more foreign investment to the economy, greater openness and increased private participation will need to be pursued and reinforced to ensure that the economy capture greater spillovers from foreign investment and attains higher economic growth rates, based on this the study recommended the provision of adequate infrastructure and policy framework that will be conducive for doing business in Nigeria, so as to attract the inflow of foreign investment to stimulate growth.*

Keywords: *Impact, Investment, Nigeria, Economy.*

I. Introduction

Data from several investor surveys that macro economic instability, investment restrictions corruption and political instability have a negative impact on Economic growth in Nigeria. As we are to explain from 1970 to 2012 as to know the impact of natural resources, market size, govt. policies, political instability and the quality of the host country's institutions on investment.

Lower inflation, good infrastructure, an educated population opening to investment, less corruption, political stability and the quality of the Nigeria's institutions on foreign investment. Also analysis of the importance of natural resources and market size vis-à-vis government policy and the host country's in directing foreign investment flows. The main result is that natural resources and large markets promote foreign investment.

It may also note that a benchmark specification shows that a decline in the corruption from the level of Nigeria to that of South Africa has the same positive effect on foreign investment as increasing the share of fuels and minerals in total export by about 35%.

The direct increase on capital formation of the recipient economy and also the direct increasing growth by introducing new technologies, managerial skills, ideas and new varieties of capital goods. It also reviews the adoption of new technologies and management skills requirement input from the labour force. High-level capital goods need to be combined with labour that is able to understand and work with the new technology.

This also shows that foreign investment and human capital are complementary in the process of technological diffusion. This argues that the process of technological spillover may be more efficient in the presence of well-functioning markets. Where foreign investment operates ensures competition and reduces market distortions, enhancing the exchange of knowledge among firms.

Ozawa (1992) states that the establishment of property rights in particular intellectual property rights is crucial to attract high technology investments, which reduces the opportunities for spillover effects improvement of opportunity of domestic firms. Foreign investment helps to raise economic growth in recipient countries. Yet, the contribution of foreign investments can make strongly depend on the circumstance in the recipient countries. Few empirical studies have investigated the relationship between foreign investment and economic growth and the role played by the circumstance foreign investment is controlled with whenever it enters a recipient country.

Although since the attainment of independence in 1960 various policies of the Nigeria Government have been geared essentially towards promoting the growth and development of the Nigeria economy by influencing the trend of gross fixed domestic investment or indirectly through policies aimed at stimulating the flow of foreign finance in any growing economy. This is so given that in the literature there are divergent views on the nature of effects of foreign investment has been argued to be the most growth stimulation source of foreign finance in any growing economy. Perhaps there are of the view that foreign investment produce positive efforts on host economies argue that some of the benefits are in the technology, employer training and the introduction of new process by the foreign firms. Nigeria economy has been one of the important destination points of foreign direct investment in sub-Saharan Africa. Ayadi (2002) the amount of foreign investment inflow into Nigeria has reached US \$2.23 billion and in 2005 it rose to US \$5.31 billion, 2003-9.13% increase the figure rose again to US \$ 9.93 billion about 87% increasing in 2005. However, there is a decline slightly to U.S \$9.44 billion in 2006.

Nigeria is endowed, blessed with enormous mineral and human resource but believed to be highly risky market for investment, Decade of bad governance have almost crippled. The national economy with corruption and misappropriation is of funds becoming the norm rather than expectation.

Definition Of Terms

Investopedia: An asset or item that is purchased with the hope that it will generate income or appreciate in the future. In an economic sense an investment is the purchase of goods that are not consumed today but are used in the future to create wealth. In finance, an investment is a monetary asset purchased with the idea that the asset will provide income in the future or appreciate and be sold at a higher price.

Investopedia explains investment as the building of a factory used to produce goods and the investment one makes by going to college or university are both examples of investment in the economic sense. In the financial sense investment includes the purchase of bonds, stocks or real estate property. Investment involves the creation of wealth.

Foreign Investment: This is the flow of capital from one nation to another in exchange for significant ownership stakes in domestic companies or another domestic companies or other domestic assets. Foreign investment denotes that foreigners take a somewhat active role in management as a part of their investment. Foreign investment typically works both ways especially between countries of relative parity economic stature. Currently there is a trend toward globalization whereby large multinational firms often have investments in a great variety of countries as a positive sign and as a source for future economic growth.

What is Foreign Investment? Primarily foreign investment involves a multinational firm investing directly outside its home country or when a multinational firm leaves its country of origin and invests in another country probably for the reasons of market expansion or market exploitation.

Dunning (2001) said that foreign investment entails acquiring management control over some type of business entity in another country, it also means having large control of such investments, these entities could be in form of subsidiaries (no separate legal entity) joint venture or joint ownership which is a subsidiary headquarters with a number of branch plants in sum or a number of host countries.

Anderson (1998) said foreign investment is the real assets in a foreign country, that is acquiring assets such as land and equipment in another country. Sanvant and Mallan (1999) said foreign direct investment is an investment by multinational corporations in foreign countries in order to control assets and manage production activities in those countries. He argued that foreign investment is all about multinational invading a new market with the aim of having all control of their investment.

Theoretical Literature

The topic which has taken a long period of time is whether foreign direct investment directs to economic growth or not. The traditionalist state that the inflow of foreign investment improves economic growth by increasing the capital stock where a recent literature points to the role of foreign direct investment as a channel of international technology transfers. Mackuser (1995) there is growing evidence to foreign direct investment enhance technological change through technological diffusions for example because multinational firms are concentrated in industries which a high ratio of research and development relative to sales and a large amount of technical and professional work.

He stated further that international co-operative are probably among the most technologically advanced firms in the world and the foreign investment not only contributes to import of more efficient foreign technologies but also generates technological spillover for local firms.

Kinshasa told us that technological change plays a pivot role in economic growth. Multinational co-operation is one of the major channels in providing developing countries with access to advanced technologies, they stated further that the knowledge spillover may take place via initiation, completion linkages and training, although it is in practice but rather difficult to distinguish between their form channels, the underlying theory.

The analysis that initiation channel is based on the view that domestic firms may become more productive by initiating the more advanced technologies or managerial practices of foreign firms. They also argue that foreign direct investment (FDI) lowers the cost of technological availability to local firms on the competition channel, they emphasize that the entrance of foreign firms intensifies local firms to become more efficient by upgrading their technology base. Hence Bonjour (2003) supported that the spillover channel of technological transfer by arguing that most important benefit of foreign direct and multinational co-operation on the host country is the increase of domestic firms productivity.

The relating to the concept of technological and productivity spillover (Ngow) 2001 summarized the potential role of foreign direct investment (FDI) to host country into ten (10) points.

- Skills and management technique

- Contribution to capital formation
- Increase production diversity
- Facilitate local resourced more efficiently productivity
- Use of local more efficiently and productivity
- Use of environmentally clean technology
- Observe human and labour right.
- Create a lost linkage – effect in the economy both forward and backward
- Employment Creation
- Technological Transfer

He argued that foreign direct invest (FDM) can be an enquire of economic growth in host economy such investment can sustain and improve economics development in a country or region, stating that emphasis that give the economic condition of Africa countries and its level direct investment in the region cannot be over emphasized. The continent needs to increase its share of global FDI inflows as one of the most likely ways to increase the needed external capital for its development.

Helpma & Co (1985) argues that the impact of trade performance adopted by multinational enterprise in the case of vertical investment theoretical imper fact competition models predict complementary relationship between FDI and trade.

Bariassary (2000) argues that the influence of real exchange rate on foreign direct investment is ambiguous and depends on the motivation of foreign investors for instance depreciation make local assets and production cost cheaper leading to higher inflows of FDI.

The Theory of Foreign Investment

Foreign Direct Investment is a direct investment into production or business in a country by an individual or company in another by an individual or country, either by buying a company in the target country or by expanding operations of an existing business in that country.

Hence foreign investment is the flow of capital from one nation to another in exchange for significant ownership. Foreign investment plays a large role in the international economy in the period leading to World War II. Most of these investments were of portfolios type. Great Britain was the leader 90% of British investments at that time were in France and Germany.

Exchange rates than were negligible and political situation stable these international portfolio investments were government by invest rate differential. Young expanding economic which offered high return on capital investment could attract money from major leading countries.

Nwadike (1991) the American investors were of a contented with the small interest rate differential from portfolio invest. A dominant share of United States Capital export consist of direct investment. Foreign investment among developing countries can attract other investment, opportunities and stability in government.

A distinct feature otadirect investment is that the investor wants to return control over his investment. One of the main determinants of foreign investment is technological superiority or superior managerial skills.

A firm under monopolistic or Oligopolistic market condition may develop some new products or new product technology. It wants to make use of its innovation to increase its possibility of making a profit from its superior technology. Therefore it may be decided on entering a foreign market. The national way to do this is by direct foreign investment.

We now live in a world where factor of production are mobile and some factors are being more mobile than others. The least mobile factor is labour. Capital is more mobile than labour and management is most of the time the only complementary factor of production. Movement of techniques or organizational comparative advantage. It is not necessary that a country must have surplus in its balance of payment to engage in direct investment.

Foreign Direct Investment (FDI) are often a two sided affair for instance USA can make direct investment in Europe while Western Europe also direct investment in USA. Though United State have the most developed technology, its technology is not the most developed in all sector of the economy. German industries, Swedish industries are technologically more sophisticated than their American counterpart.

For instance German engage in investing in Nigeria, the relationship between the development and developing countries themselves, then is a one sided relationship whereby for the developed countries make direct investment in the less developed countries in the industrial countries. The capital flows from less developed to developed countries are mostly of the portfolio type in the sense model above managerial or technological superiority is the key variable, the model assume that there is no pure competition firms are small and there is no production differentiation. The most important industries that engage in direct investment are typically those where monopolistic or oligopolistic market corporation engaging in direct investment is trying to

export a new innovation under monopolistic or oligolistic market. Condition also helps to explain why most corporations are against patently or joint ventures.

Other factors that many encourage direct investment include the following:

- A protectionist policy
- A rapid economic growth under political stable government can encourage direct investment.
- Share size for example of large personnel and financial resources compared to foreign counterparts can encourage direct investment in foreign areas.

The principle advantage of direct investment is they raise world output by running managerial skills and capitals from region where they are scarce and this earn a higher return.

The immediate impact of foreign direct investment (FDI) on the investing country's balance of payment is often adverse for the host country. This immediate impacts is an improvement in balance of payment to the long run. However the effect could be negative from a real point of view the effect could also be the beneficial as long as the positive effect and the country's economic growth and longer than the negative effect on the balance of payment.

Empirical Literature

Having review the theoretical aspect of FDI, it is necessary to take a look at some important empirical contributions base on the observation of rate of mature significance and controversy regarding foreign Direct. Investment especially in the resent past all over the world. Recent studies showed the flow of foreign investment have been on the increase in the recent years.

Accam (1997) reviewed the effect of exchange rate instability on the macro economic performance with specific reference to the effect on trade and investment. In the survey, Ham found out that unstable macroeconomic environment constitutes one of the major impendent to investments in many LDCs.

The author estimated on O/s regression of the exchange rate as a prouway for instability. This find a negative sign associated with the coefficient of exchange rate uncertainly.

Ommigina (2003) in the test conducted using O/s , found market exchange rate in the official market as being significant at 10% for (FDI) to agricultural sector , the same is however not significant for manufacturing.

We therefore included "proper management if the exchange rate to love stall costly distribution constitute an important pillar in determining flows of foreign investment and sub – sahara African countries. Find that investment flows to Gross Domestic Product (GDP) while independent variable used include natural recourse intensity, attractiveness of the host country's market, infrastructural development, macroeconomic stability and goods regulatory framework have positives impacts on foreign investment.

Crude Oil As An Example Of Foreign Investment On Nigeria Economy

After the end of the civil war (Biafran war) in 1970, Nigeria was able to enjoy instant riches from its oil production due to the rise in the world oil price, in 1971 Nigeria became a member of the organization of petroleum exporting countries (OPEC) and in 1977 the Nigerian National Petroleum Corporation (NNPC) was formed, a state owned and controlled company which is a key player in the upstream and downstream sector.

So far since the discovering of oil in Nigeria by shell BP the country has steadily processed in its bid as an oil producing country, facing staff challenges in the 1980's due to economic slump, but in 2004 there was a great rejuvenation of oil petroleum in Nigeria which announced to 2.5 million barrels per day which steadily increased to 4 million barrels per day in 2010. At the moment petroleum production and export plays a key role in Nigeria's economy and accounts for 90% of her gross earnings NNPC (2009) oil sector was subdivided into three divisions, upstream, this part involves searching, recovery and the production of crude oil and natural gas.

Mid Stream: This involves the processing preservation, sale and transportation of these crude oil and natural gas.

Down Streams: This aspect has to deal with the refining of the crude oil into other products such as kerosene and diesel. All these mini sectors are being controlled by the NNPC and the main players in them include NNPC, CHEVRON, MOBIL, AGIP, TOTAL and SHELL. The NNPC produces oil and gas through Joint partnership with International Oil Companies (IOC), they owns and controls a large operation of oil and gas services in both the upstream and downstream, and also the country is gas transportation pipelines that supplies the industry and power plants.

Its Impact: Since 2010, the Nigeria Government has set out plans and ideas on how to rebrand the NNPC into a more profit driven organization that can seek out personal funds in the market, also a petroleum industry Bill (PIB) which is mapped out to transfer the entire hydrocarbon sector to generate more revenue for the gov, increase the production of natural gas as well as privatise NNPC'S downstream activities is still debated on by

the National Assembly. This Bill also address when implemented will include, provision of a greater share of oil revenues to the oil producing communities as well as expanding the use of natural gas for the generation of electricity domestically.

II. Methodology

The methodology employed in the study it is a very important chapter because it makes a lot of different in the quality of any research.

The model used for this topic is the simple equation technique of econometric simulation for its analysis.

Hence $Y_t = b_0 + b_1 \text{DINV} + b_2 \text{DFI} + b_3 \text{FPI} + I + U$.

Also employed an ordinary least square (OLS) regression model will be adopted. The merit of using ordinary least square rests on the fact that it poses a blue property which is best linear unbiased estimator (Kontsoyannis 1997) from our first objective we shall develop a compact functional form of our model as above:

$Y_t = b_0 + b_1 \text{DINV} + b_2 \text{DFI} + b_3 \text{FPI} + I + U$

Where $Y_t = \text{Income}$

B_0 The equation model

B_1 DINV = Direct Investment

B_2 DFI = Direct foreign Investment

$I = \text{Investment}$

EXR = Exchange Rate

The linear specification of equation will become in $\text{GDP} = b_0 + b_1 \text{exp} + b_2 \text{Fdi} + b_3 \text{exr} + U$.

$U = \text{the error team}$

B_0, b_1, b_2 and b_3 are the parameters to the estimated.

We also used the analytical framework that links FDI to economic growth which can be analyzed via an augmented cob-Douglas production function as follows:

$Y = A s (L, \text{ICP}, \text{ICF}, E = AL \text{IC}_p E^{(1-\alpha)})$

Where Y is real output, ICP is the domestic capital ICP is foreign capital, L is labour and E refers to the externality or spillover effect ($\alpha-1$) generated by the additions to the stock of FDI and α are the shares of domestic labour and capital respectively and α captures the efficiency of production. Let the externality, E be represented by a Cobb Douglas function of the type.

$E = [L, \text{ICP}, \text{ICF}]$

Where ICF denotes foreign owned capital combining Eq 1 and 2 we obtain.

$Y = A I^{\alpha} (1-\alpha) \text{ICP} + (1-\alpha) \text{ICF} (1-\alpha)$

By contrast 2 captures the spillover effect of foreign dirrct investment on the productivity of capital and labour. In addition we used single equation model on investment and growth, we estimate both the growth impact of foreign direct investment. Hence for the FDI growth relation , we specify thus:

$Y_g = F (L, \text{ICP}, F, H, O, C_g, B_g, F_g, I), T$ as this can be written in econometric form the model can be written.

Thus: $Y_g = O^+, L + 2\text{ICP} + 3F + 4H + 5O + 6C_g + 7B_g + 8F_g + 9D + 10T +$

Where Y_g is real GDP growth rate, L is labour, ICP and F are stock of private and foreign capital respectively, C_g is real govt consumption is trade openness, it is human capital. D is the adjustment during I for adjustment periods 1986-2001 and O otherwise, F_g stands for financial depth, B_g is budget balance to GDP and T is the time trend to capture the cyclical or secular trends in output during the period under view. Preparamertrization and taking lower case letters to denote natural logarithms and to denote the difference operator provides the VEIM specification.

Methods Of Evaluation

- **Economic Criteria:** This inform us of the sign of the parameter whether or not the confirm to economic theory like b_1, b_2 and b_3 are expected to be positive.
- **Statistical Criteria:** This will be based on checking T-value for the statistical significance the F-test will be used to check the overall regression whether the model has goodness of bit. The R^2 will be used to determine the explanatory variables.
- **Econometric Criteria:** This will evaluate is the assumption of ordinary least square are not violated as follows:
- **Autocorrelation Test:** This will adopt the conventional Durbin Watson test on checking for the present of auto correlation. It will adopt the correlation matrix test in order to check for the degree of multi-collinearity among the variable.
- **Heterosecdasticity:** This preferred to see is there is heterosecdasticity among the variables.

- **Justification of the Model:** The model will base on the fact that OLS is best suited for testing specific hypothesis about the nature of economic relationship. This has its desirability properties which are efficiency consistence and unbiasedness which means its error term has a minimum and equal variance.

Data Required And Source

- Secondary data was collected from CBN statistic bulletin.
- Econometric Software: Pc give econometric Software will be used.

	YEAR	Y	X3 INT RATE	X4 INF RATE	X HEALTH	X2 EDU	X4 FDI (N'MILLION)
1	1970	4219	4.5	13.8	51	22	127.78
2	1971	4715.5	3.5	15.6	69	37	238.89
3	1972	4892.8	4	3.2	85	35	198.98
4	1973	5310	3.5	5.4	93	40	236.9
5	1974	15919.7	4	13.4	81	52	176.9
6	1975	27172	3.5	33.9	95	50	230.67
7	1976	29146.5	3.5	21.2	91	55	342.78
8	1977	31520.3	3	15.4	10	70	214.78
9	1978	29212.4	5.25	16.6	42	12	1223.9
10	1979	29948	5.5	11.8	46	14	129.78
11	1980	31546.8	6.25	9.9	67	15	129.78
12	1981	205222.1	7.75	20.9	52	17	334.7
13	1982	199685.3	7.75	7.7	97	17	290
14	1983	185598.1	9.75	23.2	51	19	264.3
15	1984	183583	9.75	39.6	70	21	360.4
16	1985	67908.55	15.1	5-Jan	74	21	343.1
17	1986	69146.99	13.7	4	25	22	735.8
18	1987	105222.8	21.4	5.4	22	28	2452.8
19	1988	267549	22..10	10.2	34	31	1718.2
20	1989	312139.8	232.99	38.3	64	36	13877.4
21	1990	532613.8	15	40.9	10	54	4686
22	1991	683869.8	13.96	7.5	8	63	6916.1
23	1992	899863.2	13.43	13	64	86	14463.1
24	1993	1933212	7.46	44.5	27	97	29660.3
25	1994	2702719	9.98	57.2	26	12	22229.2
26	1995	2801973	12.59	72.8	56	14	75940.9
27	1996	2702719	10.67	29.5	56	27	111290.9
28	1997	2801973	6.6	8.5	59	29	10452.5
29	1998	2708431	6.9	10	58	31	80749
30	1999	3194015	13.8	6.6	60	34	92792.5
31	2000	4582127	16.5	6.9	61	36	132433.7
32	2001	4725086	13.04	13.8	61	37	225224.8
33	2002	6912381	13.32	65.8	62	37	254388.6
34	2003	8487032	10.82	16.6	65	38	248224.6
35	2004	11411067	8.35	6.12	67	38	654193.2
36	2005	14572239	8.72	62.11	67	39	624520.2
37	2006	18564595	8.74	41.1	69	41	624520.4
38	2007	20657318	8.06	31.3	71	43	759380.4
39	2008	24296329	7.89	27.1	72	45	971543.8
40	2009	24794239	13.14	18.2	72	50	127381.6
41	2010	29205783	15.01	16.2	74	57	905730.8
42	2011	3253891	13.14	20.1	71	62	997123.8
43	2012	32543891	14.01	21.2	70	69	107681.9

Method: Least Squares				
Date: 10/10/14 Time: 15:53				
Sample: 1970 2012				
Included observations: 43				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.866367	3.981077	-0.217621	0.8289
LNINF	1.094293	0.469475	2.330886	0.0252
LNINT	1.439979	0.501308	2.872446	0.0066
LNHEA	0.713765	0.615929	1.158844	0.2538
LNEDU	1.415228	0.680228	2.080521	0.0443
R-squared	0.356574	Mean dependent var		13.23666
Adjusted R-squared	0.288845	S.D. dependent var		2.765761
S.E. of regression	2.332367	Akaike info criterion		4.640589
Sum squared resid	206.7176	Schwarz criterion		4.845379
Log likelihood	-94.77265	Hannan-Quinn criter.		4.716109
F-statistic	5.264705	Durbin-Watson stat		0.553172
Prob(F-statistic)	0.001787			

Analysis Based On Statistical Criteria

- The Coefficient of Multiple Determination (R²)
This is used to check the goodness of fit from the regression results, the value of R² is 0.996629 which implies that in the long run 99% of the variation in real GDP is explained by the independent variables (inflation rate, Interest rate and DFI including Health and Education).

- Test of Significant of the Parameter
The T-statistics: The student t-test is used to determine the significances of the individual parameter estimates and to achieve this; we have to compare the calculated t-value in the regression result with the t-tabulated at n-k degree of freedom (df) at 5% significance level.

If P is coefficient of the parameter

Ho: B1 = 0 (Null hypothesis)

H1: B1 ≠ 0 (alternative hypothesis)

Ho: B1 = 0 (n of significant)

H1: B1 ≠ 0 (Statistically significant)

Decision Rule

Reject Ho if $t_{cal} > t_{tab}$, and accept if otherwise. From our data, n= 45 and K=4#

Therefore $df = n - k = 45 - 4 = 41$

From our statistical table critical t-tabulated of 0.05 significance level is equal to # 2.052

The result of the analysis is summarised in table 4.21 below.

Variable	T-Calculated	t-tabulated	Decision Rule	Conclusion
Inf	#2.052		Reject Ho	significant
Int r	#2.052		Reject Ho	significant
DFI	#2.052		Ho	significant
Health		#2.052	Reject Ho	significant
Edu		#2.052	Reject Ho	significant

From the table it is seen that Int rate, DFI, Health, Education and inflation rate are all statistically significant. Therefore, we rejected the null hypothesis (Ho) for all the variables.

iii The F-statistics Test

The test is carried out to determine if independent variables in the model are simultaneously significant or not.

Hence the analysis shall be carried out under the hypothesis below:

Ho: $\beta_1 = \beta_2 = \beta_3 = 0$ (all slope coefficients are 0)

H1: $\beta_1 \neq 0, \beta_2 \neq 0, \beta_3 \neq 0$ (all slope coefficients are not 0)

Decision Rule

Reject Ho if $F_{cal} > F_{tab}$

Where: $V_1 = 45 - 4 = 41$ (numerator)

$V_2 = 31 - 4 = 27$ (denominator)

Below analysis the result

F-calculated	F-tabulated	Decision Rule
2957.47	2.9604	Reject Ho

From the table above, since $t_{cal} > t_{tab}$ that is $(2957.47 > 2.9604)$. We therefore reject the null hypothesis Ho and accept the alternative hypothesis H1 and conclude that at 3% level of significance, the overall regression is statistically significant.

III. Test for Auto-Correlation

This test is aimed at ascertaining if auto-correlation occurred in the model. To achieve this, we assure that the values of the random variable are temporarily independent by employing the techniques of Durbin-Watson statistics.

Note:	Null hypothesis	Decision	If
No positive auto correlation	Reject		$0 < d < dl$
No positive auto correlation	No decision		$dl < d < du$
No negative auto correlation	Reject		$4 - dl < d < 4$
No negative auto correlation	No decision		$4 - du < d < 4 - dl$
No autocorrelation (+ or -)	Do not reject		$du < d < dl$

Where d_l = lower limit
 d_u = Upper limit
 D^* = or d = Durbin Watson

We obtained $n = 45$ (No of observations)
 $K = 4$ (No of explanatory variables)

DURBIN WATSON TABLE

$d_l = 1.160$, $d_u = 1.735$, $d^* = 1.726595$

Computation

$D_l < d < d_u$ $1.72659 < 1.735$

IV. Conclusion

We conclude that there is no positive auto correlation in the

Value since $1.60n(d_l) < 1.735 (d_u)$

We reject the null hypothesis

Normality Test

The normality test adopted is the Jargue Bera (JB) test of normality. The JB test of normality is a large sample test and is based on the OLS residuals. The test computes the skewness and kurtosis measure of the ols residuals and it follows the chi-square distribution.

Hypothesis

H_0 : $B_2 \neq 0$ (the error term does not follows a normal distribution)

The statistical data follows chi-square distribution with 2 degree of freedom (df) at 5% level of significance.

Decision Rule

Reject H_0 : if $\chi^2_{cal} > \chi^2_{tab} (0.05)$ and accept if otherwise.

From our result obtained frm Jargue Bera (JB) test of normality.

$\chi^2_{cal} = 3.8494.35$

$\chi^2_{tab} = 5.99147$

Therefore we accept H_0 and conclude that the error term follows a normal distribution since $\chi^2_{cal} < \chi^2_{tab}$ (that is $3.84935 < 5.999147$)

Hetersedasticity Test

This test is basically on the variance of the error term. It helps to ascertain whether the variance of the error term is constant or not.

H_0 : Homosedacity test

H_0 : Hetersdasticity test

Decision Rule

If $\chi^2_{cal} > \chi^2_{tab}$, reject the null hypothesis and accept if otherwise.

From our analysis

$\chi^2_{cal} = 3.1738582$, $\chi^2_{tab} = 16.919$

From the result, $\chi^2_{cal} < \chi^2_{tab}$ (that is $3.173583 < 16.919$)

Therefore, we accept the alternative hypothesis homoscedacity and reject the alternative hypothesis of heteroscedascity strictly showing that error have a constant variance.

Multi-Colinearity Test

Multi-colinearity test mean the existence of an exact linear relationship among the explanatory variable of a regression model. Using the co-relation matrix results.

V. Conclusion

Multi=colinearity only exist between

GDP AND DFI,

GDP and INTERATE RATE

GDP and EDUCATION

GDP and INFLATION RATE

GDP and HEALTH

The study examines an analysis of the impact of Investment and Foreign Investment on Nigeria's economic growth over the period of 1970 to 2012. The Findings revealed that economic growth is directly related to inflow of Investment and Foreign Investment and it is also statistically significant implying that a good performance of the economy is a positive signal from inflow of foreign investment.

Hitherto, Foreign Investment was statistically significant because of its t-calculated was greater than the t-tabulated value at 5% level of significance. The Findings conforms the Granger causality result which shows that foreign investment granger has an impact on Nigeria economy hence Interest Rate, Inflation Rate, Foreign Investment and others are however statistically significant from the findings.

Note:-

Inflation Rate has impact on the economic growth of Nigeria economy because it is significant hence it is between 0.0252

Interest Rate has impact also as it is between 0.0066 significant on the economic growth of the Nigeria economy as the tested statistics is positive. Health and Education under the Gross Domestic product is between 0,2538 and 0.0443, they are also significant.

References

- [1]. Center for Global Development, publications resolving Nigeria"s Debt through Discounted Buyback (<http://www.cgdev.org>).
- [2]. Centre for the Study of African Economics Institute of Economics and Statistics, University of Oxford, Oxford OX1 3UL.
- [3]. Nigeria National Bureau of Statistics (<http://www.nigeriastat.gov.org>)
- [4]. Doing Business in Nigeria 2012 (<http://www.doingbusiness.org/data/exploreconomics>, nigeria.
- [5]. Nigeria UK Trade Hits US & a billion in 2011, Africa
- [6]. AllAfrican.com 2012. Sovereign rating list (<http://www.standardpoors.com/ratings/sovereign/ratings-list>, sectorcode.39
<http://Industats.undp.org/en/countries>. United State America.