EFFECT OF ECONOMIC GLOBALIZATION ON NIGERIA'S ECONOMIC GROWTH (1981-2018)

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ABSTRACT

This study examines the nature of relationship between economic globalization and Nigeria's real economic growth (RGDP) as well as the direction of causality between the two key macroeconomic aggregates, employing the Johansen Co-integration, unit root, Granger Causality tests and error correction model for a period spanning 1981 to 2018. The empirical result demonstrates that in the long run, significant positive relationship exists between economic growth (RGDP) and some selected economic globalization indicators namely ,Nominal Foreign exchange rate (NFXR) and foreign direct investment (FDI)), implying that FDI contributes positively to the growth of the economy while that of NFXR implies significant depreciation of Naira which adversely affect cost of production in the long run , Nigeria being import dependent for the inputs of manufacturing sector of the economy. However, the relationship between trade openness (TOR) and economic growth, although negative, is weak and thus implies insignificant impact while inflation constitutes impediment to benefits derivable from economic globalization as reflected in its significant inverse relationship with economic growth. The coefficient of the ECM term, (-0.162) is significant and correctly signed (negative) at 5 percent level. The speed suggests that economic growth in Nigeria adjusts slowly to the short-run disequilibrium changes in the explanatory variables since only 16 per cent of short run disequilibrium in the economic growth process is corrected within one lag. Therefore, achieving sustainable price stability, strong institutional and economic reforms and stable polity to promote trade, domestic and foreign investments should be highly emphasized.

KEYWORDS: Real Gross Domestic Product, Foreign Direct Investment, Annual Inflation Rate, Nominal Foreign Exchange Rate, Trade Openness

1.1 Background of the Study

Most developing economies like Nigeria, have undertaken significant economic reforms in global trade and finance in recent years, but these reforms have not actually enhanced their economic status globally. Specifically, Nigeria's international transactions constitute a significant proportion of her aggregate economic activity and the economic prospects and development of the country, rest

critically on her international interdependence. Regrettably, over the years, despite the considerable degree of her trade openness through economic globalization, her performance in terms of her economic growth has remained sluggish and suboptimal (World bank (2012). According to World bank (2012), IMF Article VIII provisions recommend that for economies to achieve both economic growth and development, full trade and financial openness which can enhance economic integration should be put in place. The newer endogenous growth theory also emphasizes the need for economic efficiency through trade openness, financial liberalization and competitiveness of a country in order to remain relevant in an emerging global economy, Romer (1994).

Economic globalization refers to the increasing interdependence of world economies as a result of the growing scale of cross border trade of commodities and services, flow of international capital, and wide rapid spread of technologies. (Rao and Vadlamannati (2011).The promotion of global trade and finance as the bedrock of nation's wealth was first espoused in the "mercantile" doctrine before the emergence of Adam Smith's and David Ricardo's thesis on growth. The radical theorists and the early proponents of development economics were of the view that growth could be internalized. This argument does not favour autarky where an economy is closed from the rest of the world economies, Maku (2006). However, the recent developments in the world economies have shown that it is futile for economies to isolate themselves from rapidly integrating world. This study therefore sets out to investigate empirically the effect of economic globalization on Nigeria's economic growth in order to establish whether it is advantageous or not, and to proffer some recommendations based on the outcome of the study.

1.2 Statement of Research Problem

The Nigerian economy is basically an open economy with international transactions constituting an important proportion of her aggregate economic activities. Consequently, the economic prospects and development of the country, like many other developing countries, rest critically on her international interdependence. According to World bank (2002), economic globalization and the increasing global interdependence, have greatly facilitated the flows of trade, investment, and ideas among developing and developed countries. Nigeria as a developing economy has been at the integral part of global trade for four decades now. In order to remain relevant in global tra de, the government of Nigeria at various times had embarked on major economic policies/reforms. Example the 1986 Structural Adjustment Programme (SAP), 2004 economic reforms etc to mention but a few all to ensure active participation of Nigeria in the global market. But despite all these efforts it is very worrisome that Nigeria's economic growth has remained sluggish and discouraging (World bank (2017), hence the study. It is therefore pertinent to empirically investigate the extent economic globalization, through her trade openness, must have positively or negatively affected the growth of her economy.

Based on the above controversies, there is need to establish the position of the Nigeria's economy empirically.

In view of the above economic globalization –growth nexus and the gaps and challenges of the previous reviewed studies, this study seeks to re-examine the problem holistically by applying Nigerian time series using analytical econometric techniques (Co-integration, Unit root test, error correction mechanism and Granger Causality test) to see if a more authentic result could be achieved to enhance economic planning.

1.3 Objectives of the Study

The broad objective of the study focuses on establishing the effect of economic globalization, using some selected key indicators namely - Foreign Direct Investment, trade openness, nominal foreign exchange rate, and inflation rate (control variable) - on Nigeria's real economic growth.

The ancillary objective to the main one, is also to determine the direction of causality between these selected indicators and the real Gross Domestic Product of Nigeria. The specific objectives of this study are:

  i.   To determine the effect of foreign direct investment on real Gross Domestic Product of Nigeria
 ii.   To ascertain the effect of trade openness on real Gross Domestic Product of Nigeria
iii.   To determine the effect of   inflation on Real Gross Domestic Product of Nigeria
 iv.   To establish the effect of nominal foreign exchange rate on real Gross Domestic Product of Nigeria.
  v.   To determine the direction of Granger causal relationship between selected globalization indicators namely: Trade openness, foreign direct Investment, nominal foreign exchange rate, and inflation rate -and economic growth proxies by real Gross Domestic Product (RGDP)

2.0 REVIEW OF RELATED LITERATURE

2.1   Conceptual Framework
2.1.1   Economic Globalization

Globalization has been basically defined in various ways but the central message remains the same. Generally, globalization is a world-wide phenomenon which refers to the growing interdependence among countries, institutions, communities, families and individuals. It fosters the advancement of the global mentality. It conjures the picture of the borderless world through the use of information technology to create partnership and foster greater trade and financial integration, Ajai (2005).

According to Stiglitz (2006), globalization in its broader meaning includes different issues including capital flows, information and knowledge flows, uniformity in culture and other issues in the globe. Besides, Ibrahim (2013) has defined globalization as the process of homogenizing the economic, political, social and cultural aspects of the world.

2.1.2 Foreign Direct Investment

Foreign Direct Investment (FDI) is an investment made to acquire a lasting management interest (normally 10% of voting stock) in a business enterprise operating in a country other than that of the investor defined according to residency (World Bank, 1996). The investors' purpose being an effective voice in the management of earning either long term capital or short-term capital as shown in the nations balance of payments account statement.

It also refers to capital inflows from abroad that could be invested in the production capacity of the economy and are usually preferred over other forms of external finance because they are non-debt creating, non-volatile and their returns depend on the performance of the projects financed by the investors. Foreign direct investment also facilitates international trade and transfer of knowledge, skills and technology. It is furthermore described as a source of economic development, modernization, and employment generation, whereby the overall benefits (dependent on the policies of the host government) trigger technology spill overs, assist human capital formation, contribute to international trade integration and particularly exports, help create a more competitive business environment, enhance enterprise development, increase total factor productivity and, more generally, improve the efficiency of resource use. (OECD, 2002).

2.1.3 Trade Openness/ Liberalization

Trade openness refers to the degrees to which a country or economy permits or have trade with other countries or economies. The trading activities include that of import and export, foreign direct investment (FDI), borrowing and lending, and repatriation of funds abroad. The openness rate of a country is calculated as the proportion of foreign trade volume to gross domestic product besides the usage of the proportion of import to gross domestic product (Romer,2005) and of the country on the foreign trade. Economists generally see the concept of trade openness as the integration among the nations of the world. It is likened to openness of the world economy where nations link together to the extent that they have free trade, free movement of capital and financial activities (Igudia, 2004).

2.1.4 Concept of Economic Growth

Economic growth is the key policy objective of any government. In addressing the pertinent issues in economic management, experts and economic planners have had to choose between or combine some of the macroeconomic policies. But the link between economic growth and economic globalization is not presently so evident, Akinlo (2007). To date, the general consensus is that the rate at which declining economic growth rate is permeating the LDC countries requires urgent policy response in order to bring about sustainable economic growth.

Conceptually, economic growth refers to a sustained and positive change in the level of aggregate production of goods and services by a country over certain and given period of time. When measured

over the population of a given country, then economic growth can be stated in terms of per capita income according to which the aggregate production of goods and services in a given year is divided by the population of the country in the given period. Economic growth can also be stated in normal or in real terms. Hence, when the increase in the aggregate level of goods and services is deflated by the rate of inflation, we have the real economic growth, otherwise when measured without deflating, it is called nominal economic growth. Economic growth confers many benefits which include raising the standard of living as measured as per capita national income, making income distribution easier to achieve, enhance timeframe of accomplishing the basic needs of man to a substantial majority of the populace. Conversely economic stagnation can bring destabilizing consequences on the citizenry, Lipsey (1982).

2.1.5 Exchange Rate
Exchange rate has been defined as the price of one currency in terms of another (Mordi, 2006). Exchange rate is the price at which one country exchanges its currency for other currencies. The increase or decrease of real exchange rate indicates strength and weakness of currency in relation to foreign currency and it is a standard for illustrating the competitiveness of domestic industries in the world market. Azeez, Kolapo and Ajayi, (2012). Jhingan (2010) defines exchange rate as the rate at which one currency exchanges for another. According to Jhingan (2010), misalignment of exchange rate occurs where there is multiplicity of markets parallel with the official market.

These facts underscore the importance of exchange rate to the economic well-being of every country that opens its doors to international trade in goods and services. Dada and Oyeranti (2012) noted that the objectives of an exchange rate policy include determining an appropriate exchange rate and ensuring its stability. Over the years, efforts have been made to achieve these objectives through the applications of various techniques and options to attain efficiency in the foreign exchange market.

2.2 Theoretical Framework

2.2.1 Theory of Economic Growth
There are two main theories that relates to possible sources of growth. These are the growth theory and the growth accounting. Growth theory is concerned with the theoretical modeling of the interactions among growth of factor supplies, saving and capital formation, while growth accounting addresses the qualification of the contributions of the different determinants of growth.

Three waves of interest have currently emerged in studying growth. The first wave is associated with the work of Sir F. Harrods (1900-1978) and E. Domar (1914-1997) in what was termed the "Harrods – Domar Model". The theory presupposed that growth depended on a country's savings rate, capital/output ratio, and capital depreciation. This theory has been criticized for three reasons. Firstly, it centers on the assumption of erogeneity for all key parameters. Secondly, it ignores technical

change, and lastly, it does not allow for diminishing returns when one factor expands relative to another (Essien 2001).

The second began with the neoclassical (Solow) model, which contained the thinking that growth reflected technical progress and key inputs, (labour and capital). It allowed for diminishing returns, perfect competition but not externalities. In the neoclassical growth process, savings were needed to increase capital stock, capital accumulation had limits to ensure diminishing marginal returns, and capital per unit of labour was limited. It postulates that growth also depended on population growth rate and that growth rate amongst countries was supposed to converge to a steady state in the long-run. Despite the modifications, the basic problems associated with the neoclassical thinking are that it hardly explains the sources of technical change (Ford and Rock, (2008).

The third is the newer alternative growth theory, which entrances a diverse body of theoretical and empirical work that emerged in the 1980s. This is the endogenous growth model. It distinguished itself from the neoclassical growth model by emphasizing that economic growth was an outcome of an economic system, not the result of forces that impinged from outside. Its central idea was that the proximate causes of economic growth were the effort to economize, the accumulation of knowledge, and the accumulation of capital. According to this theory, anything that enhances economic efficiency is also good for growth. Thus, the theoretical framework indigenized technological process through "learning by doing" or "innovation processes". It also introduced human capital, governance and institutions in the overall growth objectives (Romer 1986, Romers, 1994 and Essien, 2001).

A number of endogenous growths referred to in the literature as non-Schumpeterian growth (Schumpeter emphasized the importance of temporary monopoly power as a motivating force in the innovative process). The model further incorporates the fact that technological advancement comes from what people do and existence of monopoly rents discoveries. The emphasis on knowledge and technology in the Schumpeterian model raises question about the role of government in promoting growth. Government should be seen as a critical agent that provides key intermediate inputs establishes rules, and reduces uncertainly, by creating the right macroeconomic environment for growth. (Contessi and Weinberger, (2009).

The newer growth theory (endogenous theory) fits the real world perfectly well and has important policy implications. This is because it traces growth of output per capita to two main sources: savings and efficiency. In other words, it is not only factor accumulation that drives growth but also efforts to utilize them. An important economic policy implication of this thinking is that of achieving economic stability with low inflation and positive (real) interest rate that spurs saving, which is good for growth (Gylfason, (2004), Ford and Rock, (2008). Consequently, anything that increases efficiency and savings is good for growth. This position is further examined in details below.

2.2.2. Endogenous Growth Theory:

Admittedly, some of the theories discussed above have helped immensely in explaining growth of individual countries but they do not completely explain why countries have differing growth trajectory. For instance, under the neoclassical theory, the long-run rate of growth in output was exogenously determined generally by an assumed rate of labour force growth. In other words, growth was traceable to a single source – technological progress, hence economic growth in the long-run was immune from economic policy whether good or bad. The endogenous growth theory assumes that technological progress is endogenous, which is contrary to neo-classical growth theory whose assumption is based on exogenous saving rate, population growth and technological progress. Also, new growth theory assumes that marginal product of capital is constant, but in neo-classical growth theory, the capital is assumed to be diminishing on return. Mundell (1963), Tobin (1965).

The endogenous growth theory or the new growth theory, indigenizes the rate of technological progress. It traces the rate of growth of output per capita to two main sources – savings and efficiency. It also argues that policy measures can have an impact on the long-run growth rate of an economy, even if they do not change the disaggregate saving rate. Thus, countries with high level of efficiency, appropriate economic system, sound, economic policy, tend to grow more rapidly (Romer, 1994). Rapid growth rates are associated with country with efficient economic system and prestige. (Lipsey, 1982 and Lewis, 1978). This new thinking is very important for countries in an integrated arrangement or considering forming an economic union, and therefore aptly explains why countries economic growths are different.

The efficiency argument is not entirely a new one. Economists have long held this view as they recognized technical change as important catalysts for economic growth. (Gylfason, 2004), (Ford and Rock, (2008). However, this endogenous growth theory is now being broadened to also include efforts to utilize the accumulated knowledge and other supportive conditions to optimal benefit. Thus, technical change is viewed as an aspect of general economic efficiency. It is said to be good for growth as to squeeze out more output from the economy.

2.3 Empirical Review

Kilic (2015) has tested the relationship between economic growth and economic globalization, political globalization and social globalization using seventy-four developing nations. The study has found that due to the existence of cross-sectional relationships, any economic shock or changes in the aforementioned globalization proxies in one of the developing countries will one in another way affect the economy of other countries. The regression result showed that economic growth is positively and significantly being affected by both economic globalization and political globalization whereas, social globalization affects the economic growth of the developing countries inversely. As a result, those countries are recommended to promote international trade, attract FDI and enhance involvement in international party to catch up the developed world which secures a convergence in the world economic growth.

Meraj (2013), has attempted to examine the economic impact of globalization in Bangladesh by employing Granger causality test and ARDL, for the periods 1971 to 2005, using trade openness, export and import variables to estimate the impact of globalization on economic growth. The result shows that there is bidirectional causality between export and economic growth but import does not cause economic growth. The researcher has recommended that developing countries in general should adopt export-oriented policies.

Ray, (2012) employed an error correction model to investigate whether the economic growth of India is being affected by the globalization variables using the time series data from1990 to 2011. The study has used trade openness and financial integration, human resources development and physical capital as indicators of globalization. The result revealed that trade openness was positively significant while financial integration, the other measurement of globalization were inversely and insignificantly related. The study has found that India has been benefiting from the globalization by freeing the trade for the last few decades.

Feridun, Olusi, & Folorunso, (2006) conducted research titled analyzing the impact of globalization on economic development in developing economies with special emphasis to Nigeria. The study applied Error Correction Model using annual data covering from 1986 to 2003. The research applied a Harrod-Domar growth model where the level of output (measured by nominal gross domestic product) is explained by the level of physical capital and trade openness which were negatively and insignificantly related.

Ma'rof Redzuan (2012) investigated the effect of globalization indicators on the economic development scale. The output generated from eight selected countries revealed fast improvement in the Gross Domestic Product (GDP) and economic growth rate. Significantly, attraction of Foreign Direct Investment (FDI) and rise of foreign direct investment as a percentage of GDP in these countries have impacted positively on foreign trade at international and regional levels. The data from these countries show that substantial growth in their economies is related unprecedented high foreign direct investment inflows. Generally, they had economic development and access to high income and as active players in the global economy

Adigwe, Ezeagba, and Francis (2015) conducted a study on Effect of Foreign Direct Investment on Nigerian Economic Growth. The relationship between foreign direct investment, exchange rate and gross domestic product. Using Nigerian time series data, from 2008 to 2013, Pearson Correlation was used to test the hypothesis with aids of SPSS version 20.0. The findings revealed that there is a significant relationship between FDI, EXR and GDP. This indicates that economic growth in Nigeria is directly related to foreign direct investment and exchange rate. The paper thereby recommends among others that there is need for government to be formulating investment policies that will be favorable to local investors in order to compete with the inflow of investment from foreign countries.

3.0   RESEARCH METHODOLOGY

3.1   Research Design

According to Onwumere (2005), a research design is a kind of blueprint that guides the researcher in his or her investigation and analysis. The research design adopted for this research is the *ex-post facto* research design. The adoption of this research design hinges on two reasons:

Firstly, the study relies on economic data obtained from the Central bank of Nigeria (CBN), Statistical Bulletins spanning from 1981 – 2018, which cannot be manipulated.   The inability of the researcher to manipulate these variables is a basic feature of *ex-post facto* research design. (Onwumere, 2005) and thus, it perfectly suits this research.

3.2   Sources of Data Collection

The study made use of secondary data sourced from Statistical Bulletin and various Statement of Accounts of Central Bank of Nigeria, spanning from 1981 to 2019.

3.3   Method of Data Analysis

The data analyses adopted for this study are based on econometric analytical models which include: Descriptive statistics, Ordinary Least Square Multiple Regression, Unit Root Test, Co-integration test, Granger causality Test, and Error Correction Model and these are briefly discussed below:

3.5   Model Specification

A model is a simplified view of reality designed to enable a researcher describe the essence and inter relationship within the system or phenomenon it depicts (Yomere and Agbonifoh, 1999). Economic growth, represented as real GDP is expressed functionally and mathematically, leaning on the endogenous growth theory which has been extensively discussed in chapter two as follows:

$$RGDP = \int(FDI, TOR, NFXR, INF)$$

$$LnGDP = a + b_1 lnFDI_t + b_2 lnTOR_t + b3NERt + b4INFt + \mu t$$

Where the following symbols are used to denote their respective variables.

RGDP = Real Gross Domestic Product (Proxy for Economic Growth)

FDI= Foreign Direct Investment, TOR =Trade Openness ((Export plus import as percentage of GDP), INF=Inflation (Annual inflation Rate), NFXR=Nominal Foreign Exchange Rate

μ =   Error term, a = Regression equation intercept, b = Regression equation coefficient

Hence the above estimable long-run linear equation posits that economic growth (RGDP) in Nigeria is a function of FDI, TOR, NFXR and INF which are the major selected economic globalization indicators and explanatory variables. Inflation is a control policy variable. RGDP is the dependent variable, 't' indicates time dependent and μt is an unobservable component that is assumed "white noise".

The theoretical priori expectation for this model is that b1, b2, and b3 are > 0, while b4< 0. This is based on the theories already discussed in the previous chapters.

4.0 DATA PRESENTATION AND ANALYSIS

4.1   Data Presentation

Table 4.1: Descriptive Statistical Analysis

	FDI	**TOR**	**INF**	**RGDP**	**NFXR**
Mean	5097.728	0.510097	19.87763	27569.37	97.69921
Median	113.6200	0.375400	12.95000	6102.420	104.1250
Maximum	30553.30	1.212500.	76.80000	127762.6	307.0000
Minimum	0.260000	0.073600	0.200000	144.8300	0.610000
Std Deviation	8767.784	0.406134	18.27314	37734.90	87.84400
Skewness	1.853608	0.937417	1.648377	1.279906	0.769434
Kurtosis	5.448088	2.273480	4.759748	3.322978	3.175016
Jarque Bera	10.54017	6.401153	22.11173	10.54017	3.798016
Probability	0.00018	0.040739	0.000016	0.005143	9717
Observation	38	38	38	38	38

Source: Research computation 2018 using E-view Software Package Version 9

4.1 The Descriptive Statistical Result Analysis

The result of the descriptive statistics is shown on Table 4.2. The mean for FDI, TOR, INF, RGDP and NFXR as shown on the table are: N5097.728 billion, 51. percent, 19.87 percent, N27569.37, billion and 97.699 and they are positive respectively.

The standard deviation for each variable- FDI, TOR, INF, RGDP and NFXRare: 8767.784, 0.460134, 18.27314,37734.90 and 87.84400 respectively. A a standard normal deviation and this is also referred to as Z- score.   However, the mean of a normal distribution could still be any number and could be positive or negative. A normal distribution also has a kurtosis of 3 and zero skewness. The standard deviations for the time series used for the study are all larger than one, except that of TOR. This outcome invalidates the assumption of normal distribution considered for normal OLS regression to yield a good analysis result.

The skewness for all the time series used are within the range of one while their kurtosis is approximately (3) three for RGDP and NFXR. The FDI and INF have their kurtosis above three while that of TOR is less than (3) three.

The Jarque Bera probability figures for the variables are less than 0.05 except for NFXR. This suggests absence of normality for NFXR. This is capable of affecting the analysis of result of the model for prediction of the effect of economic globalization on Nigeria's real GDP from the model.

Table 4.2 Level Series OLS Estimation Result

$$\text{RGDP} = \smallint(\text{FDI, NFXR, TOR, NFR})$$

Dependent Variable: ln RGDP.
Method: Least Squares
Date: 01/16/20 Time: 04:01
Sample(adjusted): 1981   2018
Included observations: 38 after adjusting endpoints

	Variable	Coefficient	Std. Error	t-Statistic	Prob.
	LnFDI	5.07494	2.090668	2.427425	0.0245 *
	NFXR	-0.087355	0.079962	-1.092458	0.2823
	TOR	1.247421	0.251418	4.96154.	0.0006
INF		- 3.005140	1.070161	-2.808145	0.0047
	C	12.68552	0.382482	33.16632.	0.0000

R-square	0.737935	Mean dependent var	32.8338
Adjusted R-squared	0.685522	S.D. dependent var	26.7644
.E. of regression	18.94311	Akaike info criterion	7.07926
Sum squared resid	720.092	Schwarz criterion	8.00243

Log likelihood	-320.4068	F-statistic	14.07926
Durbin-Waston stat	1.4318	Prob (F-statistics)	0.000009

Source: E-VIEW Econometric Computer Software Application, Version 9

4.2 Analysis of OLS Level Series Estimation Result

The Ordinary Least Square (OLS) level series estimation result, presented in table 4.3 shows that the selected explanatory variables–trade openness, (TOR), Foreign Direct Investment (FDI), inflation rate (INF) are appropriately signed (except Nominal Foreign Exchange rate (NFXR)) and conform to the priori expectation. The overall goodness of fit as measured by the coefficient of determination (R-squared) shows that 73 per cent of the variations in real Gross Domestic Product (RGDP) are determined by the combined effect of the changes in these explanatory variables.

The F-statistics value of 14.07 with the probability value of approximately zero are relatively high and suggests that the explanatory variables have collectively made a significant impact on the real growth of Nigerian economy. However, the low DW test (1.4318) with the high R^2 indicates possible presence of first order autocorrelation which may render the regression spurious.

Generally, the best linear unbiased estimator (BLUE) property of the OLS regression requires that the residual or the error term should have a zero mean, constant variance and zero autocorrelation and also assumes normal distribution. (Gujarati and Porters (2009). Therefore, there is need to be careful about the properties of stochastic error terms that might have entered the models which might give rise to misleading analysis of result. Since the result indicates some degree of time-dependence of these data, there was need for more rigorous tests which justifies looking at the inherent properties of these time

series by testing for stationarity or otherwise, of these variables, using conventional Augmented Dickey Fuller Unit root test.

TABLE 4. 3: Summary of Unit Root Test Result Data Presentation

VARIABLE	AT LEVEL		FIRST ORDER DIFFERENCE		
	ADF Test Stat	Order of Integration	ADF Test Stat	Order of Integration	Remarks
(INF)	-2.142418	/(0)	-3.159418	/ (0)	**
ln(RGDP)	-1.161156	-	-3.111995	/ (1)	***
ln(TOR)	-1.416484	-	-10.90625	/ (1)	**
(NFXR)	-1.017508	-	-5.314726	/ (1)	**
ln (FDI)	- 0.800022	-	-8.438378	/ (1)	***
Note:	Critical Value: 1% = -3.626784 5% = -2.945842 10% = -2.611551		Critical Value: 1% = -3.626784 5% = -2.945842 10% = -2.611551		

Source: E-View Econometric Computer Software Application, Version 9 (see appendix II).

* = 10% level of Significance   ** = 5 % level of significance

*** = 1 % level of significance

Source: E-VIEW Econometric Computer Software application, Version 6 (See Appendix 3)

4.3   Analysis of the Unit Root test Result

In view of the suspected time-dependent feature of our data in tables 4.3 the Augmented Dickey Fuller (1981) unit root test method was applied separately on all the variables at ordinary level and first order series differencing to determine if they are non-stationary or not. The result shows that the null hypothesis of non-stationarity can only be rejected after the first order differencing /(1) for all the variables namely RGDP,NFXR, FDI, and TOR at one and 5 per cent levels of significance. (except inflation which is at level). The conclusion is therefore drawn that there is existence of unit roots in the time series variables used in the study. They are therefore random walk models (RWM) series. Given the non-stationarity properties of the series, the co-integration test was conducted to confirm further the long-run relationship.

TABLE 4.4: SUMMARY OF CO-INTEGRATION TEST RESULT

Date: 01/16/20 Time: 05:10
mple (adjusted): 1983 2018
Included observations: 36 after adjustments
Trend assumption: Linear deterministic trend
Series:RGDP, FDI , TOR, INF, NFXR
Lags interval (in first differences): 1 to 1
Unrestricted Cointegration Rank Test (Trace)

Hypothesized	Trace			
			Critical	
No. of CE(s)	Eigenvalue	Statistic	Value	Prob.**
None *	0.711604	75.42008	69.81889	0.0167*
At most 1	0.418868	30.65699	47.85613	0.6848
At most 2	0.170766	11.11698	29.79707	0.9583
At most 3	0.104414	4.375873	15.49471	0.8710
At most 4	0.011212	0.405905	3.841466	0.5241

 Trace test indicates 1 cointegrating eqn(s) at the 0.05
level
 * Denotes rejection of the hypothesis at the 0.05 level
 **MacKinnon-Haug-Michelis (1999) p-values

4.4 Analysis of the Co-Integration Result

Consequently, based on the outcome of the unit root test which confirms that all the variables are difference stationary at first order /(1) level,(except INF), we applied a co-integration test using the Johansen (1995) method. This is also done as a condition for accepting error correction mechanism (ECM) in the estimation.

The null hypothesis is that there is no co-integrating relationship among the variables. The decision rule is that the computed likelihood ratios should be greater than the critical values for co-integration relation to exist. The eigenvalue must also be non-zero. Based on these rules, the number of the co-integrating relations in the model were determined. The summary of the results are presented on tables 4.4. (See Appendix V). The model result shows that there is one (1) co-integration relation at 5 percent significant level. This implies that the test statistics rejected the null hypothesis that the variables are not co-integrated and accepted the alternative hypothesis that they are. The presence of co-integrating vector equations in this model therefore implies that there is a long-run relationship at five per cent level of significance between GDP and the explanatory variables – INF, TOR, FDI, and NFXR.

TABLE 4.5: PARSIMONIOUS ECM ESTIMATION MODEL

Dependent Variable: GDP
Method: Least Squares

Date: 01/17/20   Time: 15:35
Sample (adjusted): 1984 2018
Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
lnRGDP(-1)	0.066558	0.334600	3.187562	0.0061
lnFDI (-1)	0.153345	0.035258	2.240607	0.0338
TOR(-2))	-0.418828	0.047200	-0.398768	0.6957
INF(-1)	-0.392532	0.188028	-2.087629	0.0446
NFXR(-1)	0.214532	0.066512	3.225463	0.0052
ECM (-1)	-0.162747	0.041631	-.3.909274	0.0041
C	0.167804	0.062234	2.696339	0.0206

R-squared	0.829235	Mean dependent var	3.837143
Adjusted R-squared	0.798893	S.D. dependent var	0.948527
S.E. of regression	0.036426	Akaike info criterion	-3.469661
Sum squared resid	0.020442	Schwarz criterion	-2.580891
Log likelihood	80.71407	Hannan-Quinn criter.	-3.162858
F-statistic	4166.588	Durbin-Watson stat	2.120276
Prob(F-statistic)	0.000000		

Source: E-View Computer Application Software Version

The Analysis of Parsimonious ECM Estimation Result

The Parsimonious ECM is a restricted VAR (Vector-auto Regression) that has co-integration restriction built into the specification so that it is designed for use with non-stationary series that are identified to be co-integrated in the long run. Some studies have proved that a co-integration is a sufficient condition to run an ECM process. Granger and Newbold (1977), Davidson and Mackinnon (1978), and Granger and Engel (1987)

The ECM specification therefore restricts the long run behaviour of the endogenous variables to converge to their co-integrating relationship while allowing a wide range of short-run dynamics. Granger and Engel (1987).

The residuals of the co-integration term is known as the error correction term since the deviation from the long-run equilibrium is corrected gradually through series of partial short-run adjustments.

Based on the confirmation of the existence of a co-integrating equation for the model. The study adopted the general – to – specific frame work of Engle Granger (1987) and estimated an over-parameterized error correction model from where a parsimonious (specified) error correction model is

obtained. This model gives the final result and ensures that the dynamics of the model are not constrained. The coefficient of the ECM term represents the extent of the deviation from the long-run equilibrium, and gauges the speed of adjustment of the dependent variable RGDP at which equilibrium is restored. If the co-integrating vector is stationary and the ECM term is significantly and negatively defined, the ECM estimation will then confirm the earlier proposition that the variables are co-integrated and stationary and therefore has a long-run relationship. The diagnostic tests which are applied at this level determine the final model adequacy.

The parsimonious ECM result which is presented on table 4.5 shows that the model gives the final and more improved estimation result when compared with the OLS level series and the over parameterized models. (See Appendix IV and table 4.2). All the variables are correctly signed as predicted except TOR which is negatively and insignificantly signed at second lag. The coefficient of determination (R^2) of 82 per cent which measures the overall goodness of fit is also significantly high. This implies that the changes in the explanatory variables – inflation and the economic globalization indicators - in aggregate, accounted for 82 per cent of the variations in economic growth (RGDP) performance in Nigeria. The F- statistics ratio with probability ratio of 0.0000 is high and finally confirms that the economic globalization indicators are jointly and statistically important in explaining the variations in the real growth process of Nigeria's economy.

The result indicates that inflation has a significant negative relationship with RGDP and therefore constrains the benefits derivable from economic globalization which adversely affect economic growth in Nigeria while the significant positive relationship displayed by FDI confirms that it is a growth driver. The impact of TOR with insignificant negative sign suggests that it does not contribute effectively to the growth of Nigeria's real economy. By implication, the insignificant inverse relationship of TOR also suggests that despite her degree of trade openness, high and volatile inflation and exchange rate depreciation in Nigeria have adversely affected her international trade transactions as well as long term business decisions of her economic units. The significant positive relationship of NFXR with RGDP indicates depreciation of Naira which also affects cost of production adversely through high cost of importation of industrial raw materials.

TABLE 4.6: PAIR-WISE GRANGER CAUSALITY TEST RESULT

Pairwise Granger Causality Tests
Date: 01/17/20 Time: 16:47
Sample: 1981 2018
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
RGDP does not Granger Cause INF	36	0.01410	0.9860
INF does not Granger Cause RGDP		4.33817	0.0218

TOR does not Granger Cause GDP	36	0.36735	0.6955
RGDP does not Granger Cause TOR		1.22714	0.3070
FDI does not Granger Cause GDP	36	2.97478	0.0579
RGDP does not Granger Cause FDI		4.29466	0.0226
NFXR does not Granger Cause GDP	36	0.31091	0.7350
RGDP does not Granger Cause NFXR		2.03298	0.1480

Source: E-View Computer Application Software Version 9

4.6 Analysis of the Granger Causality Test Result

The test was run with an optimal lag of 2 and the essence is to establish the direction of causality between real economic growth (RGDP) and economic globalization selected indicators – TOR, NFXR, FDI and inf (control variable). This is important in determining if it is economic globalization or real economic growth is significant in either enhancing or deteriorating the rate of each other in Nigeria.

Establishing which variable causes or promotes the other will enhance economic planning especially in determining the relative weights to be assigned to these two key macroeconomic variables. The relevant statistical tests used in explaining the Granger causality test are the F-statistics and their probability tests.

Our null hypothesis postulates that the current RGDP is not related to the past values of economic globalization indicators as well as past values of itself (i.e RGDP does not granger cause economic globalization indicators) while the second pair postulates that the current economic globalization indicators are not related to past values of RGDP as well as past values of itself (i.e. economic globalization indicators do not granger cause RGDP).

The result as shown on table 4.6, suggests that unilateral causality runs significantly from inflation to RGDP with the F-statistic and probability value of 4.33817 and 0.0218 respectively, at 5% level of significance without feedback.

Furthermore, bilateral causality runs significantly from FDI to RGDP and vice versa (F-statistics and probability values of 2.97478 (0.0579) and 4.29466 (0.0226) (with probability values in brackets). This suggests that their causality relationships are reciprocal implying that both variables determine each other.

Finally, independent causality exists between RGDP and trade openness (TOR) and NFXR with insignificant F-statistics. This implies that none of them can determine each other in Nigeria.

In summary, the above Granger causality result is inconclusive since there are unidirectional, bilateral and independent relationships among some of the variables used in the study. However, it agrees with the findings of Kara and Pentecost (2000) which show that causality tests are mixed and inconclusive depending on the variables used.

5.1   SUMMARY OF FINDINGS

The Summary of findings are as enumerated/listed below:

1. Foreign Direct Investment (FDI) has a significant positive long run relationship with Nigeria's real Economic growth (RGDP) with t- statistics value of 2.240. This implies that it contributes to the growth of RGDP.

2. Trade Openness (TOR) has a long run negative and insignificant relationship with Nigeria's real Economic growth (RGDP). This indicates that the impact is ineffective.

3. Nominal Foreign Exchange Rate (NFXR) has a long run positive significant relationship with Nigeria's real Economic growth (RGDP). This suggests that high rate of depreciation does not enhance RGDP

4. Inflation rate has a long run negative and significant relationship with Nigeria's real Economic growth (RGDP). This indicates that high inflationary pressures affects RGDP adversely.

5. Bilateral causality runs between FDI to RGDP and vice-versa, at 5% level of significance indicating that both determine each other. Unilateral causality runs significantly from inflation rate to RGDP, without feedback, implying only inflation rate determines RGDP. Independent causality exists between RGDP and TOR and also between RGDP and NFXR, implying that none determines each other.

5.2   CONCLUSION

This study critically examined the effects of economic globalization on economic growth of Nigeria's real economic growth using some selected   macroeconomic variables as economic globalization Indicators namely (FDI, TOR, NFXR) and Inflation rate as a control variable. The study spans from 1981 to 2018 with data sourced from CBN statistical bulletin and Annual Financial Reports. The findings of the study are as follows

Foreign Direct Investment has a significant positive relationship with RGDP. This confirms that FDI is a growth driver.

Trade Openness (TOR) is non-significant and has negative relationship with RGDP. This means that TOR does not contribute effectively to the growth of Nigeria's real economy, within the period under investigation.

Inflection Rate which is a control variable has a significant and negative relationship with RGDP and therefore constrains the benefit derivable from economic globalization.

Nominal Foreign Exchange Rate displayed significant positive relationship with RGDP which indicates depreciation of the Naira. This is an indication that cost of production will be high since importation of industrial input or raw materials will be high as a result of the depreciated Naria.

In conclusion, the co-efficient of determination shows that 82% of the variations in RGDP is caused by the combined effect of the changes in the explanatory variables which are the globalization indicators namely FDI, TOR, NFXR and influestion rate while the F- statistics and the probability confirm that the explanatory variables are jointly important in explaining the variations in the growth process of Nigeria's real economy.

5.3 RECOMMENDATIONS

Based on the findings of this study and the conclusions drawn therefrom, the following recommendations are made:

I. Foreign Direct Investment was found to have long run positive and significant relationship with RGDP. This goes to show that FDI is a growth driver and should therefore be encouraged. It is the recommendation of the researcher that government and the private sector should increase the capital stock of the country by way building durable and world class infrastructure that will attract more FDIs that will drive the growth of the economy.

II. Trade Openness was found to have negative and insignificant long run relationship with RGDP. This means that it does not contribute effectively to the growth of the economy. It is therefore recommended that policy makers should adopt policies that will help to increase our exportable items. Agriculture should be supported to produce things that could serve as input in the production by other nations.

III. Exchange rate was found to have significant positive long run relationship with RGDP which indicates depreciation of the Naira. The researcher recommends support for production of goods with local raw materials at this period of depreciated Naira. This will make our goods competitive in the global market thereby reaping the benefits of globalization.

IV. It was also found that inflation has long run negative but significant relationship with RGDP. This is actually not helpful to the economic development of the country. The researcher therefore recommends the adoption of tight monetary policy measures to regulate inflation and that there should also be fiscal prudence among our political elites.

V. The establishment of long and variable lags as displayed by the ECM term is another challenge which tends to make the use of discretionary monetary policy difficult to stabilize output. The researcher recommends that lag effects should be accommodated in line with the expected magnitude of change.

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