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A Vector Autoregressive Analysis of Economic Globalization and Economic Growth Relationship in Nigeria

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Abstract

In reality, however, globalization has its winners and losers. There are compliant s of rising job losses and unemployment, higher inflation, inequality in growth, worsening balance of payments and shrinking share of manufactured export base. Therefore, this study examined the impact of economic globalization on economic growth in Nigeria from 1986 to 2020 using the both the vector error correction model and vector autoregressive approaches. The variables used are real GDP as the dependent variable, and trade openness, quality of governance, school attainment, life expectancy, foreign direct balance as independent and control variables. The results show that the coefficients of secondary school attainment, life expectancy, gross fixed capital formation and fiscal balance appeared negatively related to economic growth. The study recommend among others, the need for the government to promote human capital in Nigeria through greater fiscal allocation to the health and education sectors as well as promoting the business environment in Nigeria through the provision of infrastructure.

Keywords: Economic growth, economic globalization, Nigeria, VAR

Introduction

As in many developing countries, the primary focus of policies in Nigeria and Africa is to have high and sustainable economic growth. Such high and sustainable economic growth is a necessary and sufficient conditions for enlarge and broader development for the individuals to be productive and creative. Economic growth is also vital for the society via poverty and reduction in inequality. In addition, it creates the resources to support education, healthcare and the other sustainable development goals (SGDs) to which the world has embarked upon.

Globalization became fashionable in the 1980s when it began to replace words like internationalization and transnationalization with the concept of globalization to mean the intensifying network of cross border interaction in all domains of human activity : social , political, cultural, financial and economic(Khor, 2000; Anyanwu, 2006) The prescription of globalization is to liberalize national and global markets in

belief that free flow of trade , finance and information will produce the best outcome for growth and human welfare.

Globalization can provide opportunities for countries to accelerate the development process. These opportunities focus on increased growth and access to world markets, finance and technology. Although globalization has been associated with high growth rates in some developing countries, a number of them have also experienced periodic collapse in growth rates and significant financial crises have had substantial macroeconomic and social cost.

Generally, globalization can be viewed as the integration of national economics through trade, capital flows and the accompanying convergence of economic policies. It is the process whereby political, social, economic and cultural relations increasingly take on a global scale and which has a profound consequence for individual's local experience and everyday lives (Bilton, 1997). The definition above implies that globalization operates both at global and local levels and therefore impacts on the economy and politics of a country as well as the culture and wellbeing of the citizens. Globalization is rooted in multinational trading and investments arrangements and the opening up of trade, through liberalization of the financial sector as well as the economy as a whole.

Various components of globalization affect economic growth. Openness to international trade, promote growth as it encourages gains from trade and foster innovation and efficient production. Similarly, financial globalization via inflows could in principle, help to raise economic growth in Nigeria and other developing countries via: direct and indirect channels. Some of the direct channels are: augmentation of domestic savings, reduction in the cost of capital due to better risk reduction, transfer of technology from developed to developing countries and development of domestic financial sectors. Indirect channels, which in some cases could be even more important than the direct ones, include increased production specialization due to better risk management and improvement in both macroeconomic policies and institutions induced by the competitive discipline effect of globalization (Prasad et al., 2004).

Despite years of research, the existing literature has not reached a consensus on the relationship between globalization measured by foreign direct investment and trade openness. Some recent studies affirming FDI's positive effect on growth include Borensztein et al., (1998); Hermes and Lensink (2000); Lensink and Morrisey (2006). However, Fayissa and Nsiah (2010) show that FDI has no significant effect on sub-Saharan African countries. It has also been posited theoretically, that openness to trade affects economic growth through several channels, including the exploitation of

comparative advantage, technology transfer and diffusion of knowledge, increasing scale economies and competition (Anyanwu, 2014). However, results have been mixed. Meanwhile, previous studies have attempted empirical investigations on globalization and economic growth in Nigeria. Some of these studies are: Adesoye ,Ajike & Maku (2005), Ferindu, Olusi & Folorunsho (2006), Alimi & Atanda (2011), Maduka, Madichie & Eze (2017), Verter & Osakwe (2015) and George-Anokwuru (2018) and Imandojemu (2021), while these studies have given empirical insights, globalization was wrongly measured. The exclusion of trade openness is already an estimation error. The current study included more variables outside foreign direct investment and trade openness used by Maduka *et al.* (2017). From the gaps observed in the literature, this study therefore examined economic globalization using trade openness and foreign direct investment and using a combination of techniques- vector error correction model and vector error correction (VAR) to bridge the knowledge gap. The research questions of this study following the statement of the research problem are stated as follows:

- What are the impacts of trade openness and foreign on economic growth in Nigeria?
- What are the impacts of the level of variations in trade openness and foreign direct investment on economic growth in Nigeria?
- What is the magnitude of the level of shock of trade openness and foreign direct investment on economic growth in Nigeria

The main objective of this study is to examine the impacts of trade openness and foreign direct investment on economic growth in Nigeria. The scope of this study is limited to the impacts of trade openness and foreign direct investment on real GDP in Nigeria from the period 1986-2020. The variables of this study are: trade openness: the ratios of export and import of GDP; quality of governance, school attainment, life expectancy; foreign direct investment, gross fixed capital formation; real GDP, the dependent variables and fiscal balance with the exception of economic growth, the other variables in the study are independent and control variables. These variables were sourced from the Central Bank of Nigeria Statistical Bulletin of various years and the National Bureau of Statistics (NBS) of 2020. The limitations of this study were not different from the general limitations of quantitative economic research in Nigeria. These challenges are: conflicts in data between CBN Bulletin and NBS database. These conflicts most of the times limits the validity of the data. Again, reliability of these data becomes questionable following data structure in Nigeria. Estimation challenges are also imminent. However, the researchers combined both the CBN sources and the NBS to ensure the robustness of the data. To overcome the challenges of reliability, the data were subjected to both face and content reliability using the econometric post-

estimation of the diagnostic tests to enhance the parameter estimates and its policy inference

The significance of this study on the impacts of trade openness and foreign direct investment is not in doubt. It has three-prong values: Theoretical value, empirical value and policy value.

Theoretically, the theories and linkages of trade openness and foreign direct investment were reinforced. Therefore, this study emphasized on the applications of globalization (trade and inflows) as one of the key drivers of economic growth in Nigeria. Empirically, this study extended the extant literature by including other variables of life expectancy, school attainment and fiscal balance. The inclusion of these variables is premised from the assumptions of the globalization literature. So this is a value addition over the previous studies. In terms of policy, the policy recommendations from the study of the study in line with the key variables of trade openness and foreign direct investment is an addition to policy recommendation from previous studies on the integration of the Nigerian economy across national borders. The inclusion of foreign direct investment to the study became insight since the integration of the investment markets is far out-pacing the integration of production and trading

This study is organized into five sections- Section one presents the background to this study. Section two focuses on the related literature review while section three and four presents the research methods and data presentation and analysis respectively. Section five is on the summary of this study, conclusion and policy recommendations.

Empirical Literature Review

This section presents the empirical literature review. It involves all studies across the world. Garret and Mitchel (2001) examined the effect of globalization on the efforts of welfare states in OECD countries .The study covered 18 countries for a period of 33 years from 1961 1993. The study employed panel- corrected standard errors method and least square dummy variable. The variables include government consumption expenditure, total public spending, social security transfer, labour force, and imports as percentage of total imports, trade and inflows and outflows of foreign direct investment as a percentage of GDP. The results propose long-term dissimilarities in capital freedom of movement and mainly trade; have a tendency to reduce government expenditure.

Agenor(2004) examined the effects of globalization to harm the poor in under-developed countries . The study used the ordinary least square framework of cross country regression with fixed effects by employing panel data of 16 countries for the period from late 1980s to 1990s. The variables are rate of poverty, several structural and macroeconomic variables containing indicators of schooling, terms of trade, inflation, and per capita change. The results show that inflation has corrected positive and significant statistics. It is suggested that an inverted U-shaped relationship exists between poverty and globalization.

Bobek and Korez –Vide (2005) presented a systematic methodology for assessing globalization of the country depends on the concept of systematic framework of general effectiveness and economic growth of the country. The data was collected from World Bank, OECD, and World Economic Forum Competitive Reports. The results show the satisfied reliability of the composite index when five sub-indices manly organizational arrangements, productive resources, technology, characteristics of product market and institutional framework were considered.

Dreher (2006) observed the impact of globalization on economic growth under new index of globalization. The analysis uses panel new index of 123 countries for the time period from 1970 to 2000. The study employed index of globalization which includes three sets of data comprising of variables of economic globalization, political and social globalizations. Ordinary Lesat Square and Generalized method of moment techniques were used for the analysis. It revealed that globalization has a very important role in economic growth and fasten its rate. Economic growth gets raised and encouraged in high globalized economy.

Dreher and Gaston (2008) justify the effects of globalization on inequality in earning and income. The measures of UTIP-UNIDO i.e. inequality in household income and industrial wage were used to measure the inequality besides, KOF index of globalization. The study evaluates cross section regression and GMM estimator by applying both inequality parameters for 156 countries on five year average data for the period from 1970 to 2000. Higher GDP per capita squared, lower GDP per capita and greater democracy increases economic disparity in the complete sample. The study showed that increase in globalization leads to the rise in inequalities in industrial wage and household income.

Bergh and Karlsson (2010) analyses the correlation between size of government and GDP growth, monitoring for globalization and economic freedom in panel data for 29 OECD and rich economies for two sample for the period from 1970 to 1995 and 1995 to 2005 by employing OLS and fixed –effect regression considering Bayesian

Averaging of classical Estimates (BACE) method having 21 possible explanatory variables.

Muhammed (2015) examined the impacts of globalization on economic growth in selected South Asian countries from 1981 to 2011 using Johansen cointegration approach. The data employed are overall index of globalization (KOF), real GDP, gross fixed capital formation, and total labour force. It was revealed that globalization and GDP both influences ach other and illustrate bidirectional causality in India while Pakistan and Bangladesh show unidirectional causality between globalization and GDP.

Zahnongo (2017) investigated globalization and economic growth in developing countries of sub-Saharan Africa using the panel estimation approach from 1980 to 2012. The findings show that the relationship between globalization and economic growth is not linear in sub-Saharan Africa.

Ngue (2019) examined globalization and economic growth in CEMAC countries via the role of complementarities from 1970 to 2015 using the panel data regression. The variables used are democracy, economic growth, financial development and economic globalization. The findings show that the impact of globalization on economic growth is positive and significant. The result further show that the impact of economic globalization in CEMAC countries does not depend on the level of democracy.

Bhanumurthy and Kumawat (2020) examined financial globalization and economic growth in South Asian countries from 1986 to 2018 using panel VAR and panel causality. The results show that domestic macroeconomic policies such as fiscal prudence act as pull factor for foreign capital.

Petri and Banga (2020) examined the economic consequences of globalization in the United State using explanatory approach. The study revealed that barriers against globalization do not offer solutions to inequality-they reduce the size of the economy without necessarily improving its distribution.

Hussain and Hasseb (2021) investigated the role of globalization, economic growth and natural resources in Thailand using evidence from the nonlinear causal estimation technique. The study applied the novel autoregressive distributed lag (ARDL). The findings confirmed that the effect of globalization and natural resources are significant and nonlinear. However, the effect negative shock of globalization and natural resources is more dominant on the ecological footprint in Thailand than the positive shock of both variables. Table 2.1 presents the empirical literature reviewed.

The limitations of the previous study were based on the fact that previous researchers were unable to tell the importance of openness in estimating the impact of globalization on the growth of the Nigerian economy. Therefore, this study focused on trade openness as one of the independent variables that would be used to estimate the impact of globalization on the Nigerian economy. Also the time frame for this work, (1986 to 2019) is an extension on the subsequent years used by the previous researchers. Hence, the recent impact of globalization on the Nigerian economy shall be seen and reviewed in this research work

From the empirical literature reviewed, the following summaries are conclude: studies that showed positive relationship between economic globalization and economic growth (Agenor, 2004; Bobek & Korez Vide, 2005), studies that showed negative relationship between economic globalization and economic growth (Muhammed, 2015; Reton and Banga, 2020; Bhanumurthy & Kumawat, 2020) and studies that shows no clear relationship between economic globalization and economic growth (Zahnongo, 2017; Hussain & Hasseb, 2021).

Methodology

Model Specification

Since the focus of this study is on the impact of economic globalization on economic growth, therefore, the FOF Index of Globalization may not be appropriate. Hence, the study adopts with medication the model of Muhammed (2015) that equally examined the nexus between globalization and economic growth. The empirical of the former researcher is re-specified as follows:

$$Y_t = \alpha_0 + \alpha_1(C_t) + \alpha_2(L_t) + \alpha_3(G_t) + C$$

Where Y_t is real GDP; C_t is gross fixed capital formation; L_t is total labour force, G_t is overall index of globalization. Based on the above information and adopting the exogenous growth model and the model of Muhammed(2015), the model of the study is specified as follows:

$$RGDP = f(TROPN, FDI, GOVEX, RIR, GGOV, FISB) \quad (3.1)$$

It can be further stated thus:

$$RGDP = \beta_0 + \beta_1 TROPN + \beta_2 FDI + \beta_3 GOVEX + \beta_4 RIR + \beta_5 GGOV + \beta_6 FISB + \mu_t \quad (3.2)$$

Where;

RGDP= Real Gross Domestic Product, TROPN= Trade Openness, FDI= Foreign Direct Investment, GOVEX = Government Expenditure, GGOV= Good Governance, FISB= Fiscal Balance, μ_t= Stochastic or Error term, β_1- β_2= Regression coefficients, β_0 = Intercept of the function (constant term), t= time (1986 to 2019).

The a priori expectations for the coefficients are as follows:

$\beta 0 > 0$; $\beta 1 > 0$; $\beta 2 > 0$; $\beta 30$; $\beta 5 > 0$

The estimation of the model specified may yield spurious regression if the variables are not stationary. The unit root test using the ADF will be employed in order to check this problem. Co-integration test will also be carried out so as to confirm if the series are indeed co-integrated with economic growth. The ECM technique will be employed to derive parsimonious models used for further analysis.

Results and Analysis

Summary of Descriptive Statistics

The descriptive statistics of series utilized in the study are presented in Table 4.1.

Table 1: Descriptive Statics

Variables	Obs	Mean	Std. Dev	Min	Max
RGDP	195	5.720	7.439	-20.7	49.3
OPN	195	3.190	1.524	0.85	6.9
QGN	195	5.503	1.931	1.446	12.056
SCA	195	18.662	6.389	2.1	42.520
LEP	195	17.991	59.642	-3.099	541.909
FDI	195	53.956	16.190	14.772	114.376
GFCF	195	12.407	10.054	0.103	47.122
FSB	195	14.216	12.424	1.262	28.126

Note: RGDP = Economic growth; OPN = Trade Openness; OGN = Quality of Governance; SCA = School attainment; LEP = Life expectancy; FDI = Foreign Direct Investment; GFCF = Gross Fixed Capital Formation; FSB = Fiscal Balance.

Source: Authors' computation using EVIEW 9.0

Table 1 showed that RGDP has an average of 5.7 with minimum and maximum values of -20.7 and 49.3 respectively. This implies that on the average, economic growth is very low given the low economic growth in Nigeria. The average values of trade openness and foreign direct investment, the two measures of economic globalization are 3.190 and 53.956 respectively, which implies that the level and depth of openness of trade is low, although the extent of foreign inflow in terms fo foreign investment is averagely high. The quality of governance and school attainment has values of 5.503 and 18.662 respectively. Among the value, trade openness and quality of governance have the least standard deviation. Gross fixed capital formation and fiscal balance have values of 12.407 and 14.216 with standard deviation and maximum values of 10.054, 12.424 and 47.122 and 28.126 respectively. The correlation matrix is presented in Table 4.2.

Table 2: Correlation Matrix

	LRGDP	**LOPN**	**LQGN**	**LSCA**	**LLEP**	**LFDI**	**LFSB**	**LGFCF**
LRGDP	1.0000	0.859463	-0.197856	0.460346	0.092	0.1246	0.4864	0.78
LOPN	0.859463	1.00000	-0.057326	0.267440	0.062	0.5384	0.2900	0.48
LQGN	-0.197856	-0.057326	1.00000	-0.225543	-0.1156	-0.2496	0.482	0.72
LSCA	0.460346	0.267440	0.2400	1.00000	-0.507	0.4825	0.4526	0.88
LLEP	0.092506	0.062926	-0.115671	-0.507233	1.0000	0.7824	0.4826	0.34
LFDI	0.718996	0.861713	-0.242712	0.379027	0.0188	1.0000	0.7241	0.74
LFSB	0.890422	0.894780	-0.441251	0.28604	0.7254	0.5624	1.00000	0.24
LGFCF	0.725621	0.462570	0.62572	0.27521	0.56284	0.2486	0.2468	1.000

SOURCE: Authors' Computation using EVIEW 9.0

The correlation matrix shown in Table 2 is carried out to support the descriptive statistic results. The correlation matrix plays an important role in multi-variance analysis since it shows the degree of relationship between different components of a random vector (RGDP). Each cell in the table shows the correlation between two specific variables. For example, the correlation between RGDP and the variables are: 0.8594; -0.19785; 0.4603; 0.0925; 0.718, 0.890422 and 0.72562 for trade openness, quality of governance, secondary school attainment, life expectancy; foreign direct investment, fiscal balance and gross fixed capital formation. With the expectation of quality of governance, all the other variables have positive relationship with economic growth. The variables of economic globalization are positively related with RGDP during the reviewing period. The variables are within the standard non-multicollinearity indicated by 0.95% following (Iyoha, 2009 &Tella, 2018). The unit roof result is presented in Table3.

Table 3: Stationarity/Unit Root Test

Variable	ADF Test Statistic			ADF Test Statistics
	Level [1(0)]	1st Difference	Level (1(0))	1st Difference
LRGDP	-1.04101 (0.99)	-1.1371(0.69)	4.311(1.00)	-2.91(0.00)***
LOPN	-2.88(0.5)	-6.587(0.000)***	-2.87(0.05)*	-6.59(0.00)***
LQGN	-5.22(0.00)***	-6.384(0.000)***	-2.54(0.11)	-1.98(0.29)***
LSCA	-1.101(0.708)	-6.055(0.000)***	-1.43(0.56)	-3.52(0.00)***
LLEP	-2.1068(0.24)	-2.511(0.11)	-1.97(0.29)	5.76(0.00)***
LFDI	-2.806(0.06)	-11.23(00.000)***	-2.96(0.04)**	3.82(0.05)***
LGFCF	-2.806(0.06)***	-7.76(0.000)***	-4.46(0.00)***	-4.84(0.00)***
LFSB	-1.362(0.59)	-3.600(0.00)***	-1.75(0.39)	-3.22(0.02)**

Note: (*) Significant at the 10%; (**) significant at the 5%; (***) significant at the 1%
Source: Authors' computation using EVIEW 9.0

Table 3 showed the result of the stationarity test of the variables of the model. It revealed that the majority of the variables were stationary at the first difference, I(1) at both the Philip-Perron and Augmented Dickey Fuller tests at the denoted level of significance. The satisfactory unit root test results lead to the further confirmation of the time series properties of the variables using the Johansen cointegration rank test and the normalized cointegration coefficient as reported in Table 4.4 and 4.5 respectively.

Table 4: Cointegration Rank Test (Johansen)

Johansen and Juselius Maximum Likelihood Cointegration Rank Tests					
Eigen value	Trace statistic	Max statistic	CV @ 5% Trace	CV @ 5% Max	Hypothesized No CE(5)
0.906261	398.3874	108.8931	159.52	52.36	None *
0.848748	289.4943	86.88516	125.62	46.23	At most 1*
0.799641	202.6092	73.95176	95.75	40.07	At most 2*
0.672149	128.6574	51.29867	47.86	33.87	At most 3*
0.585119	77.35874	40.46916	29.79	27.58	At most 4*
0.428302	36.88957	25.72062	15.49	21.13	At most 5*
0.211477	11.16896	10.92923	3.84	14.26	At most 6*
0.005196	0.239633	0.239623	69.81	3.84	At most 7*

Note: *denotes rejection of the hypothesis at the 0.05 level
Source: Authors' computation using EVIEW 9.0

The cointegration test of Johansen and Juselius revealed 6 cointegrating equation(s) at the 0.05 level of significance for both the Trace and Max-Eigen Statistics. The

implication is that there exist long-run equilibrium relationship for the variables of the model. Table 4.5 revealed the long-run normalized coefficients, the results indicate the magnitude and pattern of long-run equilibrium behavior of our model. The vector error correction (VECM) estimate is presented in Table 5

Table 5: Equilibrium Vector Error Correction

Variable	LRGDP	LOPN	LQGN	LSCA	LLEP	LFDI	LGFCF	LFSB
CointEq 1	-0.526935 (0.00121) [-0.45652]	-0.11880 (0.07587) [1.56598]	-0.526935 (0.10312) [-5.10915]	-0.016882 (0.13367) [-0.12629]	-0.780405 (0.47443) [1.64493]	-0.6249 (0.00245) [2.15751]	-0.0029 ((0.00245) [2.15751]	

Source: Authors' computation using EVIEW 9.0

The coefficients of ECM (-1) as shown in Table 5 conforms with the theoretical postulations, as it is correctly signed (negative), statistical significantly and its absolute magnitude being between 1 and 0 for all the variables. It shows that the model has self-adjusting mechanism for correcting short-term dynamics in the series to their long-run path. With the negatively signed ECM values for the variables including the proxy for economic globalization, the study concludes that there exists a long-run converging relationship between economic globalization measured in the study by openness to trade and foreign direct investment (FDI). For trade openness and foreign direct investment, the ECM (-1) reveal that 11.89 percent and 62.4 percent of short-run disturbances are adjusted back of equilibrium path in the long-run. Additionally, the speed of error correction for real GDP tends to be moderate for real GDP at the 10 percent significant level. The VAR lag length selection criteria is presented in Table 4.7.

Table 6 : VAR Lag Length Selection Criteria Test

Lag	LogI	LR	FPE	AIC	SC	HQ
0	-3934.303	NA	1.45e_12	45.03.204	45.14054	45.07605
1	-3190.27	1428.549	4.4e+08*	36.94020	37.69975	37.24821
2	-3101.846	69.51928*	4.38e+084*	36.92249*	38.33308	37.4946
3	-3152.78	90.6972	3.71e+084	36.75253	38.81416	37.58879*
4	-3078530	39.97040	4.31e+08	36.89749	39.61016	37.9973

Note: *Indicates lag Order selected by the Criteria: LR = Sequential modified LR test statistics (test at 5% level); FPE = Final prediction error; AIC = Akaike information; Sc = Schwarz information criteria; HQ: Hannan-Quin information criteria.

Source: Authors' computation using EVIEW 9.0

The generalized impulse response functions and the variance decomposition are presented. The impulse response function display the dynamics of the variables: trade openness; quality of governance; school attainment; life expectancy; foreign direct investment, public investment fiscal balance, tracing out the reaction of each variable to a particular shock at time t. For each equation, a unit shock is applied to the error, and the effect upon the system over the 10 horizon noted. Since the study has 8 variables, a total of 64 impulses could be generalized, this follows Sims (1980) Cholesky decomposition. The fractions of the forecast error variance for each variable that is attributable to its own innovations and to the innovations in another variable are presented in Table 4.8. The variance decomposition gives a better explanation of the relationship which exists among the major variables of the study.

The impulse response analysis and variance decompositions together called (innovation accounting) can be useful tools to examine the relationship among economic variables. It displays information on the role played by different structural shocks in explaining the variability of the series at different horizons.

Table 7: Variance Decomposition Results

Period	S.E	EGDP	OPN	QGN	SCA	LEP	FDI	GFCF	FSB
1	0.001175	100.0000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2	0.002588	97.35759	58.246	0.38661	0.0891	0.2655	64.2463	0.072293	0.0624
3	0.00424	93.47529	62.349	1.06528	0.1020	0.7565	34.2011	0.0546	0.0528
4	0.006072	88.44631	72.1024	1.904	0.0984	1.4117	24.1682	0.03221	0.1487
5	0.008097	82.52624	68.2463	2.820	0.116	2.353	15.2434	0.0181	0.0529
6	0.010362	75.94953	67.2110	3.7778	0.160	3.705	10.1524	0.0190	0.2930
7	0.012879	69.00607	48.428	4.846	0.219	5.391	12.1648	0.0541	0.1428
8	0.015664	61.90279	32.649	6.137	0.286	7.241	10.2115	0.143	0.6512
9	0.018724	54.85297	20.546	7.637	0.344	9.113	9.724	0.2958	0.01780
10	0.022043	48.14919	10.2570	9.193	0.378	10.90	8.643	0.5018	0.0258

Source: Authors' computation using EVIEW 9.0

Table 7 show that shocks to economic growth is explained by a 100 percent shock to itself in the first period at which it continuous to decline. This can be attributed to disruption in the economy notably the different economic crisis. Trade openness of the major component of economic globalization is unnoticeable in the first quarter. It rises and falls to 10.2590 in the 10^{th} quarter. Trade openness is characterized by trade liberalization measures. The quality of governance which is dependent on

institutional framework is quite unnoticeable in the first to the second quarter, but begin to grow continuously throughout the remaining quarters.

Secondary school attainment as a driver of economic growth was unnoticeable throughout the 10 year horizon. Life expectancy, another element of measurability of human capital was unnoticeable in the first three years. It becomes noticeable from the 4th quarter, ranging from 1.4117 to 10.90 in the 10th quarter. Foreign direct investment (FDI) was unnoticeable in the first quarter. It rises from the second quarter to the 4th quarter and began to decline to 8.643 from the 5th quarter to the 10th quarter. FDI is another measure of economic globalization in the model. Fiscal balance as a percentage of gross domestic product remains unnoticeable throughout the period. To ensure the enhancement of the model for robustness and for policy inference, a stability/sensitivity analysis was conducted using the Inverse Root of AR characteristic. The result show that the dots are inside the circle of the inverse root graph which implies that the model estimation is dynamically stable, robust enough to aid policy making.

Discussion of Findings

From the descriptive statistics, the table showed that RGDP has an average of 5.7 with minimum and maximum values of -20.7 and 49.3 respectively. Meanwhile, the values of trade openness, one of the measures of economic globalization and foreign direct investment, were 3.190 and 53.956, this implies that the level and depth of trade openness is low in Nigeria, this could be as a result of the mono-product (oil) of the Nigerian economy. From the correlation matrix, it was shown that the correlation between RGDP and the variable (independent) ranges from 0.8594 to 0.72562. Again, from the table, with the expectation of quality of governance, all the other variables have positive relationship with economic growth, a conformation of majority of the variables were stationary at the first difference, I(1) using both the Philip-Perron and Augmented Dickey Fuller tests.

The coefficients of secondary school attainment, life expectancy, gross fixed capital formation and fiscal balance appeared negative in relation with economic growth. The error correction Model results show that the value is appropriately signed, indicating that there exist a long-run relationship between the variables-economic growth and economic globalization.

The generalized impulse response function showed that there is a shock of the variables one economic growth over the 10 year horizon. While the variance

decomposition show that economic growth is explained by a 100 percent shock to itself in the first period, and it continuously declined in the remaining periods. Trade openness and foreign-direct investment, the two measures of economic globalization remained unnoticeable in the first quarter but rises and fall during the 10th year horizon. From the results the variables of economic globalization accounted more of variations those other exogenous variables in the model. The stability results show that the inverse roof graph is dynamically stable to aid in policy making.

Policy Implication of Findings

Some notable policy implications can be drawn based on the conclusion from the empirical results: The implications are as follows:

i) From the results, trade openness and foreign direct investment are positively and significantly related to economic growth. This implies some policy actions.
ii) The coefficients of secondary school attainment, life expectancy, gross fixed capital formation, and fiscal balanced appeared negatively related with economic growth. This also implies some policy actions.
iii) The coefficients of trade openness and foreign direct investment have some noticeable shocks on economic growth.

Conclusion and Policy Recommendations

Conclusion

The objective(s) of this study is to examine the impact of economic globalization on economic growth over the period 1985 to 2020. Specifically, the study aimed at: examining the impact of trade openness and foreign direct investment on real GDP in Nigeria; investigate the forecasting power of economic growth-economic globalization and to evaluate empirically the relative importance of trade openness and foreign direct investment in explaining the variations in economic growth. The major findings reveal that:

i) Trade openness and foreign direct investment are positively and significantly related to economic growth.
ii) The coefficients of secondary school attainment life expectancy, grows fixed capital formation and fiscal balance appeared negatively related with economic growth.
iii) The coefficient of trade openness, foreign direct investment, quality of governance, fiscal balance and gross fixed capital formation has some noticeable shocks on economic growth.

Policy Recommendation

From the key empirical results, the following policy recommendations:

i) Government should enhance and promote the Nigerian business climate and environment through monetary, fiscal and exchange rate. For example, tax holidays and export processing zones.
ii) The Nigerian policymakers should promote infrastructure development and financing in Nigeria, through the private-public partnership.
iii) The government should promote economic buffers and stimulators to absorb economic shocks caused by the variables. This could be through the promotion of the National Sovereign Wealth Fund (SWF)

The paper on economic globalization has contributed to the literature through trade openness and foreign direct investment; unarguably, the two most cited component of globalization. The use of trade and FDI hence reinforces the applicability of trade openness and FDI to economic discourse and policy. Furthermore, the study re-emphasizes the importance of promoting economic growth through its drivers. Empirically and theoretically, the study is a value-addition to the literature on the nexus between economic globalization and economic growth.

The results of this study should be considered very carefully following data measurement and tests of validity and reliability. Since trade openness and foreign direct investment are directly and positively related to economic growth, other measures of globalization-democracy, political freedom and telecommunication should be considered in subsequent studies. Again, the Kofindex of globalization should be utilized in future studies.

References

Adesoye, A.A., Ajike, E.O . & Maku, O.E(2015) Economic globalization and economic growth in the developing economies: a case of Nigerian economy. *International Journal of Economics, Commerce and Management, 3(7):340-355*

Akor, A.A, Yongu, V.M, & Akorga, M.T(2012) Effects of globalization on the Nigerian economy. *Journal of Management and Corporate Governance, 4:1-6.*

Akinmulegun, S.O.(2011) Globalization , fdi and economic growth in Nigeria, 1986-2009. An unpublished PhD thesis.

Alimi, O & Atanda, A.(2011) Globalization , business cycle and economic growth in Nigeria *African Journal of Scientific Research 7(1): 344-357.*

Anyanwu, J.C.(2006) Does globalization affect economic growth in Africa, Development Studies, 4(1-2): 54-90

Anyanwu, J.C(2014) Factors affecting economic growth in Africa: Are there any lesson from China? African Development Review, 26(3): 468-493.

Bayo, A.(2001) Globalization and the Nigerian economy. *The Economist, 4: 36-37*

Bilton, T.(1997) Introductory Sociology. Macmillan.

Borensztein, E., de Gregorio, J. & Lee , J,W,(1998) How does foreign direct investment affect economic growth? *Journal of International Economics, 45: 115-135*

CBN (2000) Foreign private investment in Nigeria. *Economic and Financial Review 38 , No. 579*

CBN (2006) Statistical Bulletin

CBN(2012) Central Bank of Nigeria Statistical Bulletin and Annual Statement of Account.

Fayissa, B & Nsiah, C.(2010) Can remittance spur economic growth and development in sub-Sahran Africa? Paper presented at the 2010 AFEA/ASSA Conference, Atlanta, January.

Feridun, M, Olusi, J.O & Folorunsho, B.A.(2006) Analyzing the impact of globalization on economic development in developing economies: an application of error correction modeling to Nigeria. *Applied Econometrics and International Development, 1(6,3): 174-182*

Frankel, J.A & Romer, D. (1996) Trade and growth: An empirical investigation, NBER Working Paper.

George-Anokwuru, C.C.(2018) Economic globalization and economic growth of the Nigerian economy . *IIARD International Journal of Economics and Business Management 4(2): 51-60.*

Imandojemu, K., Toyosi, A.N. & Babatunde, A.J.(2021) Globalization and economic growth in Nigeria. *International Journal of Economics, Commerce and Management IX(I): 185 203*

Jhigan, M.L.(2001) International Economics .Vrinda Publications , Delhi, 5th edition

Khor, M.(2000) Globalization and the South : Some critical issues, UNCTAD Discussion Paper Number 147, April

Lensik, R.(2000) Financial development , uncertainty and economic growth , *De Economist, 149(3): 299- 312.*

Lensik, W & Morrisey, O.(2006) Foreign direct investment : Flows, volatility and the impact on growth, *Review of International Economics, 14(3): 478-493*

Maduka, A.C., Madichie, V.A & Eze, E.A.(2017) Globalization and economic growth :Evidence from Nigeria. *International Journal of Social Science and Economic Research, 02(08): 4177-4191*

Obadan, M.I.(2010) Globalization: Concepts, opportunities and challenges for Nigerian development . Text of a paper presented at the training programme on economic reform

Salimono, A.(1999) Globalization and the challenges . Being a paper presented at the International Summit on globalization as problem of development in Harana, Cuba, January 18-22

Shuaib, I., M., Ekeria, O.A & Ogedengbe, A.F.(2015) The impact of globalization on the growth of Nigerian economy from 1960-2010: Error correction model approach. *British Journal of Economics, Management & Trade, 7(1): 63-73*

Tsokota, Y.M(2000) Globalization, poverty and inequality in sub-Saharan Africa: A political economy appraisal. Paper presented at the OECD dialogue on poverty and income inequality in developing countries

Verter, N & Osakwe, C.N.(2015) Economic globalization and economic performance dynamic : Some new empirical evidence from Nigeria. *Mediterranean Journal of Social Sciences, 6(1): 87-96.*

Yusuf, A.(2001) Globalization and Nigerian economic development . Being the text of a paper presented at the 4th Annual National Conference of the Social Studies Association of Nigeria held at the University of Ibadan, Ibadan