

Globalization And Economic Development In Nigeria (1980-2017)

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ABSTRACT: The study examined the effect of globalization and economic growth in Nigeria from 1980-2017. The main objective of the study was to appraise the empirical study of the effect of globalization on economic growth in Nigeria. While the specific objectives were centred on observing the effect of foreign direct investment on real gross domestic product, to examine the effect of gross capital formation on RGDP, to determine the relationship between trade openness and RGDP, to determine the effect of nominal exchange rate on RGDP, to examine the relationship between human development index and RGDP in Nigeria. Using ordinary least square method, unit root test, Johansen cointegration test, Granger causality test and parsimonious error correction mechanism to regress the time series data from 1980-2017. The time series data exhibited stationarity and long run relationship between the variables. Findings in the model showed that the short run analysis explained 88% of the RGDP by the autonomous factors (FDI, GCF, HDI, NER and TRO) and was statistically significant at 5% level except trade openness and FDI. F-statistic (45.56367) showed that the overall model was significant. While at the long run analysis the result showed that 79% of RGDP was explained by the autonomous factors and ECM revealed that the speed of adjustment of short run dynamics to long run equilibrium was corrected at the rate of 74% annually and exhibited a negative sign and demonstrated that a unit increase in FDI will increase RGDP by 41%, while 1% increase in GCF will cause RGDP increase by 25%, also 1% increase in HDI will cause RGDP increase by 48% and 1% rise in NER will increase RGDP by 69% annually and finally 1% increase in TRO will cause RGDP to increase by 6%. Granger causality demonstrated a unidirectional relationship between RGDP and GCF and bidirectional relationship between RGDP and NER. The study therefore recommends that government as a matter must implement policies that will encourage globalization and foreign market integration in

order to boost production, employment, competitiveness and advanced technology.

Keywords: Real GDP, FDI, gross capital formation, HDI, trade openness

I. INTRODUCTION

1.1 Background to the study

Since the apocalypse war II the world has become a lot more modest due to the connection between various individuals, district and countries which prompted a circumstance where a nation's economy and advancement are not just in the possession of the public authority of the day are affected by global associations inflow of assets where worldwide standards and guideline rules. (Yakubu and Akanegbu, 2015).

Globalization is the combination of public economies through exchange and monetary interface (Obaseki, 2000). It is the strengthening of cross border exchange and expanded monetary and direct venture flows among countries, promoted by fast advances in progression of communication and information technology (Islam, 1999 and Aminat, 2002). This shows the cooperation or integration of public economies through openers to exchange, monetary streams, through foreign direct venture, advances in telecom and data innovation, labour. Ogbuagu and Ewubare(2014)established that exchange rate always spreads positive shocks to economic development and negative shock to inflation rate and growth unpredictability and to accomplish a steady economic growth, it is inferred that commitment of worldwide financial integration and exchange rate soundness is a practicable system in Nigeria. Ewubare and Tuaneh (2016) further established that with the assistance of globalization, electronic banking has added to improved money related arrangement in Nigeria which prompts advancements in the financial framework.

On the other hand economic development is a strategy intervention actions focused at the economic and social prosperity of individuals (Salmon Valley Business Innovation Center, 2014).

It is the improvement in the personal quality of life of individuals, presentation of new products and ventures utilizing current technology, relief of danger and elements of development and business (Hadjimichael et al., 2014). The goal of economic development is to establish an empowering climate for neighbourhood networks and areas to grow better approaches for creation of merchandise in such amounts that may prompt exportation to different nations. Accessibility of monetary assets from exportation that prompts greater interest in foundation to support the general public and improvement in day to day environments of the individuals, in instruction, transportation organizations, medical issue, water supply, sewage and disinfection conditions (SVBIC, 2014). The changes make the conditions for long financial development by situating the economy on a higher development path (Hadjimichael et al., 2014).

1.2 Statement of Problem

Ewubare and Merenini (2018) agreed that poverty around the world and income imbalance have been distinguished as significant impediment to economic advancement of Nigeria. Regardless of the way that Nigerian economy is strangely growing the number of inhabitants in Nigerian living under destitution is expanding each year as announced by NBC (2010). Irrespective of the overall commitments of the economic globalization which communicates positive impact in Nigeria economy in light of the impact of foreign direct venture net capital arrangement, human advancement file, trade openness and nominal exchange rate to the financial improvement in Nigeria since 1986 when Nigeria started liberalization policy with world trade organization (Igudia, 2004).

Anyway countless examinations have been done to explore the affectability of the commitments of economic globalization on Nigeria economic improvement utilizing vector auto regression model (VAR). Yet, the exact proof demonstrating the connection between economic globalization and Nigeria economic development is missing subsequently the decision of this research to employ ordinary least square model, unit root, Johansen co-integration, Granger causality and ECM to examine the commitments/contributions of globalization to Nigeria economic development (1980-2017). The following research questions were utilized to manage the investigation: Is there any connection between foreign direct investment and real GDP in Nigeria? What is the connection between gross

capital formation and real GDP? Is there any connection between trade openness and real GDP? What are the effects of nominal exchange rate on real GDP? What are the relationship between human development index on real GDP?

1.3 Objectives of the Study

The broad objective of the study was to examine the contributions of economic globalization on the Nigeria economic growth. The specific objectives were to:

- i. To examine the effect of foreign direct investment on the RGDP.
- ii. To examine the effect of gross capital formation on the RGDP.
- iii. To determine the relationship between of trade openness and RGDP.
- iv. To evaluate the effect of nominal exchange rate on the RGDP.
- v. To examine the relationship between human development index and RGDP.

II. LITERATURE REVIEW

2.1.1 Product Life Cycle Theory

Vernon (1966) the product life cycle hypothesis of global exchange expresses that the exchange designs are affected once another item is introduced in the market. It conditions how manufactured items will be created first in quite a country in which they were researched and produced. Over the product life cycle, production will in general get capital intensive and will move to foreign countries. Assume, an item is introduced in Japan, Japan will be an exporter of the item at first. As request develops for the item around the planet, production facilities will be established in nations around the globe to fulfill the high demand. Rivalry will make firms to find offices in their least coast area which may be in a low wage developing nation. Additionally production at first introduced in the US and sent out from that point may end up turning into an item delivered elsewhere and afterward imported once more into the US.

The hypothesis guarantees the accompanying stages: introduction stage 1, for example development, production and sales in the first country. Stage 2 the growth stage which is exportation by the improving country, more rivalry, increment in capital force and some unfamiliar creation. Stage 3 Maturity stage; this has to do with decrease in exports from the innovating country, more item standardization, more capital power and expanded competitiveness of cost and stage 4 is the decline stage which is the concentration of production in LDCs and innovation.

2.1.2 Absolute Advantage Theory

Adam Smith posited that the advantages of a nation can accomplish by effectively partaking in the global division of labour. He contended that specialization underway prompts increment in yield. This hypothesis expresses that a country that trades globally ought to have some expertise in delivering just those merchandise which it has total complete advantage. Smith expressed that this methodology would prompt worldwide proficiency. He put together his hypothesis with respect to the suspicions of: (1) the trade includes just two nations (2) where two products are exchanged upon by the two nations (3) the two nations have a similar degree of asset input, Smith was reprimanded for his obscure

2.1.3 Heckscher – Ohlin and Samuelson Modern Theory

Heckscher-Ohlin (1953) they stated that if a nation has a bountiful supply of a factor to another they will be accessible to the organizations at less expensive cost. The production cost of merchandise which requires these components will be relatively low. Henceforth nations will dispense its assets according to the similar favorable position and specializes considerable in the production of the wares that has cheap factors. It sends out those products and keeping in mind that her imports will be less expensive merchandise, from different nations. HOS model hypothesis had been criticized dependent on the following: Over simplification of assumptions, Partial equilibrium analysis, ignorance of transportation cost and corresponding hypothesis instead of a substitute of the classical hypothesis of comparative cost.

2.2 Conceptual Framework

As indicated by Imam (2000) globalization is the avoidance or state-upheld limitations on trade across different countries and the undeniably mind boggling worldwide arrangement of manufacturing, appropriation and trade that has arisen therefore. Since 1980, the worldwide economy is being molded by neoliberal economic arrangements that endeavored to empower free enterprise at worldwide scale through exchange progression, venture from abroad and straightforwardness just as the unwinding of government guidelines particularly in merchandise, monetary and the labour markets.

Moreover, globalization is multi-dimensional, the economic viewpoint to be specific financial globalization is seen by Obadan and Obioma (1999) to be at the core of the cycle and has shifted to acknowledge greater thought in

regard with this fast development throughout the most recent sixty years (Ime, 2015) as answered, globalization alludes to the methodology of trade close to a more overall modern combining through exchange, the developing worldwide joining of business sectors for products, administrations and assets, monetary streams, development of individuals, trade of aptitude and data (Ime, 2015).

As per Winston (1971)"economic development shows the abundance of utilization and production of a nation as contrasted and increase in populace. This expansion in population is because of better blend and increase in the efficiency of the elements of production". Williamson (1994) portrayed "economic development as a cycle whereby the individuals of a nation use the accessible assets so that the per capita income of the nation increases". As per Higgins (1997)"economic advancement is the expansion in per capita and national income (NI) of a country". As indicated by Lewis (2006)"Economic Development addresses the per capita increment in the creation of a country". Meir and Baldwin (1957) characterized economic advancement as a cycle whereby the genuine public - pay of a nation increments throughout an extensive stretch of time. On the off chance that the expansion in the nominal income is more than the population increment then the per capita real income of the nation will likewise increase".

Meier and Baldwin (1963) definition contains these highlights of economic development: Process, increment in Real NI and extensive stretch of time. The progressions on stock side are as: disclosure of new assets, capital gathering, change in population, introduction of better strategies of production, improvement in skill, social and institutional changes. At that point changes on interest side are as: changes in size and nature of tastes of the individuals, changes in the level and appropriation of NI, changes in tastes of the individuals, changes in social and institutional life.(ii) Increase in Real Gross National Product (GNP): Economic improvement will happen when the genuine GNP of a nation increments. Tejvan (2015) thinks that one of the few proportions of monetary advancement is the Human Development Index (HDI). Diffeen (2015) contends that HDI is an estimation pointer that mulls over the abstract rates and future that influence profitably and could prompt financial development while monetary development doesn't consider unrecorded monetary movement.

2.3 Empirical Literature

Anokwuru (2018) this study examined the impact of globalization on economic development in Nigeria for the time frame 1981-2016. This article researched the connection between Imports, Exports, Foreign Direct Investment and Gross Domestic Product. The paper applied the bounds cointegration tests and the Short and Long Run Dynamics Autoregressive Distributed Lag (ARDL) test for the investigation time frame. The short and Long run type of the model shows that import is negatively identified with Gross Domestic Product but had a significant effects development, while the short run and long run effect of exports on Gross Domestic Product is positive and critical, demonstrating that export increased development of the Nigerian economy by 10.98%. Foreign Direct Investment was found to adversely impact Gross Domestic Product. This finding proposes that Foreign Direct Investment is ineffectual in driving genuine development in Nigeria. The discoveries of this paper demonstrated that Nigeria is not yet getting the benefits or advantages of Globalization. This paper suggests that the experts in Nigeria ought to plan and actualize strategies that will diminish the degree of import into the country and furthermore embrace strategy measures and changes just as giving sound macroeconomic arrangements, that will establish a more steady and helpful climate for venture and the extension of monetary movement to endeavor guaranteeing that Foreign Direct Investment impacts positively on economic growth.

Awoyemi, Olanike and Jabar (2014) the primary focal point of this examination is to analyze the economic ramifications of monetary globalization on the Nigerian economy. This was done utilizing the homegrown investment funds channel and the exchange of innovation channel which enormously impact monetary development in Nigeria and the investigation infers that the Nigeria economic framework is being continuously harmonized into this globalization cycle. Stricter guideline, improved approach usage, proficient danger the executives and foundational hazard moderation with respect to the controllers to upgrade speculators' certainty and guarantee monetary steadiness are expected to guarantee that the advantages of the current development of the monetary market is supported.

Shuaib, Ekeria and Ogedengbe (2015) the study empirically examined the effect of globalization on the development of Nigerian economy utilizing times- series data from 1960 to 2010. The paper used secondary data and different econometrics techniques as well as statistical

packages, analytical strategy were investigated to look at the connection between the econometrics factors and their effect on the development of Nigerian economy. The paper employed the stationarity test, cointegration of Nigerian's time series data and utilized error correction model to decide the short run and long run relationship among the factors analyzed. The consequences of the discoveries upheld Obadan's findings which demonstrated that growth of external obligation proportion was a inversely related to economic growth in Nigeria. The paper suggested based on the econometric outcomes that government should connect the domestic investors with world business sectors to prod.

Maduka, Madichie and Eze (2017) analyzed the impact of globalization and economic development and explicitly the worldwide competitiveness resulting from the amalgamation of the entire world into a global village has carried colossal advancement to the world economy. Accordingly, the investigation utilized the contemporary econometric strategies of cointegration and error correction mechanism inside the structure of the Pesaran et al. (2001) ARDL model to analyze the effect of globalization on financial development in Nigeria. Utilizing annualized secondary time series data from 1970 to 2015, the examination uncovers that trade openness, financial integration and foreign direct investment have significant positive affect economic growth in Nigeria. Accordingly, satisfactory system ought to be set up to guarantee that globalization achieves the ideal speed of economic development.

Zahonogo (2018) this study examined the impact of globalization on economic development in developing nations. The study utilized a unique development model with information from 42 Sub-Saharan African (SSA) nations, covering the time frame from 1980 to 2012. The proof shows a modified U bend type reaction, strong to changes in globalization measures and to elective model determinations. Our discoveries are promising and uphold the view that the connection among globalization and economic development isn't direct for SSA. Likewise, SSA nations have control of exchange receptiveness, especially for the import level of utilization merchandise to support their financial development through global exchange.

Zerrin and Yasemin (2018) this study examined the effect of globalization on economic development in Turkey covering the time frame from 1980 to 2015 utilizing the globalization file and its segments (financial, social and political

globalization lists). For these sub-files, the examinations were rehashed by making a differentiation between "true" and "by law." KOF generally globalization record, the aftereffect of the Full Modified Ordinary Least Squares, cointegration test indicated that economic development increases "financial" and "social" globalization in Turkey. At the point when KOF true and KOF by law are isolated, the impact of monetary globalization on economic development is negative and genuinely irrelevant. As per KOF true globalization record, social globalization increments economic development, while in an investigation utilizing the KOF by right globalization file, social globalization diminishes financial development. Also, political globalization contrarily influences financial development for all KOF globalization files that are remembered for the investigation.

III. METHODOLOGY

3.1 Research Design

This is the overall plan and strategies that direct the information collection and investigations to satisfactorily respond to the research questions (Okolo, 2009). The investigation utilized quasi-experimental design because they exists dependent and autonomous factors that are engaged in the examination process and it also covered this range of time (1980-2017).

3.2 Data Collection Method and Sources

The dataset for this research were mainly time series data generated from secondary sources spanning from 1980 - 2017. The data sources are from Central Bank of Nigeria (CBN) statistical bulletin, National Bureau of Statistics and International Monetary Fund (IMF).

3.3 Techniques of Data Analysis

The study used ordinary least square method, unit root test, Johansen cointegration test, Granger causality test and error correction mechanism (ECM).

3.3.1 Unit Root Test

$$\Delta \text{RGDP}_t = \Delta b_0 + \Delta b_1 \text{FDI}_t + \Delta b_2 \text{TRO}_t - \Delta b_3 \text{NER}_t + \Delta b_4 \text{GCF} + \Delta b_5 \text{HDI}_t + U_t$$

This was used in order to avoid false results that would lead to biased estimates and unpredictability of the model. The time series data were tested for stationarity. ADF was employed to test the order of integration of the variables.

3.3.2 Johansen Cointegration Test

$$\beta \text{RGDP}_t = \beta_0 + \beta_1 \text{FDI}_t + \beta_2 \text{TRO}_t - \beta_3 \text{NER}_t + \beta_4 \text{GCF} + \beta_5 \text{HDI}_t + U_t$$

The study adopted Johansen cointegration test to determine if a long run relationship exist among the variables in the model.

3.3.3 Error correction mechanism

$$\alpha \text{RGDP}_t = \alpha_0 + \alpha_1 \text{FDI}_t + \alpha_2 \text{TRO}_t - \alpha_3 \text{NER}_t + \alpha_4 \text{GCF} + \alpha_5 \text{HDI}_t + U_t$$

When cointegration was found to exist, then the error correction model is built in to regulate the speed of adjustment of the equation from short run to the long run equilibrium.

3.3.4 Granger Causality Test

$$\rho \text{RGDP}_t = \rho_0 + \rho_1 \text{FDI}_t + \rho_2 \text{TRO}_t - \rho_3 \text{NER}_t + \rho_4 \text{GCF} + \rho_5 \text{HDI}_t + U_t$$

Granger causality test was employed to determine the cause and effect as well as the direction of causality of the variables in the model.

- i. Coefficient of determination R² was used to describe the goodness of fit of the regression model
- ii. T-test was used to test for the significance of each of the variables in the model
- iii. F-test was used to determine the overall significance of the regression model.
- iv. Durbin-Watson was used to test for the serial autocorrelation in the model

3.4 Models Specifications

Mathematical function:

$$\text{RGDP}_t = f(\text{FDI}_t, \text{TRO}_t, \text{NER}_t, \text{GCF}_t, \text{HDI}_t) \quad (1)$$

Econometric form:

$$\text{RGDP}_t = b_0 + b_1 \text{FDI}_t + b_2 \text{TRO}_t - b_3 \text{NER}_t + b_4 \text{GCF} + b_5 \text{HDI}_t + U_t \quad (2)$$

$$\text{Log RGDP}_t = \text{log } b_0 + \text{log } b_1 \text{FDI}_t + \text{log } b_2 \text{TRO}_t + \text{log } b_3 \text{NER}_t + \text{log } b_4 \text{GCF} + \text{log } b_5 \text{HDI}_t + U_t \quad (3)$$

Where: RGDP = Real gross domestic produce

FDI = Foreign direct investment

TRO = Trade openness

NER = Nominal exchange rate

GCF = Gross capital formation

HDI = Human development index

B₀-b₅ = Parameter estimates

Log = Natural logarithm

U = Error term

Apriori expectation:

b₀> 0, b₁> 0, b₂> 0, b₃> 0, b₄> 0, b₅< 0

Variables Description

Dependent Variable

RGDP_t = Real GDP (gross domestic product) is a measure of all the goods and services produced in a nation adjusted for inflation or deflation, expressed in dollars.

Independent variables

FDI = Foreign direct investment (FDI) is an investment from a party in one country into a business or corporation in another country with the intention of establishing a lasting interest.

TRO_t = Trade openness is the measure of the extent to which a country is engaged in the global trading system.

NER_t = The nominal effective exchange rate (NEER) is an indicator of a country's international competitiveness in terms of the foreign exchange (forex) market.

GCF_t =Gross fixed capital formation (GFCF) consists of resident producers' investments, deducting disposals, in fixed assets during a given

period. Fixed assets are tangible or intangible assets produced as outputs from production processes that are used repeatedly or continuously for more than one year

HDI_t =Human Development Index (HDI) is a measure of achievement in key areas of human development such as healthy life, knowledge and standard of living.

U_i = Stochastic Term (it covers all the other variables that affect GDP but were not included in the model).

- i. **Apriori** test to check whether the signs and sizes of the variables used conformed to
- ii. the **apriori** expectations in the economy.

Table 4.1 Results Data Presentation
Table 4.1: RGDP, FDI, TRO, NER, GCF, HDI

Year	RGDP(N, millions)	HDI(%)	TRO(%)	NER(\$/N)	FDI(N, millions)	GCF(N, millions)
1980	14,766.76	0.41	0.3	0.54	324.2	128,877.44
1981	15,258.00	0.396	-0.02	0.61	334.7	133,217.52
1982	14,985.08	0.356	-0.03	0.6729	290.0	103,313.02
1983	13,849.73	0.325	-0.01	0.7241	264.3	67,751.34
1984	13,779.26	0.363	0.02	0.7649	360.4	43,363.02
1985	14,953.91	0.391	0.03	0.8938	434.1	40,934.55
1986	15,237.99	0.393	0.02	2.0206	735.8	35,536.21
1987	15,263.93	0.3802	0.06	4.0179	2,452.8	27,159.19
1988	16,215.37	0.3705	0.04	4.5367	1,718.2	28,369.81
1989	17,294.68	0.378	0.07	7.3916	13,877.4	28,937.12
1990	19,305.63	0.438	0.14	8.0378	4,686.0	40,121.31
1991	19,199.06	0.328	0.06	9.9095	6,916.1	39,968.52
1992	19,620.19	0.348	0.07	17.2984	14,463.1	38,771.57
1993	19,927.99	0.389	0.05	22.0511	29,660.3	44,973.00
1994	19,979.12	0.384	0.03	21.8861	22.2	40,404.28
1995	20,353.20	0.452	0.07	21.8861	75.9	29,820.29
1996	21,177.92	0.393	0.19	21.8861	111.3	35,216.28
1997	21,789.10	0.456	0.09	21.8861	110.5	38,329.17
1998	22,332.87	0.439	-0.02	21.8861	80.7	36,390.66
1999	22,449.41	0.455	0.07	92.6934	92.8	35,325.93
2000	23,688.28	0.466	0.14	102.1052	116.0	41,342.64
2001	25,267.54	0.463	0.07	111.9433	132.4	6,331.64
2002	28,957.71	0.445	0.03	120.9702	225.2	7,936.78
2003	31,709.45	0.445	0.1	129.3565	258.4	12,991.61
2004	35,020.55	0.463	0.23	133.5004	248.2	44,443.72
2005	37,474.95	0.466	0.3	132.147	654.2	39,795.29
2006	39,995.50	0.477	0.23	128.6516	624.5	63,428.72
2007	42,922.41	0.481	0.21	125.8331	759.4	89,896.86
2008	46,012.52	0.487	0.2	118.5669	971.5	89,244.50
2009	49,856.10	0.492	0.13	148.8802	1,273.8	120,273.64
2010	54,612.26	0.5	0.07	150.298	905.7	142,316.45
2011	57,511.04	0.507	0.07	153.8616	1,360.3	126,942.84
2012	59,929.89	0.514	0.07	157.4994	1,113.5	101,699.74
2013	63,218.72	0.521	0.07	159.4	875.1	73,563.22

2014	67,152.79	0.525	0.03	161	738.2	74,660.72
2015	69,023.93	0.527	0.04	167.44	1,055.7	75,758.21
2016	58,814.27	0.529	0.14	260.6	533.1	76,855.70
2017	60,374.85	0.534	0.15	360	423.0	77,953.19

Short run Analysis

Dependent Variable: RGDP				
Method: Least Squares				
Date: 03/08/19 Time: 03:51				
Sample: 1980 2017				
Included observations: 38				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-46425.22	14392.33	-3.225692	0.0029
FDI	0.295474	0.212126	1.392916	0.1732
GCF	0.095613	0.032500	2.941927	0.0060
HDI	0.516140	0.701789	0.074695	0.0003
NER	0.363238	0.543467	0.671289	0.0008
TRO	-0.614753	0.423662	-1.456639	0.0756
R-squared	0.876837	Mean dependent var	31823.21	
Adjusted R-squared	0.857593	S.D. dependent var	18056.19	
S.E. of regression	6813.844	Akaike info criterion	20.63524	
Sum squared resid	1.49E+09	Schwarz criterion	20.89381	
Log likelihood	-386.0696	Hannan-Quinn criter.	20.72724	
F-statistic	45.56367	Durbin-Watson stat	1.040334	
Prob(F-statistic)	0.000000			

Table 4.7: Augmented-DickeyFuller Tests Results

Coefficients	Critical Values at 5%	ADF Values	Probability	Comments
RGDP	-2.945842	-4.535859	0.0009	I(1)
FDI	-2.945842	-8.202176	0.0000	I(1)
NER	-2.945842	-9.114723	0.0000	I(1)
TOR	-2.948404	-6.270942	0.0000	I(1)
HDI	-2.945842	-9.114723	0.0000	I(1)
GCF	-2.945842	-4.049677	0.0033	I(1)

Source: Authors Computation (Eviews 10.0)

Table 4.8: Johansen Cointegration Test

Date: 03/08/19 Time: 04:03	
Sample (adjusted): 1982 2017	
Included observations: 36 after adjustments	
Trend assumption: Linear deterministic trend	
Series: RGDP FDI GCF HDI NER TRO	
Lags interval (in first differences): 1 to 1	
Unrestricted Cointegration Rank Test (Trace)	

Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.869046	154.1758	95.75366	0.0000
At most 1 *	0.563971	80.99098	69.81889	0.0049
At most 2 *	0.508431	51.10928	47.85613	0.0240
At most 3	0.282243	25.54377	29.79707	0.1429
At most 4	0.214853	13.60529	15.49471	0.0944
At most 5 *	0.127192	4.897432	3.841466	0.0269
Trace test indicates 3 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

Source: Estimated by Author using E-view 10

Table 4.9: Parismonious ECM

Dependent Variable: RGDP				
Method: Least Squares				
Date: 03/08/19 Time: 04:09				
Sample (adjusted): 1984 2017				
Included observations: 34 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	17902.84	3232.824	5.537833	0.0000
D(FDI(-1))	0.411939	0.494205	0.833539	0.0161
D(FDI(-2))	-0.142689	0.467811	-0.305014	0.7641
D(FDI(-3))	-0.235320	0.429517	-0.547871	0.5909
D(GCF(-1))	0.250229	0.173898	0.438944	0.0083
D(GCF(-2))	0.040441	0.154260	0.262160	0.7963
D(GCF(-3))	0.255563	0.135829	0.881497	0.0771
D(HDI(-1))	0.482658	95104.33	0.713411	0.0002
D(HDI(-2))	0.462223	107565.8	0.289040	0.0351
D(HDI(-3))	0.684715	106058.7	0.441710	0.6643
D(NER(-1))	0.692052	133.5501	0.262110	0.0005
D(NER(-2))	0.233434	185.0864	0.367851	0.0037
D(NER(-3))	0.390428	203.2637	0.651938	0.0168
D(TRO(-1))	-0.055841	46332.57	-0.278830	0.0359
D(TRO(-2))	-0.237782	37308.44	-1.671949	0.1128
D(TRO(-3))	-0.446841	34779.31	-1.278588	0.2182
ECM(-1)	-0.739995	0.521997	7.164783	0.0000
R-squared	0.787422	Mean dependent var		33835.95
Adjusted R-squared	0.587348	S.D. dependent var		18051.55
S.E. of regression	11595.95	Akaike info criterion		21.86155
Sum squared resid	2.29E+09	Schwarz criterion		22.62473
Log likelihood	-354.6464	Hannan-Quinn criter.		22.12182
F-statistic	3.935661	Durbin-Watson stat		2.021613
Prob(F-statistic)	0.003843			

Source: Estimated by Author using E-view 10

Table 4.10: Granger Causality Test

Pairwise Granger Causality Tests			
Date: 03/08/19 Time: 04:04			
Sample: 1980 2017			
Lags: 2			
Null Hypothesis:	Obs	F-Statistic	Prob.
FDI does not Granger Cause RGDP	36	0.19953	0.8202
RGDP does not Granger Cause FDI		0.35633	0.7031
GCF does not Granger Cause RGDP	36	0.02613	0.9742
RGDP does not Granger Cause GCF		3.47745	0.0434
HDI does not Granger Cause RGDP	36	0.98751	0.3839
RGDP does not Granger Cause HDI		2.06144	0.1444
NER does not Granger Cause RGDP	36	4.91705	0.0140
RGDP does not Granger Cause NER		7.34785	0.0024
TRO does not Granger Cause RGDP	36	2.37641	0.1096
RGDP does not Granger Cause TRO		0.32436	0.7254

Source: Author's computation using E-views 10.0

IV. DISCUSSION OF FINDINGS

Table 4.2 Ordinary Least Square Test

With respect to table 4.2 the result of the OLS showed that R^2 is 0.87%, meaning that 87% of the variation of the dependent variable was explained by the explanatory variables in the model. F-statistic value of 45.56 with the probability value 0.00000 showed that the overall statistical significance at 5% level of the model was viable whilst T-statistic showed that each of the individual variables was statistically significant at 5% level. Furthermore the coefficient of FDI, GCF, HDI, NER was positively signed at 5% level whilst the coefficient of TRO was negatively with economic growth but not significant while the coefficient of HDI was positively significant with economic growth and all the variables in the model conform to the priori expectations

Short Run Analysis

$$RGDP_t = -46.42 + 0.295FDI_t - 0.6147TRO_t - 0.363NER_t + 0.095GCF + 0.516HDI_t$$

$$T\text{-test} = (0.212126), (0.032500), (0.701789), (0.543467), (0.423662)$$

$$F\text{-test} = (45.56367), R^2 = 0.87, DW = 1.040$$

4.3 Unit Root test

The test unit root was performed at 5% level of significant using ADF method. The series was subjected to levels and first

difference test. It was found that none of the variables is stationary at levels given that the corresponding probability values of their respective critical values are less than ADF at 5%. On the basis findings the variables were subjected to first difference test and the results showed that all the variables were stationary at first difference. Hence they are regarded as [1(1)]. It indicates that the null hypothesis of unit root cannot be rejected for each of the series at 5% level. This finding is in accordance with the postulations of Granger and Newbold (1974) that time series data tend to depict unit root process. With the evidence of unit root in each of the variables, cointegration test was undertaken to determine whether the series have long relationship.

4.4 Johansen Cointegration Test

The result from table 4.4 showed a long run relationship exists among the variables. This is based on the evidence of the trace test values indicating three cointegration equations among the variables at 5% level. The test result also demonstrated that the trace statistic is greater than the critical value at 5% level.

Table 4.5 Error Correction Mechanism

The parsimonious ECM estimated from table 4.5 revealed that 79% of the variation of

the economic growth was explained by foreign direct investment, human development index, trade openness and gross capital formation and the pitfalls in the short run equilibrium were corrected in the long run equilibrium at the speed of 74% annually. F-statistic value of 39.35 with the probability value of 0.0038 reveal that FDI,NER,GCF and TRO were significant in explaining economic growth in Nigeria. The Durbin-Watson value of 2.02 indicates lesser degree of serial autocorrelation and this conform to the a priori expectation of the model.

Table 4.7 Pairwise Granger Causal

Table 4.7 depicts the test result for causal association among the elements employing Granger pairwise causality test. The result revealed a unidirectional causality between real gross domestic product and gross capital formation whilst bidirectional relationship between nominal exchange rate and real gross domestic product.

V. CONCLUSION

The study examined the dynamic relationship between the series of gross capital formation, foreign direct investment, trade openness, human development index, nominal exchange rate and economic growth in Nigeria for the period of 1980-2017. It adopted OLS, unit root test, cointegration test, Granger causality test and error correction mechanism to explore the existence of a long run relation among the above noted series and the Granger causality to test the direction of causality between the variables. The topic merits special importance due to the possible interrelations among the series with implications for economic growth.

Therefore this research concludes that foreign direct investment had a positive and significant relationship with real gross domestic product in Nigeria within the period under consideration while gross capital formation was positively and significantly related with real gross domestic product, furthermore human development index had a positive and significant relationship with RGDP whilst nominal exchange rate was positively and significantly related with RGDP and finally trade openness had a negative and significant relationship with real gross domestic product. There exist a unidirectional relationship between gross capital formation and real domestic product and bidirectional relationship between real gross domestic product and nominal exchange rate in Nigeria (1980-2017).

5.2 Recommendations

- (i). Develop and implement policies that encourage human capital development in across the six geo-political regions in Nigeria. Especially programs such as scholarships, free skill acquisition centres across the 774 LGAs, incentives to NGOs already carrying out such programs, etc.
- (ii). Policies geared towards the reduction of exchange rate in the Nigeria economy and lower than the exchange rate so as to increase the volume of goods and services sold to the outside world.
- (iii). Develop policies to enhance gross capital formation or saving culture of the economy in order to encourage foreigners' investments in Nigeria economy.

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