International Trade and Inclusive Economic Growth: A Case for Nigeria

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Abstract: **Though theoretical literature strongly supports the positive linkage between trade openness and economic growth, empirical findings however, are inconclusive with some supporting the positive mantra while others observed insignificant and in some cases negative relationship between the two variables. Our paper therefore as a contribution to this body of knowledge, was to investigate how international trade can create an inclusive economic growth that will impact the population of Nigeria. To do that we formulated econometric models with GDP per capita growth rate as proxy for economic growth as the dependent variable, while the Independent variable is international trade proxied as export, import, export plus import, exchange rate premium, net capital flow (FDI), trade openness, tariff, time to clear goods, ease of doing business indicator. We utilized panel data for our variables within two time periods of 1980-2005, and 2006-2016, and tested their long run empirical relationships using Autoregressive distributed lag (ARDL) cointegration and granger causality test. Our results showed no significant and positive linkage between international trade and economic growth for Nigeria during the study period of 1980 – 2016. The negative relationship is due to unchecked population growth rate in the country without the government transforming its teeming labour force into human capital for economic activities. This has caused the country not to take advantage of knowledge, technological and skill transfer through trade openness, as was the case with South East Asian economies, and therefore relied solely on primary product exports which are subject to price and market shocks and volatilities, rather than manufacturing industrialization. Besides this, the country also exhibited a high taste for foreign imported consumer goods, including petroleum products, with high subsidy costs. The economy is solely dependent on public sector patronage as it lacked active and inclusive participation of the private sectors in the mainstream economy. The reliance on the public sector also fueled gross institutional corruption and governance abuses. The solution therefore is for Nigeria to focus in transforming its teeming population into human capital necessary to adopt innovative technologies that will transform its primary product export into manufacturing industrialization.**

Keywords: **International trade, trade openness, economic growth, gross domestic product per capita growth rate, Autoregressive distributed lag (ARDL) cointegration and granger causality test.**

1. INTRODUCTION

International trade practiced under trade liberalization and trade openness, is a cross border trade between different countries (Schnitzer 2010), where nations exchange their goods and services under international market forces, through an international exchange system. It has also helped the growth and development of trading partners as it offers them the opportunity to expand their domestic markets by creating efficient production of goods and services through division of labour, and specialization. (Schumacher, 2012). Trade with other nations have also been used to settle diplomatic rifts amongst participating nations, and as a diplomatic tool through sanctions to persuade erring countries into alignment with global or regional treaty. (Subedi, 2012). According to Morgan & Katsikeas 1997, countries can grow their economies through the vehicle of international trade as they open the economies to technological growth that creates efficiency, product innovation and specialization for increased economies of scale, that will spillover to other sectors of the economy in a country. Besides technology transfer, Todaro and Smith (2012), reported that international trade also transfers consumption pattern and social, political and cultural systems across national borders based on the level of individual

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country's growth. How a country benefits from international trade, according to Grossman and Helpman (1991), depends on the degree of trade openness of the participating country, and this is where, the some literature supports the positive link between growth and international trade. There are however, other views that do not really align with this positive relationship.

Early views of trade by David Ricardo in the early 19th century showed that nations can attain sustained economic growth and development through international trade by harnessing their comparative advantages and specializing in areas of relative cost advantage over other economies. His theory became the foundation for Eli Heckscher and Bertil Ohlin, in the early 1900s that showed that countries could actually gain comparative advantage by utilizing their abundant production factors such as land, labor, and capital, within a country. (Suranovic, 2007). Sadly, though Nigeria has been reported as the biggest economy in GDP terms on the African continent, with its natural endowment in people and resources, the evidence on the streets contradicts its GDP status, with no clear evidence of the positive linkage between trade and growth due to the level of poverty and a lot of dysfunctionality on the polity. (World Bank, 2017).

Though Nigeria has been exposed to international trade, in its pre- and post-colonial period where it produces and exports primary products to its foreign partners, while it imports finished goods for domestic consumption. The country however, formally ventured into trade liberalization during the 1986 structural adjustment programme (SAP) period, in order to provide opportunities for the domestic economies to compete with other economies so as to increase its production efficiencies. (Olufemi, (2004). Unfortunately, the economy continued to rely heavily on export of primary commodities, so while in GDP terms, the economy post the biggest number, in reality, the growth is not impacting on the population. (World Bank, 2017). The aim of this paper therefore to investigate if we can support the theoretical postulation that international trade correlates positively with economic growth for the case of Nigeria during the period 1980 to 2016.

2. THEORETICAL FRAMEWORK

International trade and economic growth has become a topical issue both in scholarly works, and contemporary business environment, as nations and regions constantly negotiate new trade deals, or renegotiates existing deals to boost their economies, as was the recent case between United States of America and its NAFTA partners of Canada and Mexico, which resulted in a new trade platform called the USMCA.

Besides trade in goods, international trade also occurs in services through exchange of ideas, know-how and technology, some of which are communications, constructions, transportation, information technology, recreational, financial and banking. (International Trade in Services, OECD Data). It wasn't until after the great depression in 1930, that international trade became pronounced as nations consciously broke down national barriers to form regional and global economic groups and associations (Suranovi, 2010; Morgan & Katsikeas, 1997). One of such structure is the General Agreement on Tariffs and Trade (GATT), that transformed into the World trade Organization (WTO) during the Uruguay Round of negotiations between 1986-94 in January 1, 1995. International trade in all intents should be a positive sum game where according to Todaro and Smith (2012) countries, besides goods and services also transfer and receive social changes, cultural influence, and political ideologies in their interactions. This ensures that all participants' benefit to some degree through trade, which is actually the desire of trading partners, as opposed to the classical zero sum game model, where one wins and the other loses. The zero-sum game theory of international trade presents an unfavorable economic and financial problems to developing countries, as gains from the trade often accrue to the developed nations. This is because such trade with developed nations distorts the industrial set up of the developing industries, killing infant industries that cannot compete at world prices. (Abiodun, 2017).

Under theoretical concept, international trade hinges on two broad theories, the Classical or Country-Based, and then from mid-twentieth century, into a Firm based or Company Based theories, also known as Modern Theories, that is associated with multinationals and globalization where trade is done between companies. While there are several trade theories in the literature, the one that is pivotal to our paper is the theory of Comparative Advantage, postulated by David Richardo, upon which most modern theories were anchored. The Comparative Advantage postulates that though a country may have absolute advantage in the production of two products, countries can still trade through specialization. That both trading nations can still experience welfare gain regardless of one country having absolute advantage in both products so far as the other country exports goods in which its inferiority is least. (Acharyya 2014). The theory of Comparative Advantage was the basis for the Heckscher-Ohlin Theory which states that a country could gain comparative advantage by producing in products where it utilized such production factors as land, labour or capital in which has relative abundance. Such factors provide the funds required for investment in plants and equipment. Technically therefore, by

every standard Nigeria should have become a developed economy through trade in view of its natural resource abundance, however, the Country records relatively poor in most global development performance indices, to the extent that it recorded the country with the highest number of poor people in the world in 2018, over taking India with a population that is almost 7 times that of Nigeria. The country is also deficit in basic infrastructure such as roads, rails and good education system, with access to power. Nigeria's economic performance in the midst of its natural endowment seem to make it a natural resource grabber friendly nation as postulated by Mehlum et al (2006) where countries with natural resources can operate either producer friendly or grabber friendly institutions. Producer friendly governments such as Botswana and Norway provide business friendly environments for entrepreneurs, which also make them growth winners. On the other hand, grabber friendly institutions, who are also growth losers, such as Nigeria, Sierra leone, Angola, and Venezuela, are also known to have relatively weak rule of law, dysfunctional bureaucracy, and heavily laden with graft and corruption. Mehlum et al (2006) further noted that as a result of these dysfunctionalities, most natural resource abundant economies lag behind those without substantial natural resources, when one compares the economies of Korea, Taiwan, Hong Kong and Singapore, to those of Nigeria, Zambia, Sierra Leone, Angola, Saudi Arabia and Venezuela. Grabber friendly economies such as Nigeria, Venezuela, and Congo are fraught with dysfunctional institutions that are riddled with corruption and grafts with slow economic growth fall under government that are unable to provide basic social security, and hence create the platform for violence, theft, and looting, and most times, civil conflicts and insurgencies and militancy such as in Nigeria. Again, not only that the economy is solely a primary product export oriented, the country also imports mostly consumer goods, including petroleum products that costs in excess of $10 billion or nearly 50 per cent of its national budget, rather than industrial intermediates as inputs for manufacturing industrialization.

2.1 Empirical Review:

Though the theories paint international trade as an economic growth engine for both developed and developing economies, empirical conclusions vary on the subject with one set of empirical studies affirming the positive relationship, from such works as Krueger, 1980, 1998; Dollar, 1992; Stiglitz, 1998; Wacziarg, 2003; Sachs & Warner, 1995; Frankel & Romer, 1999; Balassa, 1978; Dao, 2014; Barro, 1996. Some empirical works on Nigeria such as Nduka etal (2015); Olaifa etal (2013); Nduka (2013), Mkubwa, 2014, Omoju and Adesanya (2012); Arodoye and Iyoha (2014), Lawal and Ezeuchenne (2017) also supported the positive relationship between the two. Even the World Bank (2012) as cited in Dowrick and Golley (2004), showed that per capita growth of most developed economies increased from 1960 level of 1 percent to about 5 percent in the 1990s due to globalization. The opposing views are held by such researchers as Rodrik, 1997; Chang, 2009; Oskam, 2004; Rodriguez & Rodrik, 1999; Vamvakidis, 2002; Hassan & Islam, 2005; Rodrik etal, 2004. Khamala, 2015, also using data from 47 sub-Saharan African countries with GDP per capita found negative linkage between economic growth and trade openness. Khamala, 2015, also using data from 47 sub-Saharan countries with GDP per capita as dependent variable, showed negative correlation between trade openness and with growth. Atoyebi etal (2004). Lawal et al (2016), and Moyo et al (2017) also reported a long run negative relationship between trade openness and economic growth for Nigeria. Finally, Lawal et al (2016) also found a long run negative relationship between trade openness and growth for Nigeria using ARDL econometric model. This has left both policy makers and researchers scrambling for something that can be relied upon as the mantra. According to Tahir and Ali (2014), the confusion of which template speaks explicitly on the subject arose from the different objective and most times subjective models used by researchers in describing trade openness. Besides the methodologies, there are also issues of poor data quality especially from low income developing countries. There is also the problem of establishing a consistent measure of trade openness by researchers. According to Rodrik (1997) trade openness does not immediately lead to economic growth, as growth is strongly dependent on investment in human capital development, infrastructure, and institutions of macroeconomic management, which generally would take some time to achieve. To Rodrik and Rodriguez (2000), the relationship between growth and trade openness is dependent on both domestic and external characteristics of a country. Following this argument, Oskam et al (2004), showed that the unfavourable relationship between the two may be influenced by (i) inadequate institutions, governance and deficient infrastructure (ii) infant industry argument (iii) trade openness eventually cause relative income differences and therefore make developing economies less competitive- and (iv) trade exposes developing economies to external (price) shocks and growth path instability. Rodrik (2006), added that the focus on trade and growth should shift from policy to getting institutions right rather than the much talked about Policy rightness. He argues that policies that do not require deep seated institutional change and those policies alone cannot produce lasting effects without sound institutional support. Consequently, the structure must allow fiscal institutions to compensate for lost in trade revenue; the capital market must supply sufficient fund into expanding sectors of the economy, while there must be policing of the customs for transparency and competence, while the institutions regulating the labour market must handle transitional employment efficiently, if trade openness must catalyze growth for

an economy. Finally, according to Zahonogo (2017), there has to be focused investment in human capital development, and deep and efficient financial system to support the positive trade openness and growth nexus. Our research is therefore a contribution to this debate to investigate how international trade has impacted on the economy of Nigeria.

3. DATA AND RESEARCH METHODOLOGY

We adopted a panel data, quasi-experimental research design to capture our dependent and independent variables that are presented in annual time series and cross sectional data format, with the pooling together of our independent variables within the same time frame. Our research is also based on the Ex-Post-Facto econometric model because of past historical data of the time period 1980 to 2016 (Isiwu, 2004). To therefore estimate the parameters of our operating variables, we relied on econometric models based on regression equations using panel data of time series and cross sectional format. Finally, we also adopted the Granger Causality Test to address the issue of causation, since regression models only deal with the dependence of one variable on another, and not on causality of the variables (Gujarati, 2004)

The research is limited to data only from quantitative secondary time series and cross sectional panel data collected from existing sources. Given that the research covers a long time period from 1980 to 2016, our data set were also limited to annual data for ease of application.

The secondary data was collated from several published sources such as the CIA World Fact Book, World Development Indicators (World Bank), African Development Indicators (World Bank), International Financial Statistics (IMF), National Bureau of Statistics (NBS), Central Bank of Nigeria (CBN).

Our key variables therefore are Economic Growth as the dependent variable, while the Independent Variable is International Trade, ITD, proxied as Export, Import, Export plus Import, Exchange Rate Premium, Net Capital Flow (FDI), trade openness, tariff, Time to Clear Goods, Ease of Doing Business Indicator. Our literature survey showed the prevalence of GDP, and GDP per capita as most common proxies for Economic Growth, and as a contribution, we decided to use GDP per capita growth rate after the work of Upreti (2015) as our proxy for Economic Growth. The per capita GDP measures growth over the entire population of the county, and has been a very useful economic performance indicator that captures the trickledown effect of growth on the population. Rather than working with the absolute term, we have chosen the growth rate of the per capita GDP to provide a closer measure of how this grows with the population. Evidently, unless this grows more than the population growth rate, international trade would not have contributed significantly to the economic, since from our literature, trade exports and imports not only goods and services, but technology, culture, and way of life, and even taste. Our model is to enable us to see a sustainable economic growth as a result of policy shifts if any from year to year due to international trade.

Our model specification for this study adopted Autoregressive distributed Lag (ARDL) Cointegration and Granger Causality Tests, after the work of Constant, and Yaoxing (2010), Keho (2017), and Moyo etal (2017) as opposed the commonly used Ordinary Least Square (OLS) regression model in most of the empirical work on Nigeria. The functional relationship between the dependent and independent variables are thus stated here:

Dependent Variable = GDP per Capita Growth Rate (GDPGRPC), which is the change of the per capita GDP growth rate as compared to the rate from previous year. The sign therefore can either be negative or positive in a given year and this can due to either drop in economic growth or increase in population growth rate in a particular year. The Independent Variable is International Trade, ITD, and from our literature, this is impacted by the following, Export (EXP), Import (IMP), Export plus Import (EXIM), Exchange Rate Premium (FX), Net Capital Flow (FDI), Import plus Export, over GDP (EXIMG), Tariff (TRF), Time to Clear Goods (TRDF), Doing Business Indicator (EODB). Again, according to the literature economic growth is positively impacted by international trade, therefore the functional relationship of our variables can be formulated as GDPGRPC = f (ITD), whereas

ITD = f (EXP, IMP, EXIM, FX, FDI, EXIMG, TRF, TRDF, EODB). We can now express our functional relationship between our dependent and independent variables in the following form:

GDPGRPC = f (EXP, IMP, EXIM, FX, FDI, EXIMG, TRF, TRDF, EODB).

Consequently, the mathematical model can be expressed as:

GDPGRPC = $\alpha_0 + \alpha_1 EXP + \alpha_2 IMP + \alpha_3(EXIM) + \alpha_4 FX + \alpha_5 FDI + \alpha_6 EXIMG + \alpha_7 TRF + \alpha_8 TRDF + \alpha_9 EODB + U$, where α is the coefficient of the parameters, and U is the stochastic term or the random variable or the unexplained variation, while the coefficients of the independent variables are expected to have the following signs in the model are: $\alpha_1 > 0$; $\alpha_2 > 0$; $\alpha_3 > 0$; ……………. $\alpha_8 > 0$; $\alpha_9 > 0$

We broke down our method of data analysis into three subheads: the first step requires testing Stationarity of the variables using the Unit Root Test. A Time Series Data is said to be stationary if its mean, variance, and autocovariance are constant over time. (Gujarati:2006). The test for stationarity is critical as it enables the researcher to make reasonable generalization and forecast of the data beyond a particular time period. To do that, we employed the Augmented Dickey-Fuller (ADF) formulae to test the existence of unit roots in the data. The next step is the testing of the presence of any long-run relationship between the variables using the ARDL of cointegration. According to Giles, (2013), an ARDL regression is expressed as: $y_t = \beta_0 + \beta_1 y_{t-1} + ... + \beta_p y_{t-p} + \alpha_0 x_t + \alpha_1 x_{t-1} + \alpha_2 x_{t-2} + ... + \alpha_q x_{t-q} + \varepsilon_t$, where ε_t is a random "disturbance" term. The ARDL only tests for the presence of long-run relationship and not on the the direction of relationship. The advantage of using the ARDL to the conventional cointegration techniques is its ability to handle small and finite sample sizes even though the variables are purely I(0), purely I(1) or fractionally integrated. ARDL can also provide long run estimates that are unbiased with valid t-statistics even where the causality of the variables is reversed due to the presence of endogeneity.

The final step uses the Granger Causality tests to confirm the direction of the relationship among the variables. The causality can either be unidirectional or bi-directional. It is unidirectional when only X causes Y and not Y causing X, while bi-directional occurs when each of X and Y causes the other. The variables become statistically independent when there is no causal relationship between them. Our study also adopted the Vector Error Correction Model (VECM) as opposed to VAR Model to capture causality if the variables are cointegrated. VECM model is used when there exist a long run relationship between the variables under consideration, and therefore useful in evaluating the cointegrated series. The analysis also requires the testing of some hypotheses which are stated below:

Ho1: International trade as trade openness does not impact on the economic growth of Nigerian significantly and positively.

HA1: International trade as trade openness does impact economic growth of Nigerian significantly and positively.

Finally, we shall use the E-View Econometric Software Package in our estimation in this study.

4. RESULTS AND ANALYSES

We now present the results of our empirical models below:

Table 1: UNIT ROOT TEST

YEAR	VARIABLE	T STATISTICS	PROBABILITY
1980-2005	EXIM I(0) ***	-1.059	0.3799
2006-2016	EXIM I(0) ***	-4.745	0.0019
1980 - 2005	EXIMG I(0) ***	-2.549	0.9170
2006 2016	EXIMG I(1) ***	-7.702	0.0000
1980 - 2005	EXPORTS I(0) ***	-1.353	0.3040
2006 2016	EXPORTS I(1) ***	-5.269	0.0006
1980 - 2005	FDI I(0) ***	2.319	0.8505
2006 2016	FDI I(1) ***	-4.840	0.0021
1980 - 2005	FX I(0) ***	-2.524	0.4082
2006 2016	FX I(1) ***	-5.021	0.0007
1980 - 2005	GDP GROWTH per capita I(0) ***	-2.379	0.3148
2006 2016	GDP GROWTH per capita I(0) ***	-4.40	0.006
1980 - 2005	IMPORTS I(0) ***	0.974	0.9345
2006 2016	IMPORTS I(1) ***	-3.512	0.0012
1980 - 2005			
2006 2016	EASE OF DOING BUSINESS I(0)***	0.303924	0.9647

* Stationary at 1%   ** Stationary at 1% and 5% *** Stationary at 1% , 5% and 10%

Source: Author

Table 2: BOUNDS TESTS

	(1980-2005)		(2006-2016)	
F -STATISTICS	6.035609		4.472021	
CRITICAL VALUE BOUNDS	I0	I1	I0	I1
10%	1.75	2.87	2.26	3.35
5%	2.04	3.24	2.62	3.79
2.5%	2.32	3.59	2.96	4.18
1%	1.66	4.05	3.41	4.68

Table 3: LONG RUN ARDL MODEL ESTIMATION OUTPUT

VARIABLE	1980-2005	2006-2016
IMPORT	9.112	-66.309931
EXPORT	11.318	-75.281731
EASE OF DOING BUSINESS		-0.118677
FOREIGN EXCHANGE	-0.054	-17.946729
EXIM	-19.7431	38.270428
EXIMG	-1.465	-9.621958
FDI	0.000946	5.764859
R^2	0.614720	0.99680
DURBIN WATSON	1.208	2.827740

Source: Author

4.1 Discussions of Results:

From our analysis, our test confirmed the null hypothesis (Ho1) that International trade proxied as trade openness, did not impact significantly and positively with economic growth in Nigeria during the period 1980-2016. While our finding is not in line with the widely held theoretical view of the positive linkage between the two variables, there are empirical findings that support our results, from such works as Rodrik, 1997; Chang, 2009; Oskam, 2004; Rodriguez & Rodrik, 1999; Vamvakidis, 2002; Hassan & Islam, 2005; Rodrik etal, 2004, Atoyebi etal (2004). Khamala, 2015, also using data from 47 sub-Saharan countries with GDP per capita as dependent variable, showed negative correlation between trade openness and with growth. Lawal et al (2016), and Moyo et al (2017) also reported a long run negative relationship between trade openness and economic growth for Nigeria. Our findings can be supported by the economic performance reports on Nigeria where despite its high nominal GDP of $400 billion, the country still records as the poverty capital of the world in 2018. Oskam et al (2004), in support of our findings, identified poor institutions, governance and deficient infrastructure and exposure to external (price) shocks and growth path instability as potential causes of this relationship. Rodrik (1997) also reported that the positive impact of trade openness on growth generally takes time due to lags in human capital development, infrastructure, and institutions of macroeconomic management.

Our empirical finding is also explained with the descriptive statistics of the plot of GDP per Capita Growth Rate as proxy for economic growth as shown in figure 1 which shows a relatively unimpressive performance compared to the plot of nominal GDP growth in figure 2, and that of GDP per Capita in figure 3, both of which trended positively within the period of study. Figure 4 is a plot of the economic performance of these South East Asian economies with Nigeria from 1960 to 2016 showing how the left Nigeria behind, even though at some point Nigerian economy was even slightly higher between 1972 and 1983.
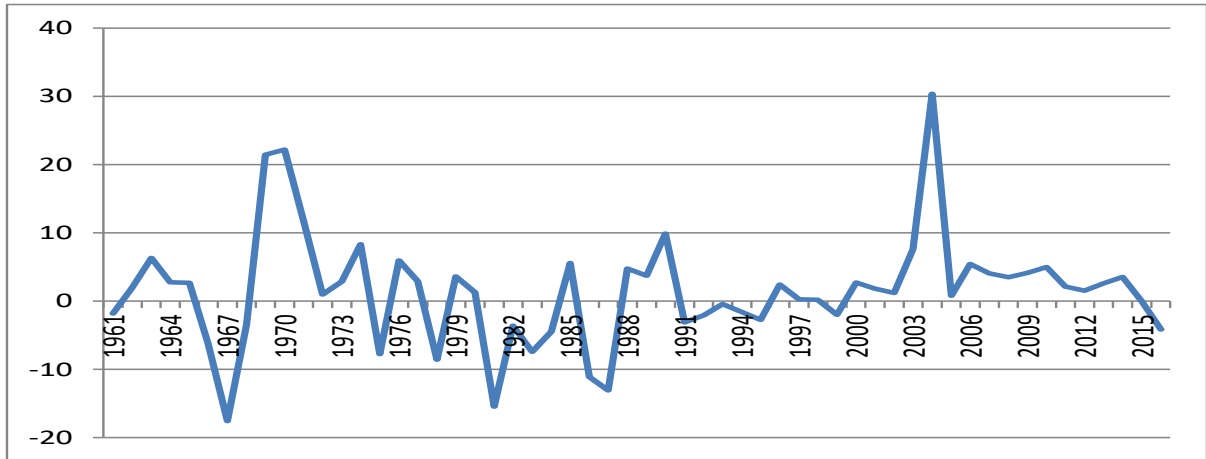
Figure 1: GDP Per Capita Growth Rate (%) for Nigeria.   Source: Generated by Author from World Bank Data
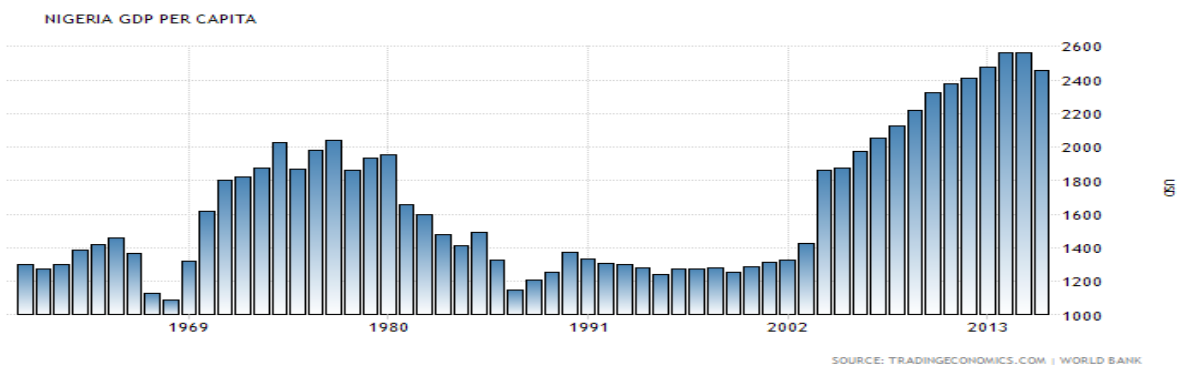

Figure 2: Historical GDP per Capita for Nigeria for 1980 to 2016, Source: World Bank
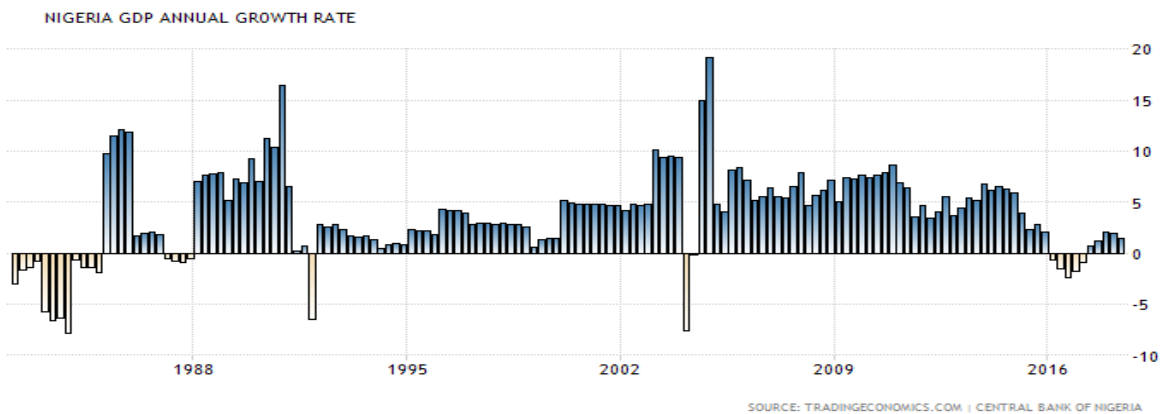

Figure 3: Historical GDP Growth Rate for Nigeria from 1980 to 2016, Source: World Bank
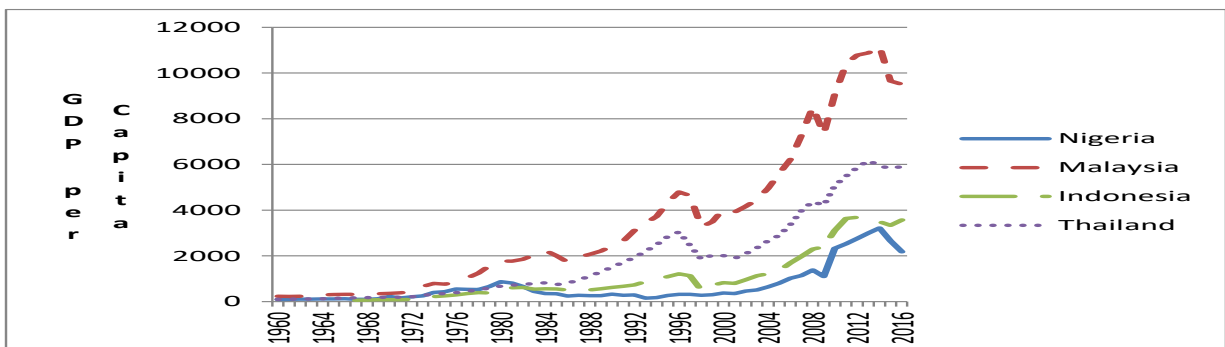

Figure 4: Cross Country GDP Per Capita US Dollar.   Source: Generated by Author from World Bank Data

Our findings can also be explained technically from several factors (i) the lack of transforming its teeming labour force into human capital as was the case with the South East Asian economies of Indonesia, Malaysia, and Thailand, that invested heavily in human capital development as shown in table 4.

Table 4: 2015 WEF Human Capital Index-Cross Country Comparison

Nigeria	Indonesia	South Africa	Malaysia	Kenya	Ghana	Rwanda	Ivory Coast	Thailand
120	69	92	52	101	82	108	117	57

The Human Capital Index report ranks a country using 46 different human capital measures some of which are school enrolment and Quality of education, educational attainment and Workplace learning, employment which includes participation in economic activities, skills, and vulnerability. These indicators are further broken down into different age groups from under 15, 15–24, 25–54, 55–64 and those at 65 years and over. According to the report, human capital for the business sector means the economic value of an employee's set of skills, while for the policy maker in government; it means the workforce within the population that drives economic growth. Based on these metrics, Nigeria performed poorly at 120 out of 124 countries, which showed its level of human capital development, and hence its economic realities. The report further recognized that the long term economic growth and success of a nation depends on the appropriate channeling of its human capital endowment to productive use in the economy. It therefore recommends for government to invest in their human capacity if they must reap the benefits of economic growth.

According to NBS (2017), out of the 85.08 million Nigerian labour force in 2017 about 29.8 percent are with no form of education, 20.2 percent with basic primary education, 34.1 percent with secondary education, while post-secondary employment recorded only 16 percent. When compared with Malaysia, 27 percent of labour force highly skilled, 59.7 percent for semi skilled workers, while low skill workers averaged only 13 percen. (Talentcorp 2018). On the other hand, Darmawan et al (2018) showed that 60 percent of Indonesian economic growth for the past two decades, came from consistent labour productivity improvements by converting its increasing labour force into productive economic use. As at 2012, with a labour force of 110.8 million for a population of 245 million, its work force was dominated by Primary School level of about 48,6%, while the the balance was from higher educational level, meaning that Indonesia work force is very literate.

These Asian economies strongly depend on educating their population to move their economies forward as they focus on building their human capacity, through their very flexible academic programmes that enables students to choose between vocational training and university. They also have educational systems tailored especially for the 21st century to meet the 360 degrees need of the entire society. (The Nation (2016). Specifically, the Indonesia economy is one of the success story in South East Asia, which as at 1970 had a GDP of $9.74 billion nominal, while Nigeria was $12.55 billion. With a population of 262 million people in 2017, Indonesia only had 6 million unemployed, with a very high skilled labour force. Indonesia is now 16th largest economy with a $1.02 trillion nominal GDP while Nigeria trails behind at 31, with a GDP of $376 billion. While Nigeria plans to grow its economy at 2-3 percent, Indonesia is forecasted to grow at 5.2 percent in 2018, and 5.3 percent in 2019. Again, while Indonesia spends 20.52 percent of its budget on education, Nigeria only planned for 7 percent for education in the 2018 budget. (Country comparison). The impact of education, especially at the tertiary level with higher skill set, on economic growth as shown in figure 5 from the works of Earle (2010) clearly explains the Indonesian economic growth miracle because of its high skill set.
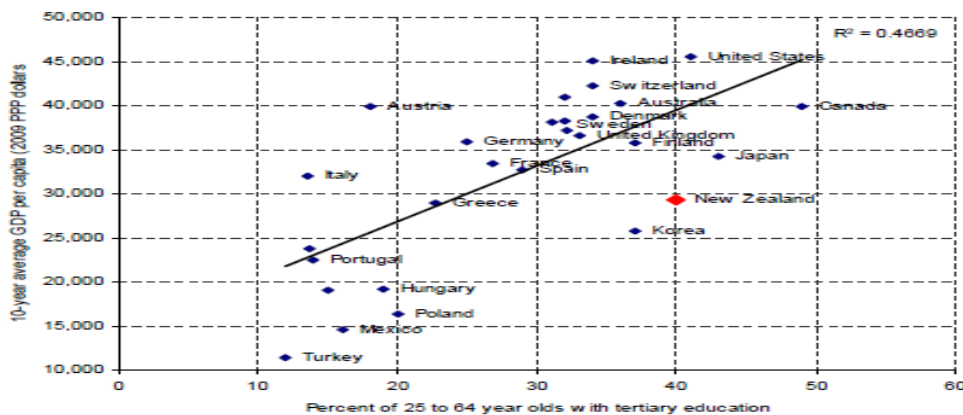
Figure 5: Impact of tertiary education and economic growth, Source: Earle (2010)

Comparing Nigerian skill set with that of Indonesia clearly explains the lag in growth in Nigerian economy, where nearly 30 percent of Nigeria's labour force in 2018 has no form of formal education, while only 16 percent have higher education qualifications, which can easily relate with its low GDP per capita performance. Indonesia on the other hand has 48 percent of its labour force as having primary school education, while the rest are secondary school and higher education graduates. We can also link the population growth rates of the two countries; while Indonesia population growth rate is now hovering around 0.9 and 1 percent, Nigeria is still very strong at 2.6-3.2 percent, with a UN forecast of having a population of about 380 million by 2050, to place third in the world after India and China. It is therefore imperative for Nigeria to confront this by investing heavily to transform this growing population into human capital that can grow the economy, otherwise, they country will remain in abject poverty perpetually. This linkage between economic growth and education is also strongly supported by the endogenous growth theorists who opined that economic growth is dependent investment in human capital that can enhance adoption of new technologies and other productivity innovations. They therefore encourage both public and private institutions to create necessary incentives to encourage their workers and people to pursue innovations and knowledge adoption. An educated workforce according to them, will benefit from spillover effects from trade openness from their developed trading partners in order to compete favourably in the global market space. Babatunde and Adefabi (2005) also established this linkage for the Nigerian economy in their study that individual workers output is positively correlated to how long a person spends in primary school and tertiary education. This is because such a well-educated work force has capacity to accumulate knowledge and be very inventive in order to provide strategic input into economic growth. It is therefore critical that an economy must invest heavily and develop its human capital base if it must enjoy virility in per capita growth. Unfortunately, Nigeria literacy ranking of 51.1 percent to place 177 on a scale of 196 countries can be compared with other developing economies in the table 5 below

Table 5: Literacy and Development in some developing Countries and Nigeria

Nations	Saudi Arabia	Indonesia	Turkey	Libya	UAE	Iran	Oman	Nigeria
Literacy-%	94.4	92.8	92.7	90.3	90	83.6	86.9	51.1
HDI	0.847	0.698	0.767	0.716	0.84	0.774	0.796	0.527

Source: Generated by Author from UNDP, and World Bank data

It is also clear that those with higher literacy rating globally exhibit higher development based on HDI ranking of countries, and hence their economic growth performances. Economically, an illiterate labour force negatively impacts on workplace productivity, unemployment rates are higher, and even national GDP are impacted severely. Table 6 compares the literacy levels of the Geopolitical Regions of Nigeria which clearly attest to the impact of literacy on development, from ability to generate internal revenue which is also correlated with poverty index. The states and the regions of the North with lower literacy index also exhibit higher poverty index.

Table 6: Relationship between Literacy Level and Poverty of Geopolitical Regions in Nigeria

Region	North West	North Central	North East	South West	South South	South East
Literacy-%	26.06	62.18	34.41	87.64	88.07	90
IGR-Nbn	64.78	54.9	29.25	414.72	198.4	51.31
Poverty-%	79.13	45.75	76.75	19.28	25.22	27.36

Source: By Author from Several: Poverty Index: Based on data collected between 2004 and 2014 by United Nation's Multi-Dimensional Poverty Index, IGR – Source Budgit, and Literacy Level from NBS collation.

In order to deliver Nigeria from this poverty and illiteracy linkage, and by extension, poor economic growth and development, the United Nations advised the country to invest about 26 percent of its GDP on education, however, unfortunately, this has been ignored as the country only allocated a merger 7.04 percent of its N 8.6 trillion 2018 National Budget to education, which translates to N605.8 billion. (Adedigba, (2017). In comparison, Ghana with only 28-29 million people, allocated more than N700 billion to its education sector in the 2018 Budget, while Nigeria budgeted about N600 billion for a population of 200 million people. As a smaller country, Ghana also proposed to spend $13.9 billion in

2018, while the giant Nigeria is still struggling with its budget of N 8.6 trillion or $28.2 billion, barely twice Ghanaian Budget, while population ratio is nearly 7:1, which further speaks to the seriousness of our leadership in developing this country. (ACEP, 2017), When also compared with South Africa, allocation for education in 2018 budget was $20.73 billion, with total 2018 appropriation of $140.4 billion. These figures only show Nigerian's government's insensitivity to the linkage between human capital and economy growth (ACEP (2017). For any economy to compete at the global space, it must invest heavily in educating its labour force, in order to empower them into research and development and knowledge and technological innovations. Table 7 shows the global innovation index for some selected countries, including Nigeria reported by Insead Business School, which ranked Nigeria very low at 119 out of 127 countries that were surveyed. This is no surprise considering the paltry investment in education by the Nigerian government, compared to Indonesia, Malaysia, and Thailand.

Table 7: 2017 Global Innovation Index

Nigeria	Indonesia	South Africa	Malaysia	Kenya	Rwanda	Ivory Coast	Thailand
119	87	57	37	80	99	112	51

Source: Collated by Author from Insead Business School,

The report showed that the top 45 countries on the list belong to the High and Upper Medium Income countries who understand the linking between economic growth and innovation, and hence investment in the training of their labour force to participate in the global competitive market. Figure 6 is a chart from Global Innovation Index showing the relationship between GDP growth and Research and Development.
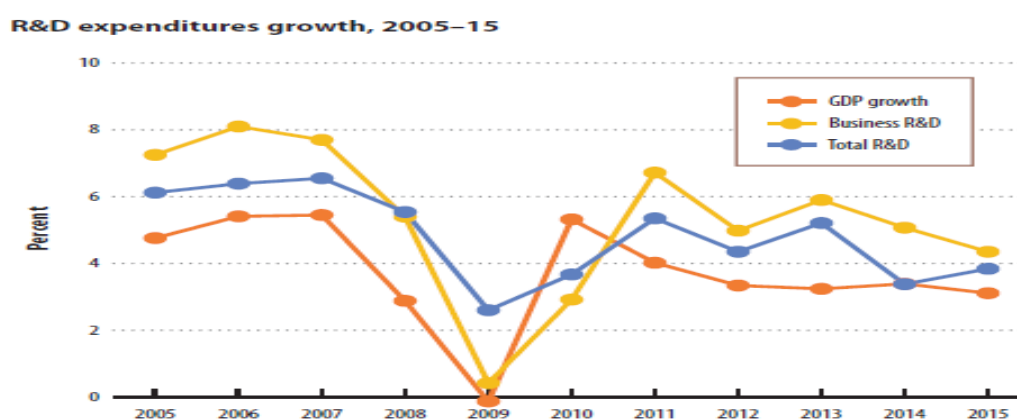
Figure 6: R&D expenditure with GDP Growth, 2005-2015. Source. Global Innovation Index

Other factors we identified as responsible for the negative linkage between trade openness and economic growth for Nigeria include (ii) Over reliance on unprocessed raw natural resource commodities export (iii) prevalence of finished consumer goods importation (iv) deficit social infrastructures and logistics support for economic growth (v) institutional and governance failure (vi) lack of political will to implement policies (vii) inefficient public enterprise and Guided Privatization and Commercialization

5. CONCLUSIONS AND POLICY RECOMMENDATIONS

From the results obtained from our analyses, Nigerian economy was not impacted positively through trade openness during the period of study using GDP per capita growth rate as proxy for economic growth. The use of a more pragmatic GDP per Capita Growth rate is to capture the impact of increasing population growth rate, and its contribution to human capital in economic activities, which unfortunately, for Nigeria was not the case. Our finding thus shows the deficiency in measuring economic performance using only nominal GDP, which only deals in production and consumption, without measuring its impact on the population. This result therefore accentuates the need for African economies to focus on developing its labour force into human capital through investment in higher education, which we showed correlates positively with economic growth. Sadly, our research showed that this is significantly lacking in Nigeria as significant portion of the labour force are illiterates and primary school holders, with very low tertiary education holders. This explains the relatively poor performance through trade as Nigeria never took advantage of the benefits of international trade which are institutional development, innovation and technological and knowledge transfer and diffusion and

learning by doing when compared again with Indonesia, Thailand and Malaysia. It further explains why the Country also ranked very low on the Global Innovation and Human Capacity Indices. The lack of technological innovation especially in a digital world also helped further the country's continued reliance on raw primary products export that are subject to price, market and seasonal volatilities. All these accentuate the country's economic woes. There were also visible issues of poor governance and institutional problems, prevalence of public expenditure with a relatively low private sector participation to grow the economies, which resulted in institutionalized corruption high public debt profile. As a way forward therefore, Nigeria and other developing economies must focus in transforming its teeming population into human capital by measuring economic growth with GDP per capita growth rate instead of the nominal GDP. If the country must leap frog into the developed economic space, it must also attract and incentivize the private sector to invest in focused research and development (R&D) in all key sectors of the economy.

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