SIGNIFICANT IMPACT OF INTERNATIONAL TRADE ON NIGERIA'S ECONOMIC GROWTH

[1]Okoli, C. N. and [2]Onyeso, K. C.
Department of Statistics, Chukwuemeka Odumegwu Ojukwu University, Uli, Anambra state.
E-mail: [1]cecilia.okoli@yahoo.com and [2]onyesokingsley@gmail.com

ABSTRACT
The Study centered on Impact of international trade on economic growth in Nigeria with three objectives in which its sole aim it to ascertain if international trade has any significant impact on the growth of the Nigeria Economy within the period of study. Tests were carried out to ascertain the validity of these objectives using time series variables covering 36 years on Gross Domestics Product (GDP), imported goods, exportation of goods and trade openness which were sourced from the National Bureau of Statistics (NBS) Annual Abstract of Statistics and Central Bank of Nigeria statistical bulletin and analyzed using the appropriate statistical tests. The result of the analysis indicated that import and export are positively related to the economic growth in Nigeria while trade openness has a negative relationship with the growth of the economy. Also, the findings of the study further showed that import and trade openness has significant impact on the economic growth of the country within the period of study with 5%level of significance and 35degrees of freedom which falls on rejection region of the null hypothesis. Export is positively related to the GDP but has no significant impact on the growth of the economy. Therefore, import and trade openness are the deterministic variable for the growth of the Nigeria Economy. The Granger Causality Result (GCR) showed that Import and GDP influences each other (Bi- directional causality) with p-values of 0.0002 and $0.005 < \alpha = 0.05$ while export and trade openness has uni-directional influence on the GDP within the period of study. From the results of the study, recommendations were made to advise the government on ways to handle international trade issues towards impacting significantly on growth of the Nigeria economy.

Keywords: International Trade, GDP, Economic Growth, Multiple Regression, Time Series Model and Granger Causality Test.

1.0 INTRODUCTION

International trade is the exchange of capital, goods and services across international borders or territories. In most countries, such trade represents significant share of the Gross Domestic Product (GDP). Hence, international trade has been an area of interest to policy makers as well as economists. It enables nations sell their domestically produced goods to other countries of the world. International trade has been regarded as an engine of growth, which leads to steady improvement in human status by expanding the range of people's standard and preferences (Adewuyi, 2002). Since no country has grown without trade, international trade plays a vital role in restructuring economic and social attributes of countries around the world, particularly, the less developed countries. Furthermore, over the years, development economists have long recognized the role of trade in the growth process of national economies as trade provides both foreign exchange earnings and market stimulus for accelerated economic growth. The economic growth of Nigeria to a large extent depends on her trade with other nations. Nigeria as a developing country has been grappling with realities of developmental process not only politically and socially but also economically. In the 1960s, agriculture was the main stay of the economy and the greatest foreign exchange earner Nigerian government then was able to execute investment projects through domestic savings, earnings from exports of agricultural products and foreign aids

(Ezike and Amah, 2011). Since the advent of oil as a major source of foreign exchange earning in Nigeria in 1974, the picture has been almost that of general stagnation in agricultural export. This has led to loss of Nigeria's position as an important producer and exporter of palm oil produce, groundnut, cocoa and rubber. Between 1960 and 1980, agricultural and agro-allied exports constituted an average of sixty percent of total export in Nigeria, which is now accounted for by petroleum oil export. However the importance of international trade in the Nigerian economy has grown rapidly in recent time, especially since 2002. Economic openness measured as the ratio of export and imports to GDP has risen just above 3 percent in 1991 to over 11 percent in 2008 due to unrest in Nigeria's oil producing Niger Delta region which resulted in significant disruption in oil production and shortfalls in oil export. Despite these challenges, it is become imperative that the issue of international trade as catalyst for economic growth in Nigeria should be addressed, hence the essence of this paper.

2.0 Review of Related Literature

Adekitan, (2005) looked at the impact of exportation and observed that export plays an important role in the development of West African countries, serving as an important source of foreign exchange and employment. Expectedly people are directly or indirectly engaged in the export trade because it serves as a source of capital for development. The foreign exchange earned is used to finance development projects. It also serves as a source of raw materials for domestic industries. Most of the primary products which were previously meant for exportation are now being locally processed. Production for export encourages local production and raw materials are either transformed into semi-finished goods for export or into finished goods for local consumption.

Exportation provides an avenue for introducing foreign technology through the participation of foreign firms. The production of goods for export has encouraged the importation of technology. Export has also enhanced the development of technical and managerial knowledge. The transfer of technology and managerial skills, which brought about by the need to produce certain goods and services to export, has helped to improve the skills of indigenous manpower (Ogunbiyi, 2010). Hammouda, (2004) showed that the export trade has led to improvements in research techniques. Exporters try to improve production methods so as to maintain their share of foreign markers

Kaldor (1970) developed an export–led growth model built on the notion of cumulative causation and takes into consideration the fact that exports are the main components of demand. Keynesian models in Kaldorian lines, such as Thirlwall's balance of payments constrain growth model was used to find the channel between trade and growth by means of demand pull characteristics of exports. Static trade models suggested that movements toward openness can temporarily increase the rate of growth due to short - run gains from the reallocation of resources, which would imply a positive relationship between changes in openness and GDP growth.

Chenery and Strout (1994) asserted that for a long time, there was hardly any country which exhibited sustained growth rate higher than its growth of exports. They also claimed that growth rates of individual developing countries since 1950 correlate better with their export performance than with any other single economic indicator. Thirlwall (1997) further explained the possibility that export growth may set up a vicious cycle of growth such that once a country is launched on the path, it maintains its competitive position in world trade and performs continually better relative to other countries. The paper contended that export growth relieves a country of balance of payment constraints so that the faster exports grow, the faster output growth can be

without running into balance of payment difficulties. The findings suggested that an export based strategy of development offers the best prospects for economic growth. Although theoretical links between trade and economic growth have been extensively discussed for over two centuries, a lot of controversies still abound concerning their real effects. The arguments in favour of trade can be traced to the classical school of economic thought that started with Adam Smith since then, the justification for free trade and the various indisputable benefits to nations have been greatly discussed (Bhagwati 1978 and Krueger, 1997).

Triggered by the endogenous growth theories, there have been several models that stress the importance of trade in achieving a sustainable rate of economic growth. Some of such models focused on different variables such as the degree of openness, real exchange rates, tariffs, terms of trade and export performance to verify the hypothesis that open economies grow more rapidly than those that are closed (Obadan, 2008) while the nexus between trade and growth lies with growth models, it was also stressed that trade is only one factor of the variables which enter the growth equation Advocates of the export – led growth hypothesis state that trade was actually the main engine of growth among the Asian Tigers; Hong Kong, Taiwan, Singapore and South Korea (Medina – Smith, 2001). .

Mwaba (1999) notes that the issue of whether trade and increased openness lead to high rates of economic growth is an age – old question which sustained the debate between pro – traders and protectionists over the years. While the protectionist scholars contended that trade liberalization is detrimental to growth and could lead to deterioration, new development theorists contend that openness stimulates technological change by increasing domestic rivalry and competition and hence increased innovation. Mwaba further explained that African countries have not embraced trade liberalization in the manner that other developing regions have. Protectionist measures have taken various forms including tariffs, quantitative restrictions, exchange controls and downright import bans. Significant number of researchers has attributed in part the poor performance of African economies to protectionist trade practices. Economists have made sustained efforts at cataloguing the welfare costs of trade barriers and emphasizing the gains from trade in order to advance policies to reverse protectionist practices. In fact, new growth theorists contend that traditional analysis tended to consistently underestimate the welfare costs of protectionism because they ignored the effects of the introduction of new goods on technological progress, domestic production and growth associated with free trade. He then concludes by stressing that while opening an economy to trade may not provide the desired quick fix, the removal or relaxation of quantitative import and export restrictions and lowering of tariffs would result in increased export growth. The dawn of a global economy ushered in by universal trade liberalization, need not spell catastrophe for African economies as is widely feared.

It has been argued that accrual from trade is biased in favour of advanced industrialized countries, that foreign trade has adversely affected industrial development in the poorer nations and that contrary to expectations from classical trade doctrine – free trade has in reality accentuated international inequalities. Contrarily, some theorists have maintained the traditional position that foreign trade can contribute substantially to the development of primary exporting countries, and that gains from international specialization merge with gains from growth. This implied that foreign trade could make impressive contributions to a country's development. Trade was therefore linked with economic development describing free trade (trade liberalization) as an engine of growth. This view was corroborated by Obadan (1994) stressing that trade performed the role of engine of

growth especially via real productivity export sectors and also that specialization and increased division of labour.

3.0 Materials and Method

3.1 SOURCE OF DATA

The data required for this study are secondary time series data on gross domestic product (GDP), IMPORT, EXPORT and Trade Openness ranging from 1980-2016. The data were extracted from the National Bureau of Statistics Annual Statistics and the Central Bank of Nigeria (CBN) statistical bulletin.

3.2 MODEL SPECIFICATION

This study proposes multiple regression models and uses Time series models procedure in estimating the relationship between the economic variables.

The functional form of the model is specified as follows:

GDP = F (IMPORT, EXPORT,TOP) **(1)**

$GDP_t = b_0 + b_1 IMPORT_t + b_2 EXPORT_t + b_3 TOP_t + \mu$ **(2)**

Where:

b_0: Intercept

b_1, b_2 and b_3 are the parameter estimates

GDP_t = Gross Domestic product (It is used to measure economic growth and development)

$IMPORT_t$: Import (total import both oil-import and non-oil import)

$EXPORT_t$: Export (Total oil export and non-oil export)

μ: Error Term

TOP_t: Trade Openness (Expressed as (Import + Export)/GDP)

3.3 Data Analysis

Data analysis will be evaluated using the following methods: Preliminary test, Statistical criteria and Econometric criteria.

3.3.1 DATA PRESENTATION

Table 1: Table showing distribution of GDP, IMPORT, EXPORT and TRADE OPENNESS (TOP) from 1980-2016

YEAR	GDP	IMPORT	EXPORT	TRADE OPENESS
1980	49,632.32	9,095.6	14,186.7	0.4690955
1981	47,619.66	12,839.6	11,023.3	0.5011145
1982	49,069.28	10,770.5	8,206.4	0.3867369

1983	53,107.38	8,903.7	7,502.5	0.308925
1984	59,622.53	7,178.3	9,088.0	0.2728214
1985	67,908.55	7,062.6	11,720.8	0.2765985
1986	69,146.99	5,983.6	8,920.6	0.2155437
1987	105,222.84	17,861.7	30,360.6	0.4582874
1988	139,085.30	21,445.7	31,192.8	0.378462
1989	216,797.54	30,860.2	57,971.2	0.4097436
1990	267,549.99	45,717.9	109,886.1	0.5815885
1991	312,139.74	89,488.2	121,535.4	0.6760549
1992	532,613.83	143,151.2	205,611.7	0.6548138
1993	683,869.79	165,629.4	218,770.1	0.5620946
1994	899,863.22	162,788.8	206,059.2	0.4098934
1995	1,933,211.55	755,127.7	950,661.4	0.8823603
1996	2,702,719.13	562,626.6	1,309,543.4	0.6926987
1997	2,801,972.58	845,716.6	1,241,662.7	0.7449678
1998	2,708,430.86	837,418.7	751,856.7	0.5867882
1999	3,194,014.97	862,515.7	1,188,969.8	0.6422905
2000	4,582,127.29	985,022.4	1,945,723.3	0.6396037
2001	4,725,086.00	1,358,180.3	1,867,953.9	0.6827673
2002	6,912,381.25	1,512,695.3	1,744,177.7	0.4711651
2003	8,487,031.57	2,080,235.3	3,087,886.4	0.6089434
2004	11,411,066.91	1,987,045.3	4,602,781.5	0.5774944
2005	14,572,239.12	2,800,856.3	7,246,534.8	0.6894885

2006	18,564,594.73	3,108,519.3	7,324,680.6	0.5619945
2007	20,657,317.67	3,911,952.6	8,309,758.3	0.5916408
2008	24,296,329.29	5,189,802.6	10,161,490.1	0.6318359
2009	24,794,238.66	5,102,534.4	8,356,385.6	0.5428245
2010	29,205,782.96	8,005,374.2	11,035,794.5	0.6519657
2011	33,617,327.26	10,908,214.00	13,715,203.40	0.761107
2012	38,028,871.56	13,811,053.80	16,394,612.30	0.870248
2013	21,401,519.78	10,908,214.00	13,715,203.40	1.150545
2014	24,205,863.34	11,875,827.27	14,608,339.70	1.094122
2015	18533,75	12,198,365.02	14,906,051.80	0.146243566
2016	18,292.95	11,660,802.10	14,409,864.97	0.142517621

Source: NBS and Central Bank of Nigeria Bulletin, 2016. Trade Openness is calculated as addition of import and export divided by gross domestic product (Import+Export/GDP).

4.0 Results of the Analysis

Table 4.1: Unit Root Test Analysis Result

VARIABLES	ADF test Statistics	5% critical Value	Order of Integration
GDP	-13.88976	**-2.639210**	I(2)
IMPORT	-4.863689	-2.632688	I(1)
EXPORT	-5.257324	-2.632688	I(1)
TOP	-6.391129	-3.632900	I(1)

Augmented Dickey Fuller outputted from E-view

Table 4.2:Co-integration Test Result

Null Hypothesis: ECT has a unit root

Exogenous: None

Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*	TEST RESULT
Augmented Dickey-Fuller test statistic		**-2.362454**	**0.0195**	**CO-INTEGRATED**
Test critical values:	1% level	-2.630762		
	5% level	**-1.950394**		
	10% level	-1.611202		

Table 4.3: Error Correction Mechanism (ECM) Result

VARIABLE	COEFFICIENT	STANDARDERROR	T-STATISTICS	PROBABILITY
ECT(-1)	0.716819	0.151577	-2.749885	0.0097

Source: E-view

Table 4.4: The Regression Analysis Result

Variable	Coefficient	Standard Error	t-Statistic	Probability
C	52922555	9257877.	5.716489	0.0000
IMPORT	8.008019	3.649666	2.194178	0.0354
EXPORT	0.269400	2.869337	0.093889	0.9258
TOP	-1.06E+08	16063973	-6.626756	0.0000

R^2 = 0.776756, Adjusted R^2 = 0.756461 *Durbin Watson Statistics* = 0.751244 (3)

F statistics = 38.27340 (4)

Table 4.5: Result of t-Test of Significance

VARIABLES	t-computed (t*)	t-tabulated ($t_{a/2}$)	Conclusion
IMPORT	2.194178	1.96	Statistically significant
EXPORT	0.093889	1.96	Not Statistically significant
TOP	-6.626756	1.96	Statistically significant

Table 4.6: Result of F-Test of Significance:

Computed f-ratio value	Critical f-ratio value	Result

38.27340	2.92	Statistically significant

Table 4.7: Durbin-Watson statistics

Du	d*	4-du	Result
1.73	0.751244	2.27	Autocorrelation absent

Table 4.8: Causality Test Analysis Result:

Pairwise Granger Causality Tests
Date: 03/30/19 Time: 15:40
Sample: 1980 2016
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
IMPORT does not Granger Cause GDP	35	11.2817	0.0002
GDP does not Granger Cause IMPORT		6.11488	0.0059
EXPORT does not Granger Cause GDP	35	57.9233	5.E-11
GDP does not Granger Cause EXPORT		2.28443	0.1193
TOP does not Granger Cause GDP	35	4.96234	0.0137
GDP does not Granger Cause TOP		2.48079	0.1007
EXPORT does not Granger Cause IMPORT	35	5.03978	0.0130
IMPORT does not Granger Cause EXPORT		1.29881	0.2878
TOP does not Granger Cause IMPORT	35	0.11671	0.8902
IMPORT does not Granger Cause TOP		0.44189	0.6469
TOP does not Granger Cause EXPORT	35	0.30050	0.7427
EXPORT does not Granger Cause TOP		0.46004	0.6356

5.0 Discussion of Results

The unit root test in table 4.1 shows the stationality level of the time series variables at 5% level significance. The unit root test shows that Import, Export and Trade Openness are stationary at first difference at 5% level of significance while GDP is stationary at second difference. Since all the variables are not stationary at level form i.e. I (0), a co-integration test was conducted to ascertain if there will exist a long run equilibrium relationship. From table 4.2 Augmented –Dickey-Fuller (ADF) test statistics (-2.362454) is greater than the 5% critical value (-1.950394) in absolute terms. This reveal the rejection of the null hypotheses at 5% level of significance based on the decision rule. This implies that there is a co-integrating equations or vectors among the variables of interest. Therefore, there is a long run relationship between the variables. That is, the linear combination of these variables cancels out the stochastic trend in the series. This will prevent the generation of spurious regression results.

From table 4.3, the magnitude of the short run disparity is 72%, that is to say the degree of the short run dynamics is 71.6819. This shows a high speed of adjustment to equilibrium after a shock.

The coefficient of determination R^2 from the regression result in table 4.4 is given as 0.776756. This implied that 78% of the variation in Gross Domestic Product is being explained by the variation in Import, Export and Trade Openness. More so, it implies that the regression line has a good fit of measure.

From table 4.5, the t-test result, For IMPORT, $t^* > t_{\alpha/2}$, accepted the alternative hypothesis. Hence Import is statistically significant. Thus Import has a significant impact on economic growth in Nigeria.

For EXPORT, $t^* < t_{\alpha/2}$ the null hypothesis showing that Export is not statistically significant is accepted, thus export has no significant impact on economic growth. More so, Trade openness with $t^* > t_{\alpha/2.}$ Implies that Trade Openness has a significant impact on the economic growth of Nigeria within the period of study. From table 4.6, the null hypothesis was rejected and concluded that the variables (Import, Export and TOP) have joint influence on economic growth.

The result in table 4.7 showed that there is no presence of autocorrelation problem in the model as the computed Durbin Watson statistic fall within the zero autocorrelation regions.

From the table 4.8 for Granger causality test result, in the first row, Import and GDP Granger causes each other (i.e. both have a direct influence on each other). This implies bi-directional causality since the p-value is less than 0.05. In the second and third rows, it is observed that for Export and Trade Openness granger causes GDP respectively. This result implies uni-directional causality. On the fourth and fifth rows, there is unidirectional causality between Export and Import, Trade Openness and Import respectively. The implication of the result is that Export and trade openness does not granger cause import. More so, the last row depict that export and trade openness does not granger cause each other, hence a zero-direction of causality.

6.0 Evaluation of Research Hypotheses and Implication of the Results

H_{01}: There is no significant relationship between the components of international trade and economic growth in Nigeria.

From the t-test and based on the decision rule, the null hypothesis (Ho) for both the import and trade openness was rejected The implication of the result is that the two variables have a significant impact on the Nigeria Economic Growth while the Null hypothesis is accepted for export, and it is an indication that export does not have any impact on the economic growth within the period of study.

H_{02}: The component of international trade does not determine the economic growth in Nigeria within the period of study. Furthermore, from the t-test result also, it is seen that Import and Trade Openness have a significant impact on the economic growth. Therefore, Import and Trade Openness determined the growth of the Nigeria economy within the period of study.

H_{03}: There is no causal relationship between the component of international trade and growth of the Nigeria economy. The result of the granger causality indicates that import and the economy of Nigeria have a bi-directional influence on each other. This implies that within the period of study that both variables behaved well in determining the standard of living within the country. Though uni-directional its influence exists between other variables and it does not depict an equal influence as the direction of influences are symmetrically skewed.

Conclusion

The work examined the effects of international trade on economic growth of Nigeria within the stipulated period of 1980-2016. The study conducted an empirical investigation using Time series models (econometric evaluation criteria) to test the statistical relationship between Export, Import, Trade Openness of the economy and GDP. The result showed positive relationship between Import and growth in Nigeria GDP. The implication is that through importation of goods and services there was innovation and exchange of ideas which promoted growth rate of the GDP. It also implies that the Nigerian government should come up or emphasize on policies that can monitor importation of goods and services so that it will not exceed the limit hence making Nigeria a dumping ground of foreign good which in turn discourages local producers. It was deduced that export was found to be positively related to the growth of the economy although it is not a deterministic variable for the growth of the economy.

The negative relationship between openness of the economy and growth of GDP showed that importation increased at the expense of exportation over the years covered and this resulted in deficit of balance of trade. The implication of this is that apart from the positive relationship that exist between import and GDP, Import skyrocketed at the expense of Export over the years resulting in negative relationship between openness of the economy and the growth of Nigeria GDP. Moreover, the result showed negative relationship between Export and growth of GDP. This implies that decrease in the exportation of goods and services contributed to the growth of GDP. The implication of this is that the Nigerian government needs to emphasize more on strategies that will result in increased exportation of goods and services. Such export promotion strategies could be enhanced through encouragement given to exporters, farmers and local manufacturers.

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