Relationship Between Export and Economic Growth in Nigeria from 1986-2021

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***Abstract*: All government of the world is faced with the challenges of poverty reduction, improve revenue generation, reduction in both external and domestic borrowing, and efficient allocation of resources. Many studies have showed that export has the capacity to achieve the aforementioned goals. Export is to send goods and services to another country for sale; it can also be seen as goods and services that are produced in one country and sold in another country. Whereas, there are mixed opinions by scholars about the relationship between export and economic growth, this study set out to investigate the relationship between export and economic growth in Nigeria in the period 1986-2021. The specific objective was also, to examine the trend in export and economic growth in Nigeria in the period 1986-2021. The study employed the secondary method of data collection. Time series data was collected from World Development Indicators 2021. The study employed the unit root test, co integration test and vector autoregressive technique (VAR) model with the use of Eviews 10 package to achieve the objectives of the study. The study found that export had positive relationship on economic growth during the period 1986- 2021. The study further recommended among others, restructuring of the oil sector in Nigeria in order to improve the foreign exchange revenue generated from crude oil and liquefied natural gas.**

***Keywords*: Export, Economic Growth, Unit Root, Cointegration**

I. INTRODUCTION

There have been many studies on the relationship between export and economic growth for instance, Okeme (2018) in a study on causal relationship between net-export and GDP using panel data from selected African countries found that long run exports, capital and labour were significant for high income countries on their GDP. Another study by Omotor(2008) on the role of exports in the economic growth of Nigeria using bound test from the period 1979-2005 found economic growth, exports, labour force and exchange rate are co integrated. Similar study from Nguyen (2016) analysed the impart of export on economic growth in Vietnam from 1990-2015 confirmed a significant and positive relationship between export and economic growth.

Accordingly Oruba (1998) and Iyoh (1995) cited in Douglason (2008) opine that export expansion leads to growth through the stimulation of technical change and investment or by demand spill over into other sectors of the economy.

Further studies like Egwuegbe and Uruakpka (2013) also, examined export impact on economic growth in Nigeria using time series data from 1986-2011. The study found export led growth hypothesis valid in Nigeria in the period reviewed and recommended that the Nigerian government should restructure the oil sector so as to improve the contribution to the economic growth of Nigeria.

There have been other studies who disagree with the export led economic growth like Michaely (1977), Ulasan (2015) while others cited in Pam (2017) are Lucas (1988) Musila and Jouini (2015) Redding (1999), Young(1991)

Against this backdrop, this study set out to investigate the relationship between export and economic growth in Nigeria from 1986- 2021

Statement of Problem

Governments all over the world have stressed the need to grow the economy by improving the Gross Domestic product (GDP) and revenue from foreign earnings. This can only be achieved by efficient use of both human and natural resources. Countries especially African countries are faced with poverty, low per capital income and balance of payment deficit. The Nigeria economy has been battling with a rise in external and domestic debt due to low production of both capital and consumer goods. An increase in export is capable of improving the Nigeria economy by exporting the commodities produced with comparative cost advantage. Nigeria has been a major exporter of crude oil and the proceeds have not been efficiently utilized due to corruption and weak institutions.

Objectives of the study

The main objective of the study is to investigate the relationship between Nigeria export and economic growth from 1986-2021.The specific objective is to:

1. Determine the relationship between net export and economic growth in Nigeria from 1986-2021.
2. Examine the trend in export and economic growth in Nigeria from 1986-2021

Research Questions

To achieve the objectives of the study, the following research questions were used as guide:

1. What is the relationship between export and economic growth from 1986-2021?
2. What is the trend in export and economic growth in Nigeria from 1986-2021

II. LITERATURE REVIEW

Economic growth can be defined as an increase in the production of the quantity and quality of economic goods and services produced in an economy. The total income of a society corresponds with the total sum of goods and services produced in that society.

Conceptual Clarification.

Economic growth can be defined as an increase in the capacity of an economy to produce more goods and services. Economic growth is usually measured in terms of Gross Domestic Product (GDP). It can also be measured in real or nominal terms. While export is to send goods and services to another country for sale; it can also be seen as goods and services that are produced in one country and sold in another country.

Empirical Review

There exist a plethora of studies on the impact and or relationship between export and economic growth in several countries around the world. For example, Egwuegbe and Uruakpka (2013) also empirically examined export trading on economic growth in Nigeria using time series data from 1986-2011. The study found l export led growth hypothesis valid in Nigeria in the period reviewed futher studies like Chenery and trout (1966) argued that export activity is linked with economic growth while Fouad (2005) opined that export of goods and services represent one of the most important sources of foreign exchange. Accordingly, Maizels(1963) tested the export growth hypothesis using cross- sectional data in seven countries from 1899 – 1959. The study agreed with the export-led hypothesis. Egbuche et.al,(2019) in a study on Foreign trade and economic Development in Nigeria from 1980-2016 using secondary data found that ease of doing business had a negative outcome on Nigeria's economic growth.

Theoretical Review

There are different international trade theories like the Ricardo theory of comparative advantage, the neo-classical modern theory of international trade and the Hecksher- Ohlin theory. However, this study is anchored on the Hecksher Ohlin theory.

Hecksher-Ohlin Theory

According to Atiman (2022) Eli Hecksher and Bertil Ohlin are two Swedish economist that postulates a theory that addressed two issues that the Ricardian theory could not explain; what factors determine the comparative advantaged and what effect does international trade have on the factors incomes in the trading nations. The Hecksher – Ohlin theory focuses on the differences in relative factors endowments and factors prices between nations as the most determinants of trade (On the assumption of equal or similar technology and tastes). Hecksher Ohlin maintained that the sources of the factors endowments determine a nation's comparative advantage. This arrangement is the basis of the theory to be referred to as factor endowment theory. The theory analysed the differences in factors endowment on international specialization. The model was based on two main prepositions; firstly, a country with specialization in the production and export of a commodity whose production requires intensive use of abundant resources. This implies that goods differ in factor requirement. Secondly, countries differ in factors of production.

III. METHODOLOGY

This study used the secondary method of data collection. Time series data from 1986-2021 was collected from World development indicators 2021 online database. The study employed the use of Eviews 10 package to test data using unit root test, cointegration test and as well as, the vector autoregressive (VAR) model

Model Specification

The model for this study is adopted from the work of Markku(2009) and its given below as

$$y_t = A_{1t,} y_{t-1} + ... + A_p y_{t-p} + Cx_t + \varepsilon_t \qquad (1.1)$$

Where;

$y_t = (y_{1t,} y_{2t,} ..., y_{kt})^`$ is a k x 1 vector of endogenous variable,

$x_t = (x_{1t,} x_{2t,} ...)^`$ is a $d \times 1$ vector of exogenous variable,

$A_{1,} ..., A_p$ are $k \times k$ matrices of lag coefficients to be estimated,

C is a $k \times d$ matrix of exogenous variable coefficients to be estimated,

$\varepsilon_t = (\varepsilon_{1t,} \varepsilon_{2t,} ..., \varepsilon_{kt})^`$ is a $k \times 1$ white noise innovation process, with $\mathrm{E}(\varepsilon_t) = 0, \mathrm{E}(\varepsilon_t \varepsilon_t^`) = \Sigma_\varepsilon$ and $\mathrm{E}(\varepsilon_t \varepsilon_\delta^`) = 0$ for $t \neq \delta$.

IV. RESULTS AND DISCUSSIONS

Unit Root Test

Augmented Dickey-Fuller (ADF) unit root test was conducted on the variables, to determine whether they are stationary or non-stationary.

The unit root test was done at levels as presented in Table 4.1. The result shows that all the variables are stationary at level. This means that all the variables i.e. gross domestic variables (LOGGDP) and export (LOGX) are integrated at I(0). We therefore conclude that the series is significantly reliable for further analyses.

Table 4.1 Unit Root Test Results

Variable	LEVELS ADF Prob.	FIRST DIFFERENCE ADF Prob.	Order of Integration
$LOGGDP_t$	-4.1351 0.0117**	- -	I (0)
$LOGX_t$	-4.4072 0.0058*	- -	I (0)

Source: Computed and Compiled by the Researcher using E-Views 10 (2022)

Note: The asterisks *, ** indicate rejection of null hypothesis at 1% and 5% respectively

Table 4.2 Engle-Granger Cointegration Test Result

Dependent	tau-statistic	Prob.	z-statistic	Prob.
LOGGDP	-3.623442	0.0373**	-20.38213	0.0249**
LOGX	-4.349251	0.0064*	-27.58356	0.0026*

Source: Computed and Compiled by the Researcher using E-Views 10 (2022)

The asterisks *, ** indicate rejection of null hypothesis at 1% and 5% respectively

Cointegration Test

In order to examine the long-run relationship between the variables under study, the study conducted Engle-Granger cointegration test.This is to determine the cointegrating equations. The decision rule is to reject the null hypothesis if the probability value is less than 5% (0.05). Otherwise, we do not reject (Dimitrious and Stephen, 2007). As seen in table 4.2, both the tau-statistic and z-statistic revealed the rejection of the first and second null hypotheses at 1% and 5% levels of significance based on our decision rule. This implies that there is the existence of cointegration between 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 (i.e., non-meaningful) regression results.

Table 4.3 VAR Model

Dependent Variable: $LOGGDP_t$

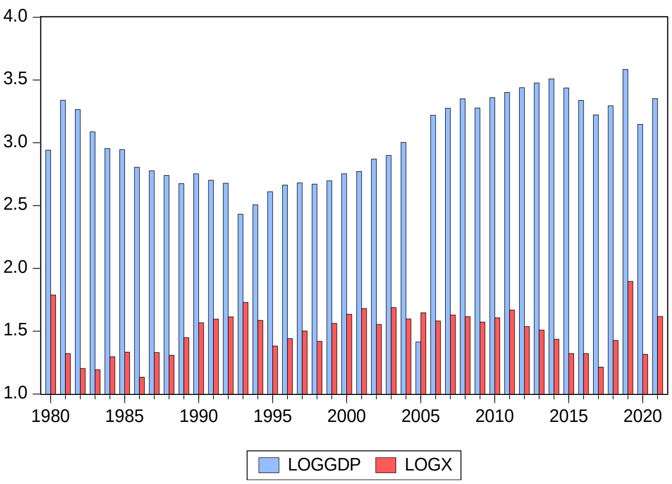
Variable	Coefficient	Std. Error	t-Statistic	Prob.
$LOGx_t$	0.0576	0.3277	0.1757	0.8614
R-squared	0.960			
Adjusted R-squared	0.921			
Durbin-Watson stat	2.278			

Source: Researcher 2022

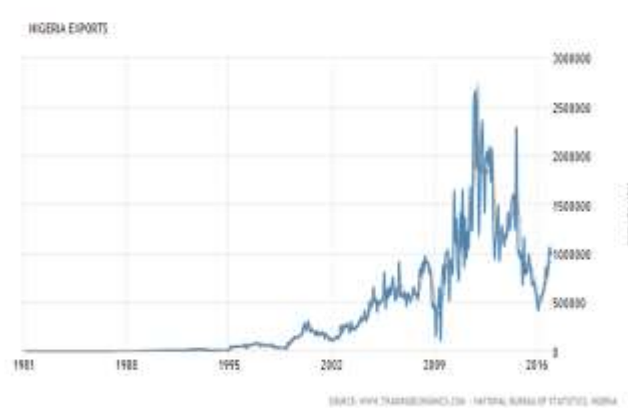
Markku and Helmut (2009) VAR technique as depicted in Table 4.3 was conducted to actualize the objective of the study; this is because macroeconomic events in one variable can spill over to another variable; as such Markku and Helmut (2009) VAR model aids to ascertain such effects. The optimal lag was circumspectly decided in order to circumvent insignificant coefficients, losing the degrees of freedom and to end up having specification error in the model. The VAR model decision rule is that, the Probability value should be less than 5% significant level (Gujarati and Porter, 2015; Wooldridge, 2009).

In investigating the effect of export (LOGX) on gross domestic product (LOGGDP) in Nigeria, it could be observed that, the elasticity coefficient (0.0576) indicate a positive impact of LOGX on LOGGDP but statistically not significant as evidenced by the coefficient and p-values of the model. This suggests that at 8.6% increase in the Nigeria`s export, *ceteris paribus* will lead to only 0.5% increase in the country`s GDP. The R^2 is (0.960) showing that the explanatory variable (LOGX) explain (96%) of changes in the dependent variable (LOGGDP). it remained strong even after adjusting for the degrees of freedom to (92%) adjusted R^2. This means that the variable chosen (explanatory variable) is strong in explaining the dependent variable. The Durbin-Watson statistics of (2.278) fall within the acceptable range of no heteroskedasticity in the estimated VAR model.

Trend Analysis



The above graph shows the trend of economic growth (gdp) and export in Nigeria from 1980- 2021. The graph below shows Nigeria's export from 1981-2016



Source: Egbuche et.al (2019)

V. CONCLUSION AND RECOMMENDATIONS

To conclude, The study found crude oil and agricultural output as the major commodities for export in Nigeria during the period under review.

It is also, worthy to note this study found that there exist a positive relationship between export and economic growth in Nigeria from 1986-2021. The study also concludes that export was not significant on economic growth in the period under review

This study therefore, recommends the following:

1. That the Nigeria government should restructure the petroleum ministry especially the Nigeria National Petroleum Corporation (NNPC) in order to position itself to deliver gains from crude oil export as obtained in other developed countries. This may also, include adding value to increase income from crude oil by products like wax, jet fuel, petrochemical feedstock, lubricating oil, asphalt. Etc.
2. The agricultural sector should be given more attention like empowering local farmers with extension service knowledge, soft loans at minimum interest rate, easy access to technology and modern farming tools to boost output for export which will equally, increase employment generation and in turn increase per capita income and Gross Domestic Product.
3. There should be a framework to curb corruption in the repatriation of foreign exchange from oil and agricultural export to enable prudent and efficient use of resources for economic growth in Nigeria.

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