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EFFECT OF INTERNATIONAL TRADE ON NIGERIAN ECONOMIC GROWTH: THE 21STCENTURY EXPERIENCE

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Abstract

The study examines the effect of international trade on the economic growth of Nigeria in the 21st century. The model specified economic growth measured by gross domestic product as dependent on international trade proxy by imports, exports, and trade openness. Annual time-series data from 2000-2012 was sourced and analysed using Ordinary Least Square (OLS) estimation technique. It was evidenced that international trade has a significant positive impact on economic growth. Imports, Exports, and Trade Openness have significant effect on the economy. The study recommends that government should reduce over-dependence on oil exports and increase and diversify its export base to earn more revenue.

Keywords: International Trade, Economic Growth, Imports, Exports, Trade Openness, Nigeria

INTRODUCTION

With the world having evolved into a global village, it is a precept for a nation to be in alliance with other nation(s). One of the coherent ways to create such an alliance between or among nations is via international trade. International trade allows for the exchange of goods and services cum foster healthy relations among countries irrespective of their level of economic development. A country involved in international trade need not have fear of hegemony or loss of its sovereignty because it is a mutual agreement to engage in trade across their border. A nation not participating in international trade is at risk of a slow pace of economic development due to the cogent fact that a country cannot be fully endowed with all the resources essential to be utilized for sustainable economic development.

International trade can be interchangeably referred to as '*foreign trade' or 'global trade'*. It encompasses the inflow (import) and outflow (export) of goods and services in a country. A country's imports and exports represent a significant share of her gross domestic product (GDP); thus, international trade is correlated to economic growth. In an open economy, development of foreign trade greatly impacts GDP growth (Li, Chen & San, 2010). Countries would be limited to goods and services produced within their territories without international trade. International trade is directly related to globalization because increase in trade activities across border is paramount to the globalization process. The globalized nature of an economy enhances its direct participation in the world market consequently leading to market expansion. According to Adam Smith, expansion of a country's market encourages productivity which inevitably leads to economic growth.

Government earn revenue through international trade activities. International trade, as a major factor of openness, has made an increasingly significant impact to economic growth (Sun and Heshmati, 2010). The openness of a nation influences a country's growth rate by impacting upon the level of economic activities and facilitating the transfer of resources across borders. Nigeria is basically an open economy with international transactions constituting a significant proportion of her output (Emeka, Frederick & Peter, 2012). Nigeria's trade openness has increased the participation of foreigners in the economy by allowing the inflow of foreign capital and expertise, thereby impacting on her economic growth.

There is no negation that Nigeria is an import-dependent nation. Her most important export commodity is oil. The discovery of oil has inflicted *'Dutch Disease'* or resource curse on the economy. Prior to oil discovery, the agricultural sector has been the largest export sector for Nigeria. However, the oil boom which occurred in 1970s made the relevance of Nigeria's agricultural sector in the global market whittle away. The focus of the government on crude oil exports led to the neglect of the agricultural sector; hence, reducing the overall productivity of the economy. According to Abebefe (1995), Nigeria's over-dependence on crude oil is dangerous because crude oil is a wasting asset with a proven reserve which would eventually become depleted and the vagaries of the oil market has resulted in a significant decline in the earnings because of the exogenously determined price of crude oil. The 21st century has witnessed series of economic and trade reforms in Nigeria put in place by government in order to diversify the export base and ensure that foreign trade serves as a driving force for the economic growth engine. In view of this, the study aims to provide evidence on the effect of international trade on Nigeria's economic growth.

The study uses annual time-series data covering the period 2000-2012. Though the period under review is short in contrast to other studies that have been conducted in Nigeria, however, the study gives a succinct empirical analysis of how international trade has affected the growth of the economy in the 21st century. The rest of the study is segmented as follows: review of prior research, methodology, results and discussion of findings, conclusion and recommendations.

REVIEW OF LITERATURE

Studies have been carried out to provide clear evidence on the nexus trade across border has on the economy. Previous findings on the Nigerian economy are majorly reviewed. Omoju and Adesanya (2012) examined the impact of trade on economic growth in Nigeria using data from 1980 to 2010. Adopting Ordinary Least Square (OLS) technique, the study showed that trade, foreign direct investment, government expenditure and exchange rate have a significant positive impact on economic growth. Saibu (2012) investigated the direct and interactive effects of capital inflow, trade openness and economic growth using data from Nigeria over the period 1960 to 2011. The study employed the composite indicator derived from principal component analysis (PCA) in the Autoregressive Distributed Lag (ARDL) bound testing model. It found statistically significant effect of capital inflow and trade on economic growth. The study further provided new evidence in support of the modernization hypothesis that capital inflow and trade policy are complementary and growth enhancing in developing economies like Nigeria and that trade liberalization policies tend to enhance effectiveness of capital inflow and jointly promote higher economic growth in Nigeria.

Emeka, Frederick and Peter (2012) evaluated the role of trade on Nigeria's economy for the period 1970 to 2008. By applying a combination of bi-variate and multivariate models, the relationships between the selected macroeconomic variables was estimated. \The findings indicated that exports and foreign direct investment inflows have positive and significant impact on economic growth. The study suggested that there should be congruence of exports and fiscal policies, towards a greater diversification of non-oil exports by the Nigerian government in order to attain the desired growth prospects of external trade. Adelowokan and Maku (2013) examined the effect of trade and financial investment openness on economic growth in Nigeria between 1960 and 2011. Estimates from the reported dynamic regression model indicated that trade openness and foreign investment exert positive and negative effect on economic growth respectively. Also, the partial adjustment term, fiscal deficit, inflation and lending rate were found growth increasing. It was evidenced that long-run relationship exists among trade openness, foreign investment, and economic growth in Nigeria.

Adenugba and Dipo (2013) evaluated the performance of non-oil exports in the economic growth of Nigeria from 1981 to 2010. Findings revealed that non-oil exports have performed below expectations; hence, giving reason to doubt the efficacy of the export promotion strategies that have been adopted. They pointed out that the economy is still far from diversifying from crude oil exports and as such the crude oil sub-sector continues to be the single most important sector of the economy. Edoumiekumo and Opukri (2013) examined the contributions of international trade (proxy with export and import values) to economic growth in Nigeria measured by real gross domestic product (RGDP). Time-series data obtained for a period of 27years was analyzed using Augmented Dickey-Fuller (ADF) test, Ordinary Least Square (OLS) statistical technique, Johansen co-integration test and Granger Causality test. The results showed that positive relationship exists between the variables and there is co-integration among the variables. The Granger Causality test realized a uni-directional relationship showing that RGDP Granger cause export and import Granger cause RGDP and export.

Evidence from empirical studies from other countries also reviewed. Li, Chen and San (2010) conducted a research on the relationship between foreign trade and the GDP growth of East China for a period 1981-2008. Adopting the unit root test, co-integration analysis and error correction model, they found out that foreign trade is the long-term and short-term reason of GDP growth, but no evidence proved that there exists long-term stationary causality between import trade and GDP. Sun and Heshmati (2010) evaluated the effects of international trade on China's economic growth through examining improvement in productivity. Both econometric and non-parametric approaches were applied based on a 6-year balanced panel data of 31 provinces of China from 2002-2007. The study demonstrated that increasing participation in the global trade helped China reap the static and dynamic benefits, stimulating rapid national economic growth. Also, it revealed that both international trade volume and trade structure towards high-tech exports resulted in positive effects on China's regional productivity.

Javed, Qaiser, Mushtaq, Saif-ullaha and Iqbal (2012) examined the impact of total exports to GDP ratio, import to GDP, terms of trade, trade openness, investment to GDP ratio and inflation on the Paskitani economy using time-series data from1973-2010. Employing Chow test and Ordinary Least Square method, the estimated results revealed that all the explanatory variables have positive and significant impact on Pakistan. The study further discovered that an increase in the import of raw-materials boosted production, employment and output of Pakistan. Ulasan (2012) revisited the empirical evidence on the relationship between trade openness and long-run economic growth over the sample period 1960-2000 in contrast to previous studies focusing mainly on the period 1970-1990. The study used various openness measures suggested in literature rather than relying on a few proxy variables. The findings from the cross-country analysis indicated that many openness variables are positively and significantly correlated with long-run economic growth. The study suggested that because of the fragility of the openness-growth association, the significance of openness variables disappear once other growth determinants, such as institutions, population heterogeneity, geography and macroeconomic stability are accounted for.

METHODOLOGY

This study investigates the effect of international trade on the economic growth of Nigeria in the 21st century using annual time-series data from 2000 to 2012. The data used is secondary in nature; hence, the Central Bank of Nigeria (CBN) Statistical Bulletin is relied on as the only source for data collection. The estimation technique is the Ordinary Least Square (OLS) method. This study hypothesize that international trade has no significant and positive effect on the Nigerian economy in the 21st century. A model is built from Edoumiekumo and Opukri (2013) with slight modification; trade openness is included while gross domestic product at market price measured economic growth instead of real gross domestic product. Trade openness is calculated as ratio of total value of imports plus total value of exports i.e. total trade to gross domestic product. The model specifies the endogenous variable as gross domestic product (GDP) as a function of imports (IMP), exports (EXP), and trade openness (OPEN), representing the exogenous variables.

The model is specified below as;

$GDP = f\ (IMP, EXP, OPEN)$

The econometric form of the model is presented as;

$GDP = \beta_0 + \beta_1 IMP + \beta_2 EXP + \beta_3 OPEN + u$

Where;

β_0 = Intercept of relationship in the model/constant

β_1- β_3 = Coefficients of exogenous variable

u= Stochastic variable (error term)

By presenting in logarithm form, the model becomes;

$logGDP = \beta_0 + \beta_1 logIMP + \beta_2 logEXP + \beta_3 logOPEN + u$

The *'a priori'* expectation is the expected relationship the each exogenous variable is predicted to have with the endogenous variable. For the study, $\beta_1, \beta_2, \beta_3 > 0$, this implies that all the exogenous variables are expected to have a positive relationship with the endogenous variable.

RESULTS AND DISCUSSIONS

IMP, EXP, and OPEN are regressed against GDP (indicator for economic growth); thus forming a multiple regression model. In analyzing the model, OLS estimation technique is employed. The OLS estimation allows for goodness of fit of the model (co-efficient of multiple determination) to be determined as well as the linear relationship existing between the endogenous variable and each exogenous variable. The OLS regression result is presented in Table 1.

Table 1: OLS Regression Result

Endogenous Variable	Exogenous Variables	Co-efficient	T-statistics	F-statistic
GDP	C	0.773	4.778*	13343.554*
	IMP	0.359	21.815*	
	EXP	0.634	29.878*	
	OPEN	-0.985	-19.850*	

R=1.000 R^2=1.000 Adjusted R^2=1.000

** denotes statistical significance at 95% confidence level*

From the OLS result, the co-efficient of the intercept denoted by C is 0.773, suggesting that if IMP, EXP, and OPEN are held constant, 0.773units increase in GDP occurs. The co-efficient of IMP is 0.359, implying that a unit increase in IMP causes GDP to rise by 0.359units.

The co-efficient of EXP is 0.635, connoting that a unit increase in EXP leads to an upward movement in GDP by 0.635units. IMP and EXP have direct (positive relationship) with GDP, which means they both have a positive impact on the economic growth. EXP produce a greater positive effect on GDP compared to IMP. The co-efficient of OPEN is -0.985, implying that OPEN and GDP are inversely or negatively related; therefore, a unit increase in OPEN leads to fall in GDP by 0.985 and vice-versa. It is revealed that the exogenous variables are in conformity with their *'a priori'* expectation except OPEN which exerts a negative influence on economic growth as opposed to the expected positive outcome.

The correlation co-efficient (R) is 1, signifying that a perfect positive correlation exist between economic growth and international trade, inferring that increase in international trade activities leads to constant increase in economic growth. The co-efficient of multiple determination (R^2) of 1.000 shows that the exogenous variables i.e. IMP, EXP, and OPEN absolutely explains variations in GDP, leaving the stochastic variable or error term ineffectual to account for changes in GDP. The Adjusted R^2 of 1.000 confirms the robustness of the model and reveals the reliability of the R^2.

The test of significance shows that all the exogenous variables including the intercept are statistically significant on GDP at 95% confidence level. The F-statistic is very high with a value of 13343.554, justifying the statistical significance of the model at 95% confidence level and that international trade measured with imports, exports and trade openness is a reliable predictor of economic growth.

CONCLUSION AND RECOMMENDATIONS

Empirical studies have shown that international trade is linked to economic growth. The study examines the effect of international trade on Nigeria's economic growth in the 21st century. Findings emanating from the study suggest that international trade has a significant positive impact on the Nigerian economy for the period under review; hence, the null hypothesis formulated is rejected. This is line with the postulation of Adam Smith that international trade have positive effect on economic growth. Imports, Exports, and Trade openness have significant effect on economic growth. The influence of imports is favourable likewise exports while on the contrary, trade openness had an adverse effect. Overall, international trade is a catalyst to boost the economic prosperity of Nigeria; thus, leading to the rejection of the hypothesis formulated for this study.

Notwithstanding the positive effect international trade has had on Nigeria, it is still imperative to make recommendations in order to garner greater benefits. The recommendations are highlighted below;

- Government should reduce over-dependence on oil exports and increase and diversify its export base to earn more revenue.
- Government should put in place policies that promote industrialization and enhance domestic production.
- Government should ensure political and macroeconomic stability so as encourage investment, both local and foreign and guarantee business survival.
- Adopt tight trade openness by keeping trade openness rate below or at ceiling level in order to ensure economic growth.

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