
TRADE OPENNESS AND SUSTAINABLE ECONOMIC GROWTH
IN NIGERIA

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Abstract

The relationship between trade openness and economic growth has been severally investigated by numerous researchers yielding to lots of mixed results. This paper empirically examines the effect of trade openness on economic growth in Nigeria over the period 1990 to 2019, incorporating Per capita income, investments and trade openness as the independent variables and economic growth proxied by Gross Domestic Product as the dependent variable. It used the Johanson co-integration test to test for a long-run equilibrium relationship among the variables, applied the Augmented Dicky Fuller test for Unit root test and the ordinary least squares technique to examine the effect of trade openness on Gross Domestic Product (GDP). The time series data were extracted from World Bank data 2019. The result of the Analysis shows that all the variables; Real Gross Domestic Product (RGDP) Degree of Trade Openness (TOP), Investment (INV) and Per capita income (PCI) were positive and statistically significant, the variables are co-integrated and stationary at first differencing. The study therefore, recommends that policy makers should ensure that policies on trade openness such as reduction of tariffs and quotas etc. are actually adopted to enable the economy grow at the expected rates and also establish policies that focuses on regulation and financing of all sources of imports and exports in the country.

Keywords: International Trade, Openness, GDP, Per capita income, Investment

INTRODUCTION

Trade openness is measured as exports plus imports as a percentage of Gross Domestic Product. It is used to measure the degree to which countries are open to international trade with their imports and exports, international trade on the other hand is a channel through which Foreign Direct Investment, technology, capital resources, goods and services flow to other countries. These are sources of economic growth to

developing countries it has been regarded as an engine of growth which leads to steady improvement in human status by expanding the range of people's standard of living and preferences (Adewuyi, 2002). Harrison (1994) supports that international trade openness, according to Solow model, creates inflows of capital goods and technology which broaden industrial activity and trade in manufactured products and expand economic growth. Trade

openness is the liberalization of the exchange of goods and services across borders through increased integration among countries (CBN). These countries are joined together in terms of free movement of capital and labour, free foreign trade and finance (Igudia, 2004). Trade liberalization implies lower tariffs, making imports more attractive than domestic production. Trade liberalization includes policy measures to increase trade openness while increased trade openness is usually considered as an increase in the size of a country's traded sectors in relation to total output .

The relationship between trade openness and economic growth has been an issue of controversy among researchers, Numerous studies have reported that open economies enjoy faster economic growth than closed economies. empirical studies such as China, Hye, Wizarat, and Lau (2016). Yakubu(2018), Edwards 1992, Wacziarg (2001), Sinha D. and Sinha T. (2000) agrees that the growth rate of GDP is positively related to the degree of trade openness; economists have acknowledged the positive role of openness to trade on economic growth. Trade can directly increase per capita income when countries specialize in producing goods in which they have a comparative advantage but it also can indirectly encourage development via other channels such as the transfer of

technology and technological know-how, diversification of products, increasing scale economies, efficient allocation and distribution of resources within the economy and interaction with other countries. Trade Openness raises imports and exports of goods and services and improves domestic technology, human capital resources and leads to rise in production. As a result, the economies of countries open to world trade; grows faster than closed economies. Rodriguez and Rodrik (1999) show that the positive correlation between openness and growth is not robust as a result of problems in measurement of openness. Another group of researchers supports that trade openness leads to increase in economic growth with respect to some economic policies and certain sectors of the economy. However, The greater the growth effects, the more the risk of international trade. According to Adhikary (2011) a liberalized trade regime results in high exchange rate depreciation which leads to decrease in the aggregate supply of inputs by increasing the prices of the imported inputs used in the production, this results to the reduction of domestic outputs and competitiveness. Rodrik (1997) suggested that the investment on human capital, physical infrastructures, macroeconomic stability, private sector development will enable trade openness contribution to the economy to be

sustainable, Howitt (2000) also supports that developing economies should have a high level of human capital in order to successfully implement technologies from advanced countries. The use of advanced technology is determined by the availability of human capital resources in the country, lack of investment in human capital may prevent developing countries from fully utilizing advanced countries technologies, and hence affects productivity growth. Although, efficient distribution of knowledge, technology and capital resources are easily achieved through trade openness, studies such as Levine and Renelt (1992) which support that trade openness negatively affects economic growth. According to Alessandro De Matteis (2004), trade liberalization sets exogenous constraints to economic growth, this is specifically detrimental to young economies, it contributes to their dependence on other countries and also increase their vulnerability to fluctuations in the international markets. In addition to this, Rodrik (1992) mentions that openness may cause macroeconomic instability through inflation, depreciating exchange rates and lead to balance of payment crisis, Leamer (1995) suggest that free trade can be a primary source of economic downturn.

Looking at the various reviews we can see that no agreement has been reached on the effect of trade openness on

economic growth despite the strong theoretical support that trade openness leads to production efficiency, export of abundant resources, production cost advantage and the importation of scarce and least cost advantageous commodities, leads to increase in production output, hence increase in economic growth and standard of living. This is one of the reasons that motivated me for this further analysis, again, several attempts and policies have been put in place in the quest to achieving a sustainable economic growth in Nigeria. Agriculture was the main stay of the Nigeria economy in 1960s and the greatest foreign exchange earner, Nigerian government was able to execute investment projects through domestic savings, earnings from exports of agricultural products and foreign aids (Ezike, et. al, 2012). But since the advent of the oil boom of 1970s, oil became the major source of foreign exchange earning in Nigeria, the economic situation of the country has been almost that of general stagnation in agricultural exports. This led to loss of Nigeria's position as an important producer and exporter of palm oil produce, groundnut, cocoa and rubber (CBN, 2006). Between the year 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, (CBN, 2004). Nduka (2013)

Nigeria, being fully integrated into the global economic system, is a member and signatory to many multilateral and regional trade agreements (such as ECOWAS, OPEC, etc.). The policy response of such economic partnership agreements on trade policy has been to remove trade barriers, reduce tariffs and embark on outward oriented trade policies which will lead to economic growth. ECOWAS was established to promote trade among member countries and it introduced uniform trade barriers such as Common External Tariff (CET) to guide payment of tariffs among the member countries. Nigeria has identified deeper trade integration as a means to foster economic growth and alleviate poverty. Border tariffs are being reduced, trade regulations are under review, and ambitious modernization programs for customs services and port infrastructure have been launched (Nduka, 2013). This leads to the question of how trade openness affects economic growth in Nigeria and to answer this question, examining the effect of trade openness in Nigeria is important.

Objective of the study

The objective of this study is to examine the extent of relationship between Trade openness and Economic growth in Nigeria.

Research Question

What is the extent of relationship between Trade Openness and Economic growth in Nigeria within the period under this review.

Hypothesis

Ho: There is no significant relationship between Trade openness and Economic growth in Nigeria.

The Theories of International Trade

Adam Smith's Absolute Advantage theory propounded (1776) advocates for free trade, arguing that with free trade, each nation could specialize in the production of those commodities in which it has absolute advantage in cost of production or could produce more efficiently than other countries and import those commodities in which it has absolute disadvantage on. David Ricardo's Comparative Advantage theory propounded (1817) advocates that due to differences in production cost as a result of geographical situations, natural resources, climate and efficiency of labour, each country should specialize in production and exportation of those commodities in which they have greater comparative cost advantage in the production and import those commodities in which they have greater comparative disadvantage in the production. Heckshere Ohlin's Factor proportion theory states that capital intensive countries will export capital intensive goods/technologies while

the Labour intensive countries will export labour intensive goods/technologies and import the goods they have scarce resources. Specialization would result to increase in outputs, imports and exports and gain from international trade.

Empirical Literature

Empirical evidence on the positive or negative effect of trade openness on economic growth has been a challenging topic affected by different factors. Some researchers agree that trade openness have positive relationship with economic growth, some others do not agree that openness impact on growth positively. Nwadike, Ani and Alamba (2020) studied the Impact of Trade Openness on Nigerian Economic Growth: An Empirical Investigation, 1970–2011. ADF unit root test, co-integration test and the ordinary least squared (OLS) were employed in the study. The result obtained was used to test the hypotheses, and it was revealed that (i) Trade Openness has positive significant impact on Nigeria's economic growth; while (ii) Gross Domestic Product (GDP) responds to the shock of Trade Openness value as a proxy of total import and total export divided by GDP as well as change in Exchange Rate (DEXR) within Nigeria's economy during the period of study. Thus, the co-integration results indicate that there exists long-run relationship among the

variables. Chimobi (2010) investigated the causal relationship among financial development, trade openness and economic growth in Nigeria and discovered that trade openness and financial developments have causal impact on economic growth in Nigeria. Conversely, growth has causal impact on trade and financial development, implying support for growth-led trade but no support for trade-led growth. Iyoha and Okim (2017), analyzed the impact of trade on economic growth on ECOWAS member countries using panel data from 1990 to 2013. Using four estimators; pooled OLS, Fixed effects model, Random effects model, and dynamic panel regression model although dynamic panel data estimator was preferred to handle the problem of endogeneity, they found that exports, exchange rate and investment were significant determinants of per capita real income growth and that exports were consistently positively related to growth, suggesting that trade has a significant positive impact on economic growth in ECOWAS member countries. This study however fell short in terms of the scope covered for the analysis and the conditions for choosing between Pooled Mean Group estimator and Mean Group estimator through the application of Hausman test. The test would have determined whether the differences in estimated coefficients are systematic or not. Keho (2017) analyzed the

impact of trade openness on economic growth in Cote d'Ivoire for the period 1965 to 2014 employing the autoregressive distributed lag (ARDL) bounds test and the Toda and Yamamoto Granger causality tests. The results revealed that trade openness has a positive effect on economic growth both in the short and long run. More so, the study found a positive and strong complementary relationship between trade openness and capital formation in enhancing economic growth. Kim, Lin and Seun (2016) examined the relationship between trade, economic growth and growth volatility using the Chudik and Pesaran (2013) Cross-Sectional Augmented Auto-regressive Distributed Lag (CS-ARDL) panel data approach covering the period 1960 to 2011. The study used a sample of 73 developing and developed countries to account for the potential dynamic heterogeneity and cross-section dependency in the effects of trade. The results showed that greater international trade promotes economic growth and amplifies growth volatility in the long run. The study also found that there is large heterogeneity in the effects of trade, depending upon a country's development level, financial system, macroeconomic policies, human capital, corruption, and labor regulation. Peter and Olivier (2006), investigated the impact of trade and diversification on growth in Nigeria. Their

results show that in 2004, the share in GDP of imports plus exports of goods and services amounted to 86 percent in Nigeria. They found that Nigeria has enjoyed a sizable current account surplus in recent years, which according to Central Bank statistics amounted to more than 20 percent of GDP in 2004. They concluded that the impact of trade policy on productivity and investment is critical, and greater openness is generally associated with higher productivity, larger investment, and stronger growth. Lawal, Nwanji, Asaleye, and Ahmed (2016) apply the ARDL methodology to Nigeria and find a negative long-run impact of trade openness on economic growth but a positive growth effect in the short run. Further, a two-way causality was found between the two variables. Prabirjit (2007) investigated the link between openness and growth using cross-country panel data analysis of a sample of 51 countries of the South (LDCs) and the North (DCs) during 1981 – 2002. In his panel data analysis, he found out that 11 rich and highly trade-dependent countries had higher real growth associated with a higher trade share. His time series study of individual country experiences shows that the majority of LDCs including the East Asian countries experienced no positive long-term relationship between openness and growth during 1961 – 2002. Extending his study to cover various regions and

groups shows that only the middle income group experienced a positive long-term relationship.

Methodology

Research design

The study is quantitative in nature, ex-post facto research design was applied, data collected from the world bank data bank (2019). Ordinary least square regression model is the estimation method used to determine the effect of trade openness on economic growth in Nigeria.

Specification of the Model:

The model follows the ordinary least square regression technique

$$RGDP_t = F (TOP_t , INV_t, PCI_t) \text{-----}$$

$$\text{----- (1)}$$

$$\ln RGDP_t = \beta_0 + \beta_1 TOP_t + \beta_2 \ln INV_t + \beta_3 \ln PCI_t + \mu_t \text{-----}$$

$$\text{----- (2)}$$

where

(RGDP) = Real Gross Domestic Product

(INV) = Investment

(PCI) = Per capita income

(TOP) = Trade Openness

β_0 = intercept, β_1 to β_3 = Coefficients of the regressors , and μ_t = Stochastic error term . $\beta_1, \beta_2, \beta_3, > 0$

Results of the analysis

Unit Root Test

In order not to obtain spurious regression results, the variables were tested for

stationarity using the Augmented Dickey – Fuller (ADF) test.

ADF Unit -root test for GDP, TOP, INV and PCI

Variables	ADF-value	5% critical value	Remarks
RGDP	-4.007547	-2.9446	Stationary I(1)
TOP	-6.364690	-2.9446	Stationary I(1)
INV	-4.799346	-3.5386	Stationary I(1)
PCI	-4.279683	-3.5386	Stationary I(1)

The summary result of the ADF Unit root test shows that all the variables are stationary after first differencing and at 5 % levels of significance.

Cointegration Test

Result of the Johanson Co-integration test

Hypothesized No of CE	Eigen-value	T-Statistics	5% Critical value	Prob.
None*	0.974274	76.43569	32.97352	0.0000
At most 1*	0.768462	51.67541	21.76246	0.0326
At most 2*	0.283526	14.37284	15.74281	0.3452
At most 3*	0.349623	2.738852	3.643976	0.2614

Source: Author’s computation Eview 10

This result implies that there is three (3) co-integrating equation at 5% level of significance indicating that there is a long-

run equilibrium relationship between the variables.

Summary result of the Ordinary least square regression analysis

Dependent Variable; (RGDP)

Variabl es	Coefficie nt	T- statistics	Prob.
C	0.164738	0.969761	0.3392
TOP	0.054873	0.695959	0.4913
INV	0.155696	2.347754	0.0250
PCI	0.082057	0.960353	0.3439
R-Squared	0.9738762		
Adjusted R-squared	0.953952		
F-statistic s	187.7983		
Durbin Watson	1.903628		

Source; Author’s computation using Eview10

Discussing of Findings

From the regression result above, the sign of each variable in the model conforms to it’s “a priori” expectation. The coefficient of Trade openness (TOP) which is about 0.05 shows a positive and significant relationship between trade openness and economic growth within the period of this

review, meaning that holding other variables constant, a unit increase in the degree of openness would lead to an increase in the level of economic growth by about 5 percent,

The coefficient of Investment(INV) is 0.16, indicating a positive and statistically significant relationship between economic growth and investment, holding other variables constant, 1percent increase in investment leads to an increase in the economic growth by about 16 percent.

The coefficient of Per capita income (PCI) is 0.08, signifying positive and significant relationship between income per head and economic growth in Nigeria within the period under review, given other variables constant, 1 percent increase in per capita income leads to about 8percent increase in the level of economic growth.

R-square of 0.9738762 shows that 97% of the variations in gross domestic product are properly explained by the changes in the independent variables and 3% changes in GDP were caused by other factors not captured in the model but were represented by the error term for the period under this review, this result is further supported by the Adjusted R-square of 95%.

The Durbin Watson result of 1.9 which is approximately equal to 2 shows absence of auto-correlation in the model.

Conclusion

The outcome of the analysis shows that trade openness have a positive and significant effect on economic growth within the period under review, a unit increase in the degree of trade openness leads to about 5% increase in the level of economic growth in Nigeria.

Recommendation

The issue of poor infrastructural development needs to be looked into, focus should be on non-oil growth and reduction of costs of inputs/production materials, improvement of efficiency in production and consumption, expansion and maintenance of investments in infrastructures, creation of large scale economies and improving the private sector activities and domestic business climate, there is a need for diversification of exports. The ultimate goal of export orientation in Nigeria should be to achieve significant export diversification, One of the major problems of Nigeria is its over-dependence on crude oil exports which which has led to the relegation of the real sectors of the economy. This dominance of fuel exports has made Nigeria highly dependent on developments in the world oil market and prevented it from taking advantage of dynamic opportunities in other sectors. Past

attempts to foster non-fuel merchandise exports through export subsidies and other incentive measures have had very limited success, as many of the programs have been undermined by fraud and corruption, (Peter and Olivier, 2006). Following the Heckscher-Ohlin theory of trade, Nigeria is a labour-intensive country, therefore she has the ability to produce and export agricultural products, policy makers should adopt policies that will help to revive the Nigeria's agricultural sector so as to reap and maximize the benefits of trade openness, and this will lead to more increase in economic growth.

Policy makers should implement policies that will stimulate long-term export growth and increase per capita income. Increasing the number of exports directly increases income per capita thereby raising the standard of living of the people. The institutions concerned with trade promotion in Nigeria should identify production constraints and invest on human resources in international trade. Furthermore, trade policies should constantly be reviewed to ensure the adjustment and preparedness of domestic producers to the more competitive global economy and also to achieve international competitive advantage. openness and good governance are very necessary for improved economic growth, Political stability, good and functional trade policies will give confidence to both

domestic and foreign investors to invest in the country. Stability of the interest rate as the cost of investment should be ensured, trade openness can have more positive effect on economic growth through investment.

References

- Adewuyi, A. (2002). "Balance of payments Constraints and growth rate differences under Alternative policy Regimes". *Nigerian Institute of Social and Economic Research (NISER) Monograph Series No. 10 Ibadan in Nigeria*
- Adhikary, B.K (2011). FDI, Trade Openness, Capital Formation, and Economic Growth in Bangladesh: A Linkage Analysis. *International Journal of Business and Management*, (6)1.
- Allesandro de Matteis, *Journal of International Development Journal*. Int. Dev. 16,(2004).
- CBN. (2004). *Annual Report and Statement of Account*. December, Abuja, Nigeria.
- CBN. (2006). *Annual Report and Statement of Account*. December, Abuja, Nigeria
- Chimobi, O. P. (2010). "The Causal Relationship Among Financial Development, Trade Openness and Economic Growth in Nigeria." *International Journal of Economics and finance*, (2) 2, May.
- Edwards, S. (1998). "Openness, Productivity and growth: what do we Really Know?" *Economic Journal*, March,
- Ezike, J. E., Ikpesu, F., and Amah, P. (2012). "Macroeconomic Impact of Trade on the Nigerian Growth: An empirical Evaluation". *Research Journal of Business Management and Accounting*, (1)4.
- Hye, Q. M., Wizarat, S., & Lau, W.-Y. (2016). The impact of trade openness on economic growth in China: An empirical analysis. *The Journal of Asian Finance, Economics and Business*, 3.10.13106/jafeb [[Cross ref](#)], [[Web of Science ®](#)], [[Google Scholar](#)]
- Harrison, A. (1994), "Openness and Growth: A Time Series, Cross Country Analysis for Developing Countries", *Journal of Development Economics*, (48)
- Howitt P. (2000), "Endogenous Growth and Gross country Income Differences" *American Economic Review*, 90 (4), 111-30.
- Igudia, P. (2004). Globalization and economic development: Nigeria's experience and prospects, globalization and Africa's economic development, Ibadan: Nigerian Economic Society.
- Iyoha, M., & Okim, A. (2017). The impact of trade on economic growth in ECOWAS member countries: evidence from panel data. *CBN Journal of Applied Statistics*, 8(1).
- Keho, Y. (2017). "The Impact of Trade openness on Economic growth: The Case of Cote d'Ivoire". *Cogent Economics and Finance*, 5.

- Kim, D.-H., Lin, S.-C., and Suen, Y. B. (2016). The Simultaneous Evolution of Economic Growth, Financial Development and Trade Openness . *The Journal of International of Trade and Economic Development*, 21, <https://doi.org/10.1080/09638199.2010.497933>.
- Lawal, A. I., Nwanji, T. I., Asaleye, A., & Ahmed, V. (2016). Economic growth, financial development and trade openness in Nigeria: An application of the ARDL bound testing approach. *Cogent Economics and Finance*, 4, . [Taylor & Francis Online], [Web of Science ®], [Google Scholar]
- Leamer, E.E., (1998). Measures of openness. In: Baldwin, R.E. (Ed.), *Trade Policy Issues and Empirical Analysis*. The University of Chicago Press, Chicago.
- Levine, R., & Renelt, D. (1992). A sensitivity analysis of cross-country regressions. *The American Economic Review*, 82(4).
- Nwadike, C.G. Ani, K.J. and Alamba, C.S. (2020). Impact of Trade Openness on Nigerian Economic Growth: An Empirical Investigation, 1970–2011, *SAGE Journal* <https://doi.org/10.1177/0015732519894153>
- Nduka, E.K. (2013) Openness and Economic Growth in Nigeria *Journal of Education and Practice* www.iiste.org ISSN 2222-1735 (Paper) ISSN 2222-288X (Online) (4)1, 2013.
- Peter, W and Olivier, C. (2006). “Trade, Diversification and Growth in Nigeria”. The World Bank, Washington DC.
- Prabirjit, S. (2007). “Trade Openness and Growth: Is there Any Link?” Munich personal RePEc Archive, MPRA .
- Rodrik, D. (1992). The limits of trade policy reforms in developing countries. *The Journal of Economic Perspectives*, 6(1).
- Rodrik, D. (1997), “Trade Policy and Economic Performance in Sub-Saharan Africa”, *Harvard University Working Papers*, (Online Paper).
- Rodriguez, F. and Rodrik, D. (1999): Trade policy and economic growth: a skeptic’s guide to the cross-national evidence. NBER Working Paper 7081, Cambridge MA: National Bureau of Economic Research
- Sinha, D. and Sinha, T. (2000), “Openness, Investment and Economic Growth Asia”. *The Indian Economic Journal* (49) 4.
- Wacziarg, R. (2001). 'Measuring the dynamic gains from trade', *World Bank Economic Review*, 15(3). *European Journal of Business, Economics and Accountancy*
- Yakubu, M.M (2018)**. Trade Openness and Economic Growth: Evidence from Nigeria.