

TRADE OPENNESS AND ECONOMIC GROWTH

A REFLECTION FROM NIGERIA (1981-2012)

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Abstract

This study examined the impact of trade openness on economic growth in Nigeria. Data sourced from National Bureau of Statistics and others, were analysed by employing Augmented Dickey Fuller test of Stationarity, cointegration and recursive residuals (Cusum). A unique long run equilibrium relationship between economic growth, trade openness, government expenditure, labour force, gross fixed capital formation, foreign direct investment and exchange rate for Nigeria was established. Also, the recursive residuals were adopted to establish the shortrun dynamics and long run parameters of trade openness. It is evidently proved that the residuals and cusum of squares stay within the 5% critical bound as represented by two straight lines whose equations are detailed in Brown, Durbin and Evan, 1975. The result suggests the stability of the coefficients. Therefore we can conclude that the estimated parameters for the shortrun and longrun dynamics of trade openness function which exist over the entire period shows the future tendency of further stability. It is recommended that exports should be encouraged, diversified, to improve the real Gross domestic product.

Keywords: trade openness, real gross domestic product, growth, cointegration, cusum

INTRODUCTION

Igudia (2004) Increasing volume of Trade International capital flow, Alege (2005) Search for cheaper labour raw materials and less government regulations. Akinlo (2003) multidimensional concept that affects the economic social, cultural and environmental facets of life as well as the relations among government and nations of the world. The argument in favour of trade openness has been attributed to the pioneering work of Adam Smith (1776). His submission was that openness promotes the efficient allocation of resources through comparative advantage. This theoretical argument was reviewed by Rodriquez and Rodrick (2000) on why openness is detrimental to developing countries. They analysed it using the second best theory in which trade liberalization is the policy lever and where market and institutional weakness are the imminent feature. Nigeria today falls under this category and recently believed to be the largest economy in Sub-Saharan Africa, worth \$510 billion dollars World Bank (2012). Despite this the country export base is yet to be diversified. The dominance of oil exports made Nigeria highly dependent on the world oil market.

This hindrance disallows it from taking advantage of dynamic opportunities in other sectors of the economy viza-viz service, manufacturing, construction etc. Several policies have been directed towards diversification of the economy but failed to yield positive results. As part of moving with the trend of globalization, Nigeria is signatory to many multilateral trade agreements such as ECOWAS, WTO, NEPAD etc. As a result of this trend this study is aimed at adding to the existing literature by determining the extent to which liberal policy had benefited the Nigeria economy. Furthermore, it also intend to investigate whether a long-run equilibrium exist between trade openness and economic growth in Nigeria.

CONCEPTUAL FRAMEWORK

Trade Openness is the liberalization that has generated new markets. Facilitates global integration into global markets (Iyoha and Oviakhi, 2002). One of the policy measures of the Structural Adjustment Programme (SAP) introduced in 1986 is Trade Openness. It is a catalyst to economic growth through productivity of export (Obadan, 1993).

Theory of customs union and free Trade Areas

This involves the creation of regional and international trade agreements in the form of customs union and free trade area. Proceeds of customs revenues generated by common external tariffs are shared among members (CACEU formed in 1964 by Cameroun). On the part of free trade area members of the free trade maintain individual tariffs. Barriers to trade are brought down within the area. In free trade area, the “rules of origin” are specified within the area.

Models of export led growth Kaldor (1970)

Neo-classical supply side model

The Neo-classical supply side model assume that the export sector confers externalities on the non export sector because of its exposure to foreign competition that the export sector has a higher level of productivity than non-export sector.

Feder (1983) was the first to prove a formal model. He assumed that output of the export growth sector is a function of labour and capital in the sector and that the output of non export sector is a function of labour, capital and the output of the export sector (so as to capture externalities). Also, that the ratio of marginal productivities in the two sectors is assumed to deviate from unity by a factor and lastly, the externalities conferred are part of the dynamic gains from trade which are associated with the transmission and diffusion of new ideas from abroad relating to both production techniques and management practices.

Balance of payment constrained growth model

The model assumed that no country can grow faster than the rate consistent with balance of payments equilibrium on current account in the long run. Nureldin Hussain (1995) affirmed that a country's balance of payments equilibrium specifying constant elasticity import and export demand functions in which import and export are a function of domestic income which could be substituted into equilibrium conditions. He applied the model to Africa to compare the experience of the slow growing African countries with the faster growing countries of Asia.

Virtuous circle model

The model according to shafaedd (1994) assume that output growth is a function of export growth. Export growth is a function of price competitiveness and foreign income growth. Price competitiveness is a function of wage growth and productivity growth. Productivity growth is a function of output growth. Conclusively the impact of openness works mainly through improving efficiency and stimulating exports which have powerful effects on both supply and demand within an economy.

Theoretical Literature

Mercantilist Trade Theory

They have the submission that the key way for a nation to become rich and powerful is when its export is greater than import. They believed that trade has to be controlled, regulated and restricted in the form of tariffs, quota and other commercial policies.

Absolute Advantage Trade Theory

The theory favours free trade through specialisation in the production of those commodities in which it could produce less efficiently in lower absolute cost advantage. The same country should import a commodity in which it has higher absolute cost disadvantage. This will lead to increase in the world output.

Comparative Advantage Trade Theory

This is credited to David Ricardo (1772-1823). He was of the opinion that country should specialise in producing and exporting only those goods and services it can produce more efficiently at lower opportunity cost than other goods and services it can import. Country should concentrate on those product in which it has the maximum comparative advantage and the least comparative cost.

Heckscher – Ohlin Trade Theory

This is called factor abundance hypothesis. The model assumes that a nation should produce and export a product for which large amount of relative abundance resources are used. Since different goods require different factor proportions and different countries have different relative factor endowment. Countries will tend to have comparative advantages in producing those goods that use their abundant factors more intensively.

Empirical Literature

Dow Rick (1994) tests whether trade openness affect output growth by considering 74 countries using ordinary least square cross country regression. The result indicates that the coefficient of openness is significant and positive. Dollar and Kraay (2004), run growth regressions on panel data on large sample of countries, the paper used openness indicators based on trade volumes and control for their joint endogeneity and correlation with country-specific factors through GMM methods and conclude that opening the economy to international trade bring about significant growth improvements.

Kandiero and Chitiga (2003) investigate the impact of openness to trade on the FDI inflow to Africa. They adopted panel data techniques and find that FDI to GDP ratio responds well to increased openness in the whole economy and services sector in particular. Lin (2000) explored the relationship between trade and economic growth based on China's national data for the period of 1952-1997. He found that the growth rate of exports, the growth rate of imports and the growth rate of the volume of trade are positively related to growth of per capita GDP.

Uwatt (2004) examined the link between globalization and growth for 41 African nations for the period 1980 – 1999. Though the study had mixed results but the author suggested that African nations must stand up to face the demands for trade openness through meaningful policies that would promote increased trade and capital flows.

Ndiyo and Ebong (2004) empirically investigated the dynamic influence of trade openness foreign direct investment and other macroeconomic influence on growth. Their result indicates negative influence of openness, exchange rate, fiscal deficit and balance of payments disequilibria on growth in Nigeria. Their result indicate that variable such as export, foreign direct investment and exchange rate were statistically significant at 5%. They recommended that government should design appropriate strategy by diversifying the economy through export promotion, stimulating foreign direct investment and ensuring exchange rate stability.

Against this background, the present study take a leap from the works of Mankiw (1992) and empirically examine the extent to which openness to trade had benefited Nigeria from (1981-2012).

METHODOLOGY

Stylized fact of Nigeria's External Trade

From the period 1980 to 1985 the oil export has decreased significantly from 13,632.2 million Naira to 11,223.7 million Naira while the non oil export has also decreased significantly from 554.4 million Naira to 497.1 million Naira. Over the years the non-oil export has continued to grow insignificantly when compares to the non-oil import.

It recorded a negative growth rate in 2005 (-6.5%) and in the same year non-oil import grow by 79.0% By 2007, the growth rate of non-oil export stood at 27%, while that of non-oil import recorded a significant 60.4%. A significant fact here is that non-oil export sector has performed woefully over the years.

Model Formulation

This study takes a leap from Mankiw et al (1992) that uses Cobb-Douglas production function which treated economic growth as endogenous.

The model is represented implicitly as

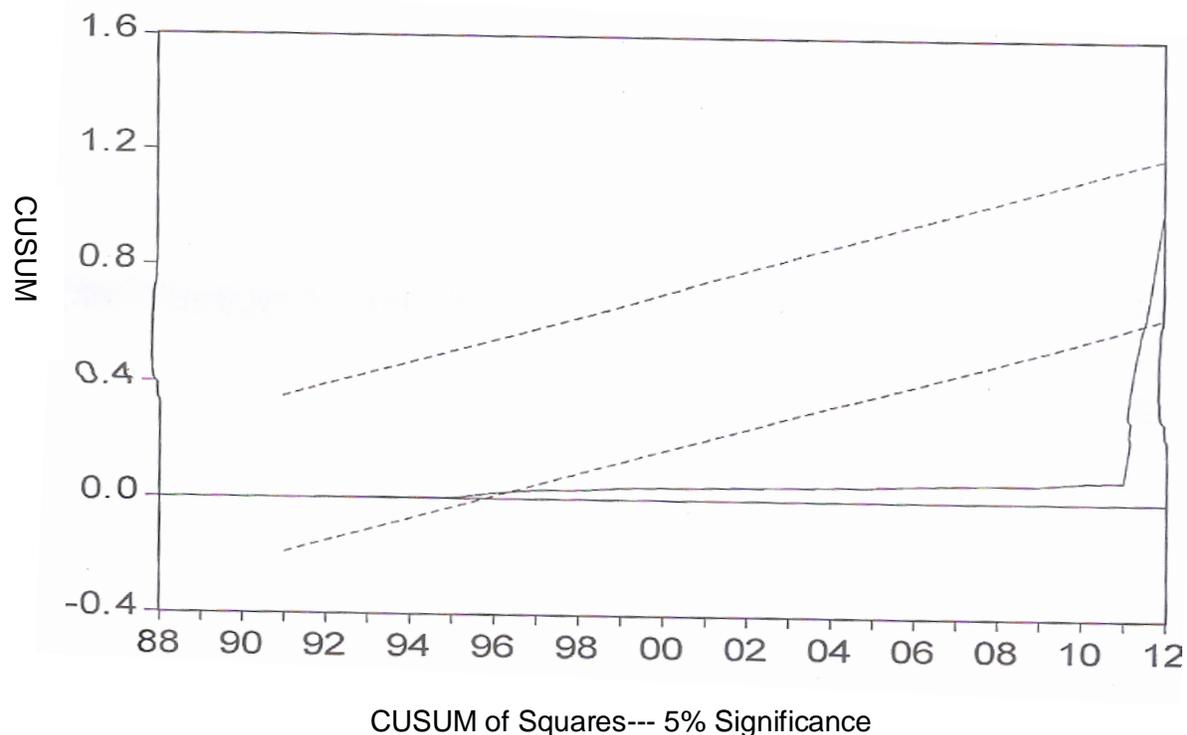
$$RGDP = F(CAP, LAF, TROP, GEX, EXG, FDN)$$

And, it can be represented in Cobb-Douglas form as non-linear before linearising it.

EMPIRICAL RESULTS AND DISCUSSION

Augmented Dickey Fuller was employed to test for the presence of Unit Root. The result obtained shows that all variables were stationary at first difference. Since their ADF value exceeds the critical values. Cointegration Technique was also employed to establish whether the long run equilibrium relationship exist between Trade Openness and economic growth during the period under consideration. The main work shows that the null hypothesis of no cointegration is rejected in favour of the alternative hypothesis.

Figure 1. Parameter Stability



Source: Central Bank of Nigeria statistical bulletin

This study however considered the issue of parameter stability by adopting recursive residual sum of squares. It is highly imperative that the residuals and cusum of squares stay within 5% critical bound represented by two straight lines whose equations are detailed in Brown, Dubin and Evan, 1975.

On the part of the co-efficient of error correction model which gives a negative result provides an important information on the short –run relationship between economic growth and its regressors in Nigeria .

The estimate terms specifies that the changes in economic growth respond to a deviation from the long-run equilibrium. This shows that 26.8 percent of dis- equilibrium in the previous period is corrected every year by changes in the real GDP.

The result suggests that the coefficients are stable, the conclusion drawn therefore is that the short run dynamic and the long run of Trade Openness shows the future tendency of stability.

IMPLICATIONS OF RESULT

A unique long run equilibrium exist between Trade Openness and economic growth, trade Openness impact positively on economic growth but this impact is significantly small due to delay in policies implementation and reliance on exportation of primary products. Another implication is the level of government spending which is relevant to economic growth of Nigeria economy but its effect is very small because of the high level of recurrent expenditure.

From the implication highlighted above it is imperative for Nigeria to keep up opening up to trade but it should align import and export mix by putting in place policies (fiscal) that will reduce the importation of consumer goods and it should also enhance technology to process its primary products before exporting them.

CONCLUSION

We attempts to offer evidence on the relationship among real gross domestic product (rgdp), foreign direct investment net flow (fdn), exchange rate (exch) and trade openness (trop) in Nigeria. The series used in the analysis was tested for stationarity, using Augmented Dickey-Fuller (ADF). The result indicted that the variables are not stationary at level, though stationary at first difference. On the Johansen Cointegration test, it shows the presence of long-run relationship among the cointegrating variables. The model indicated that all the variables are statistically significant, except the FDN and this was confirmed by the exogeneity test.

REFERENCES

- Alege, P.O. and Ogun, T.P. (2005) "Exploring the Globalization-Industrialization Nexus for Economic Development. A Case of Nigeria" *selected papers for the 2004 Annual Conference*, Ibadan: Nigerian Economic Society, PP.245-274.
- Aluko, S. (2004) "Background to Globalization and Africa's Economic Development", *Globalization and Africa's Development*, Ibadan: Nigerian Economic Society, pp.35-67.
- CBN (2005) *Economic Reports for the First Half of Year 2005*, Abuja: Central Bank of Nigeria.
- Dickey, D.A and W.A Fuller (1979) "Distribution of the Estimators for Autoregressive Time Series with a Unit Root", *Journal of the American Statistical Association*, Vol. 74, pp.427-431.

- Engle, R.F. and Granger, C.W.J, (1987) "Cointegration and Error Correction: Representation, Estimation and Testing", *Econometrica*, vol. 55, pp: 251-276.
- Fosu, A.K. (1996) "Primary Exports and Economic Growth in Developing Countries", *World Economy*, vol.19 No.4 pp.465-75
- Fosu, A.K. (1996) "Primary Exports and Economic Growth in Developing Countries", *World Economy*, vol.19 No.4 pp.465-75.
- Fosu, A.K. (1990a) "Exports and Economic Growth: the African Case", *World Development*, vol.18 No.6 pp.831-35.
- Fernandez-Arias, E. and Montiel, P. J. 1996. "The Surge in Capital Inflows to Developing Countries: Prospects and Policy Response," World Bank Policy Research *Working Paper*, No. 1473.
- Froot, K. and Ramadorai, T. 2002 'Currency Returns, Institutional Investors Flows, and Exchange Rate Fundamentals', *NBER Working Paper* No. 9101.
- Fuller, W. A. 1976 Introduction to Statistical Time Series, John Wiley & Sons, New York.
- Greene, J. and Villaneuva 1991. "Private Investment in Developing Countries: An Empirical Analysis" *IMF Staff Papers* No 38
- Harrod, R.F. 1939. "An Essay in Dynamic Theory", *Economic Journal* Vol.49, 14-33.
- Kang, J. and Stulz, R. 1997. "Why is there a home bias? An analysis of foreign portfolio Ownership in Japan", *Journal of Financial Economics*, 3-28.
- McKinnon, R.I.(1964). "Foreign Exchange Constraints in Economic Development and Efficient Aid Allocation", *Economic Journal* Vol. 74, 388-409.
- Obadan, M. I. 2004. Foreign Capital Flows and External Debt: Perspectives on Nigeria and the LDCs Group. Lagos-Nigeria: Broadway Press Limited.
- Onosode, B. 2000. "Foreign Investment Not A Panacea for Resource Mobilization" *Daily Times*: 5 March
- Pavlova, A. and Rigobon, R. 2003. 'Asset Prices and Exchange Rates', *NBER Working Paper* No.9834.
- Solimano, A (1989) "How Private Investment Reacts To Changing Macroeconomic Conditions: The Case of Chile. Pre Working Paper 212 World Bank, Washington D.C
- World Bank 2006 "World Development Indicators" Washington D. C.