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Growth Perspective via Trade in Nigeria: A Co-integration Approach *(Pp. 18-26)*

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Abstract

The research paper examined growth perspective via trade in Nigeria. The general objective of the study is to access the impact of trade on the Nigerian economy. In this paper it was believed that international trade has positive effect on economic growth. The ordinary least squares (OLS), Augmented Dicky Fuller (ADF) statistics and the co- integration method were employed to estimate the model built. The result suggest that exchange rate is statistically significant in explaining economic growth via trade in Nigeria economy, while total trade is not statistically significant in explaining economic growth in Nigeria. The researcher therefore recommends that the government should look beyond petroleum product as major tradable goods that will develop the economy.

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Introduction

The consensus in the theoretical literature is that trade promotes economic growth and reduces poverty, because it behaves as a channel through which surplus national production can exchange the products of other countries. Trade also encourages the allocation of resources based on the perceived comparative advantages of participating countries and drives economic growth. Participating countries derive significant welfare gains from trading.

Nevertheless, while trade between countries may generate growth globally, there are no guarantees that its aggregate benefits are distributed equitably among trading partners. There are winners and losers in any trading relationship. However trading partners all may gain differing degrees. Many factors determine the extent to which a country may benefit from a trading relationship. These include the terms of trade a country faces vis-à-vis its trading partners, the international exchange rate among the traded goods and the market characteristics of the country's exportable goods.

Winters (2002) has demonstrated that trade can affect poverty through different channels (economic growth, price changes, market and government revenue). Because poverty remains Africa's greatest challenge, analyzing the link between trade and poverty is crucial, and reducing its effects is the fundamental objective. Given the potential gains from increased trade, many African countries are pursuing trade liberalization policies to achieve prosperity and growth and eventually alleviate poverty. The literature indicates that a close relationship exists between aggregate economic growth and poverty reduction. These simple correlations do not prove any causal relationship, but they do show the relevant role that pro-growth policies play in any poverty-reducing strategy.

This general objective of this paper is to assess growth perspective via trade in the Nigerian economy.

Review of Related Literature

Baldwin (2003) has demonstrated persuasively that countries with few trade restrictions achieve more rapid economic growth than countries with more restrictive policies. As poverty will be reduced more quickly through faster growth, poor countries could use the trade liberalization as a policy tool. Trade liberalization reduces relative price distortions and allows those activities with a comparative advantage to expand and consequently foster economic growth. Poor countries tend to engage in labour-intensive activities due to an overabundance of available labour. Thus the removal of trade

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barriers in these countries promotes intensive economic activity and provides employment and income to many impoverished people. On the other hand, the pursuit of trade-restrictive policies by labour endowed poor countries distorts relative prices in favour of capital-intensive activities. The removal of trade barriers could lead to a decline in the value of assets of protected industries and therefore to the loss of jobs in those industries. This implies that trade liberalization has distributional effects as industries adjust to liberalized trade policies.

Traditional explanations of trade as "the engine of growth" and the impact of trade on economic development are rooted in the principles of comparative advantage. The theory of comparative advantage arises from nineteenth century free trade models associated with David Ricardo and John Stuart Mill, which were modified by trade theories embodied in the factor proportions or Hechsher – Ohlin (1933) theory and Stolper-Samuelson (1941) and Rybzsnski (1955) effects. These trade models collectively and in various ways predict that an economy will tend to be relatively effective at producing goods that are intensive in the factors with which the country is relatively well endowed. In other words, comparative advantage provides that when nations specialize, they become more efficient in producing a product (and indeed a service), and thus if they can trade for their other needs, they and the world will benefits.

Economist Ann Harrison's 1991 paper makes a synthesis of previous empirical studies between openness and the rate of GDP growth, comparing the results from cross-section and panel estimations while controlling for country effects. Harrison concluded that on the whole, correlations across openness measures seem to be positively associated with GDP growth - the more open the economy, the higher the growth rate, or the more protected the local economy, the slower the growth in income. On the other hand, trade restrictions or barriers are associated with reduced growth rates and social welfare, and countries with higher degrees of protectionism, on average, tend to grow at a much slower pace than countries with fewer trade restrictions. This is because tariffs reflect additional direct costs that producers have to absorb, which could reduce output and growth.

Oyejide (1997) also points out that the impact of the restrictive measures was to produce a large anti-export bias in the African countries. More specifically, restrictions on imports translate effectively into a tax on exports; by making import substitutes effectively more profitable, they increase the

cost and reduce the availability of imported inputs which enter the production of exports, thus forcing exporters to use expensive inputs of doubtful quality. Import restrictions also made exporters face more appreciated exchange rates than would have been the case in their absence. Oyejide concludes that these elements combined to reduce the international competitiveness of the export sectors of the African countries-and subsequently reduced exports and GDP growth In a 1998 study of the role of trade and trade policy in achieving sustained long-term growth in African countries, Dani Rodrik (1998) concluded that high levels of trade restrictions have been an important obstacle to export performance and growth. He contends that the reduction of these restrictions can be expected to result in significantly improved trade performance in the region. To examine the differences in regional policies and impacts, Rodrik also makes a cross comparison of trade policies in Sub-Saharan Africa with East Asia and Latin American countries using simple averages of tariff rates and coverage ratios of non-tariff measures (on intermediate and capital goods). There are three major findings emerging from the comparisons. Firstly that government imposed trade barriers have generally been higher in Africa than East Asia, though the differences

Frankel and Roma (1999) and Irwin and Tervio (2002) in their separate and independent studies also suggested that countries that are more open to trade tends to experience higher growth rates and per-capital income than closed economy. Klanow and Rodriguez – Clare (1997) used general equilibrium model to establish that the greater number of intermediate input combination results in productivity gain and higher output, despite using the same capital labour input which exhibit the economics increasing international trade return to scale.

However, there are other argument that suggest that international trade improves resources allocation in the short run or raise growth rate permanently there are other argument that suggest the contrary. Rodriquez and Rodrick (2000) argued that trade policy do affect the volume of trade, but there is no strong reason to expect the effect of growth to be qualitatively similar to the consequences of change in trade volumes that arise as reductions in transport cause or increases in word demand, trade restrictions should represent policy responses to real or perceived market imperfections or are used as mechanism for rent – extraction. They believe that trade policy work differently from natural or geographical barriers to trade and other exogenous determinants. Khan and Zahler (1985) assert that trade can promote growth from the supplied side but, if the balance of payments

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worsen due to fall in the price countries tradable, growth may be adversely affected from the demand side because the payment deficit resulting from liberalization on sustainable growth rate cannot be easily corrected by relative price of non-tradable or real exchange rate adjustments.

Methodology

The study adopts econometrics approach in its analysis of Growth perspective via trade in Nigeria. The study required substantial amount of statistical information which will be extracted from various issues of the Central Bank of Nigeria (CBN), Annual report and statement of accounts. The series are annual data covering 1970 to 2009.

Specification of the Model

The Empirical Model specified for this study is as follows:

$$GDP = F(TOT, EXR, EXPOT) \quad - \quad - \quad - \quad - \quad - \quad 1$$

Econometrically the above equation can be modeled thus:

$$GDP = \lambda_0 + \lambda_1 TOT + \lambda_2 EXR + \lambda_3 EXPOT + Ut \quad - \quad - \quad 2$$

Where:

GDP = Gross domestic product

TOT = Total trade

EXP = Exchange rate

EXPOT = Export

Ut = Error term

λ_0, λ_1, λ_2, and λ_3 are parameters

The Error correction term contains information about the effects of the past values of the variable (Gross domestic product) on the current values of the variables under study. The equations are estimated by using the Ordinary Least Squares (OLS) technique, the Augmented dicky Fuller Unit Root test and the co-integration technique.

Gross Domestic Product is presented as a dependend variable while the independent variables are Total trade, Exchange Rate and Export.

Unit root test

The argumented Dickey fuller (ADF) unit root test result is shown in the table 1

In the case of levels of the series, the hypothesis of non – stationary cannot be rejected for any of the series. Therefore, at levels the series are not stationary that is 1 (0). Applying the same test to the first difference To Whom It May Concern: determine the order of integration, the calculated value in absolute terms were found to be greater than the critical values at 1 percent significant level. This shows that the series are stationary after differencing once. In other words the series are integrated of order one 1 (1), but for total, (TOT) the series became stationary after taking the second difference i.e. 1(2).

Following the result of the ADF unit root test, the Johansen co- integration test will be conducted To Whom It May Concern: establish the existence or other wise of the long run relationship among the variables. The concept of co- integration creates the link between integrated process and the concept of steady state equilibrium. Although economic variables may be individually non stationary, they may be co- integrated. The co – integration test result is presented in Table 2 below:

The existence of one co-integrating equation at 5 percent significant level indicates long run relationship exist between the variables, the variation are Total trade (TOT) Exchange Rate (EXR), Export (Expot) and Gross Domestic Product (GDP).

Dependent variable: GDP

From the OLS, table above the regression coefficient for exchange rate with a value of 1713.082 shows positive Correlation and it is significant.

The t- test result with a value of 2.78081 shows that exchange rate (EXR) is statistically significant in explaining changes in growth via trade in Nigeria. But for Export (Expot) with the value of 0.078825 is not statistically significant this may be due to the fact that the Nigerian economy concentrates more on importation of goods and services than exporting locally made goods. For Total trade with a value of 1.722888 though it is not statistically significant in explaining growth rate of GDP or growth rate of the Nigerian economy but it explains growth in the Nigerian economy than Export. This may be due to the fact that the Nigerian economy trade more on crude petroleum products than any other commodity, but petroleum product

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alone cannot generate the required growth and development of a nation as it applies to the Nigerian economy as can be shown in the result.

The overall model is statistically significant judging with the result of F-statistics with the value of 55.43420. The coefficient of Determination (R^2) and the adjusted (R^2) are 82 and 80 percent respectively. This shows that 80 percent of the total variation is accounted for by the independent variable, which are total trade (TOT) , Exchange Rate (EXT), and Export (EXPOT).

Summary and Conclusion

The main objective of this study is to investigate Growth perspective via Trade: A Co-intergration Approach in Nigeria in this regards, Related Literature were reviewed. The variables were tested for stationary and co-integrated. The result of the unit root test showed that the variables are stationary at first difference, but the series for total trade became stationary after taking the second difference. The co-integration analysis indicated that the variables are co-integrated.

From the observed result it is clear that Nigerian Economy need to produce at least to some certain level goods and service that they many be needed to trade with other countries in order promote growth via trade in the Nigerian economy, equally the policy implication is that the Nigerian economy should not lay more emphasis on the crude petroleum product as their major source of export or trade on which is the bed rock for the development of the Nigerian economy via trade, they should look beyond petroleum product as a major tradable goods that will develop the economy. This alone cannot guarantee sustainable growth in the Nigerian economy.

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Table1: Summary of ADF Unit Root test Result

Variables	Levels Data	Ist Difference	1% critical value	5% critical value	Order of integration
GDP	1.349869	-3.906769	-3.6176	-2.9422	1 (1)
TOT	2.350737	-2.572646	-3.6176	-2.9422	1(2)
EXR	0.525875	-3.605710	-3.6176	-2.9422	1(1)
EXPOT	-0.059131	-5.142529	-3.6176	-2.9422	1(1)

SOURCE: **Authors calculation using E – views**

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Table 2: Summary of Co-integration Test Result

Sample: 1970- 2009

Include Observations 38

Test assumption: linear deterministic trend is the Data

Series: GDP TOT EXR EXPOT

Lags interval: 1 to 1

Eigenvalue	likelihood ratio	5% critical value	1% critical value	Hypothesized On of CE (S)
0.900977	115.3879	47.21	54.46	None **
0.416188	27.51651	29.68	35.65	At most 1
0.149409	7.065818	15.41	20.04	At most 2
0.023830	0.916502	3.76	6.65	At most 3

*(**) denotes rejection of the hypothesis at 5 significance level

L.R. test indicates 1 Co-integrating equation(s) at 5 significance level

Table 3: **Summary of OLS Result**

Variable	coefficient	std. Error	t-statistic	prob.
TOT	0.021975	0.012755	1.722888	0.0935
EXPOT	0.002655	0.033686	0.078825	0.9376
EXR	1713.082	639.6677	2.678081	0.0111
C	134512.0	17275.74	7.786179	0.0000
R^2	0.822049	F-statistics	55.434	
R^2	0.807219			
DW	1.9234			