Quest Journals
Journal of Research in Business and Management
Volume 3 ~ Issue 10(2015) pp: 01-07
ISSN(Online) : 2347-3002
www.questjournals.org

Research Paper

An Assessment of the Impact of Trade Liberalization on the Nigeria Economic Growth (1970-2012)

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Received 20October, 2015; **A**ccepted 05November, 2015 © The author(s) 2015. Published with open access at**www.questjournals.org**

ABSTRACT:-The study examined the impact of trade liberalization on the growth of the Nigerian economy. The economic realities that forced the Nigerian government to adopt Structural Adjustment Program SAP in 1985 led to the beginning of trade liberalization in Nigeria. The study used trade openness, dummy variable for nature of regime of administration in Nigeria at a particular period, exchange rate and dummy variable for structural adjustment program SAP periods. Both descriptive and econometric analysis was used in the study. The descriptive analysis shows that the trend of trade openness in Nigeria and economic growth has been positive but relatively unstable. The ordinary least square estimating technique shows that there is a negative relationship between trade openness and the GDP of Nigeria which is the proxy for economic growth. While other variables such as exchange rate, regime of administration and SAP showed positive non-significant relationship with growth. Finally, major conclusion from this study is that trade liberalization has not improved the growth of Nigerian economy significantly. Ultimately, the results have shown that Nigeria has not adequately benefited from her trade openness. This might be the reason while SAP fails to shown significant impact on growth of the Nigerian economy.

Keywords:-Trade liberalization, economic growth, trade openness

I. INTRODUCTION

Earlier thought on the trade libralization policy was grounded on the research work done by Little, Scitovsky and Scott (1970), Balassa (1971), Bhagwati (1978) and Kruenger (1978). These studies prepared the ground for the subsequent reform policies and even the manner in which they were implemented in most of the liberalizing economies. More importantly, through some quantitative calibrations, they showed that the existing policies had resulted in haphazard and inordinately high level of protection that could not be reconciled with the policymakers' stated objectives (Rodrik, 1995). Thus, assisted by the unfolding emergence of thriving and indisputable success recorded in such countries as South Korea, Taiwan, Singapore and Hon Kong, these studies gave a momentum to the need for trade policy reforms in developing economies.

Thus, many of the developing countries have followed suit. In July 1986, Nigeria embarked on the structuring of its economy through the well-documented structural adjustment programmes (SAPs). SAPs are a package of policies that aimed at liberalizing various aspects of the Nigerian economy. However, the early drive to consolidate on the gains from the trade lost steam through policy reversal and lack of credibility (Ibarra, 1995; Busari and Omoke, 2008). In recent time, the Nigerian government has been focusing on diversifying the Nigerian economy away from oil sector (Okonjo-Iweala and Osofo-Kwaako, 2007). One of the several strategies adopted by the Nigerian government to reposition the economy and create a rather sustainable growth process is to revamp the trade sector. This is gesture will drive the economy towards the growth path that is sustainable.

Many issues are easily evoked in the event of trade reforms being promoted. These issues include the structural problem characterizing the Nigerian economy, the sequencing of the policy reforms and the credibility factors involved. Matsuyama (1992), for instance, links the effect of agricultural productivity on growth to the mediating role of trade and openness. The Matsuyama model assumes two sectors namely agricultural and manufacturing, learning by doing that drives growth, and income inelastic demand for outputs in the agricultural sector. In the absence of trade, the major prediction of the model is that agricultural productivity is positively

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related to economic growth. With trade and openness, agriculture is detrimental to growth because of the tendency to specialize in the agricultural sector and thus withdrawing resources from the manufacturing sector that promotes growth.

The policy implication from this model is that for a country endowed with arable land and agricultural resources, opening up to trade could be detrimental to growth and for a country not so endowed promoting trade liberalization is a good policy strategy to enhance and sustain the growth process. In the context of Nigeria, this model suggests that trade liberalization could be detrimental to growth given the vast arable land and resources. While this is an issue at the centre of trade policy success, it has not been investigated for Nigeria. In this study, we intend to bridge this gap for Nigeria and see the role that trade liberalization policy plays in mediating the impact on the growth process.

Following the structural problem noted previously is the question of sequencing the trade reform. This point has been raised theoretically and highlighted in few studies. The import of sequencing trade reforms is important to the success of the entire reform programme. Bhattacharya (1997) dwelled on the issue of pace and sequencing of the reforms, thus bringing into focus the dynamic aspect of the reforms. Falvey and Kim (1992) noted that getting right the timing and sequencing is important because inappropriate timing may raise doubts regarding the sustainability and thus the credibility of the reforms and deter the private sector from adjusting to the new structure. While the timing and sequencing of the reforms are important for their success, the dearth of studies in this line is obvious in the burgeoning literature in Nigeria. Hence, this study contributes to the literature on Nigeria by undertaking the appropriateness of timing and sequencing of the trade liberalization reforms in Nigeria.

All the highlighted issues are very much important for the way trade policy reforms should affect investment. Felding (1997) opined that the theoretical literature holds that the measures that reduce the relative price of imports ought to stimulate investment. We therefore see that the highlighted issue if present will increase rather than lower the cost of imports thereby leading to reduced investment and thus lower growth path. Thus, in this study our primary concern is to address the issues of how these factors that determine trade liberalization affect the growth behaviour in Nigeria.

II. SOME LITERATURES

Hasan et al (2011) investigated the relationship between trade liberalization and unemployment using state and industry-level unemployment and trade protection data from India, they observed that trade liberalization has an unemployment reducing effect in states with flexible labour markets and in states with a high employment share in the net export sectors. In addition to the state level findings, they also found that workers in industries experiencing great trade liberalization were less likely to become unemployed, especially in states with flexible labour regulations and net export industries. In addition, there is further evidence that this effect works with a small lag and that in the short run there is the possibility of an unemployment increasing effect of trade liberalization in the case of industry-specific unemployment.

Similarly Omoke (2005) while examining the impact of tariff reform and currency devaluation on rural poverty and inequality in Nigeria using a computable general equilibrium framework. Specifically, he observed that trade liberalization reduces rural real wage and rural income leading to higher labour demand with worsening inequality. Hence, the study calls attention to the fact that the policy of trade liberalization should be complemented with appropriate macroeconomic and sectoral policies that will ensure that gains from trade are equitably distributed.

Belderbos et al (2011) while investigating thecapital goods trade, business groups and foreign direct investment: the import behavior of Japanese affiliates based their research on the impact of buyer-supplier relationships within business groups on capital goods trade and taking into account potential simultaneous effects of business group ties on foreign direct investment. They posited that foreign affiliates of business group firms have a greater propensity to import capital goods from the home country so as to increase home country exports and if the establishment of overseas affiliates attracts FDI by their capital goods suppliers, business group ties are localized and the 'trade creating' impact of business group ties may disappear or even be reversed.

As regards to policy that has affected the performance of the Private sector in Nigeria, in a study carried out by Adebiyi and Dauda (2004), it was concluded that trade liberalization policy since the adoption of the Structural Adjustment Programme (SAP) has not only posed a serious threat to the investment process in the country, it has also increased pressure on foreign exchange demand and the exchange rate. Importers are desperate to import all manner of finished products from the industrialized countries of the West and Asia. Nigerian markets were filled with imported new – finished products, second – hand and used products, and substandard and fake products because of the unguarded trade liberalization policy.

III. METHODOLOGY

This study will use ordinary least square (OLS) estimators. It is pertinent to note that the major area of divergence of this work from previous work is in the introduction of regime of government proxy by a dummy variable, as well as the period before and after the liberalisation policy in Nigeria also using a proxy (dummy variable) and exchange rate.The research will include an evaluation that would take into cognizance economic/theoretical a priori tests, statistical test of significance and econometrics or second order tests. It will also employ computer software packages like: Microsoft word, Microsoft excel, E-views and Stata 10.

3.2 Model Specification

The study will employ the single equation technique of econometric simulation for this study. This has a plausible theoretical explanatory, estimating and forecasting ability, Gujarati (2006). Using the ordinary least square (OLS) method which is the best linear unbiased estimator especially for testing specific hypotheses in order to get an estimate for the trade effect has been the tradition for works on trade liberalisation. But, there have been very little studies which got rid of the causality problem between trade and income, Osterfeld (2007). As a result of this basic difficulty, it is necessary to find an appropriate variable which is correlated with trade as highly as possible and which is at the same time uncorrelated with income or government policies which aim to raise income. Hence, the model is specified as follows:
The functional form of the model is specified as;

For estimation purpose model 3 is re-specified as:
$\text{Ln}\,(RGDP_t)= \beta_0 + \beta_1 \ln\,(TROP_t) + \beta_2 \ln\,(EXR_t) + \beta_3\,(REGIM_t) + \beta_4\,(BFSAP_t) + \beta_5(MS_t)+ \beta_6\,(CAP_t)\mu_t$……….(4)
Where:
RGDP= Economic growth proxy by Real Gross Domestic Product
TROP=Trade Liberalisation
EXR = Exchange rate
REGIM= Regim1 if military regime 0 if otherwise (civilian regime)
BFSAP=Before the structural adjustment programme 0 if before 1 if otherwise (after).
t = time from 1970-2012
β_0= Intercept Term.
β_1, $\beta_{2,}$ $\beta_{3,}$ $\beta_{4,}$ are the relative slope coefficients and partial elasticity of the parameters.
μ_t = stochastic error term
Guajarati (2009) defines μ_t as a random variable that has well defined probabilistic properties. The stochastic error term represents other variables affecting the dependent variable but not explicitly taken into account by the above model.

IV. ESTIMATION TECHNIQUES

This study adopts both descriptive and linear regression analysis.
Descriptive Analysis: The line trend graph will be used to show the pattern of the movement oof both trade liberalization variables and the real GDP

Regression Analysis: The estimating technique adopted for this research work is the Ordinary Least Square Estimating technique, precisely the multiple regression version. Two models are employed in order to empirically investigate the impact of trade liberalization on economic growth of Nigeria. The ordinary least square (OLS) method of multiple regression is adopted because the OLS appears appropriate as it yields estimator which are best linear, um-biased and efficient. The following are the reasons for employing the OLS method.

1. The mechanisms of OLS are easy to understand
2. The OLS interpretation procedure is fairly simple.
3. The OLS has been used in a wide range of economic relationship with fairly satisfactory results and
4. The OLS is an essential component of most other econometric techniques.

Following the model in equation 3.3 where all the variables are as previously defined, a number of standard assumptions are made about the error term or the stochastic variable, some of which are stated thus:
(i) The error term is a random variable whose summation equal to Zero i.e. U_t = O, that is to say that the value which it may assume in any one period depends on chance, this could be normality: thus implies that the error term (U_t) is normally and systematically distributed around its mean.
(ii) Hanosk elasticity: this implies that the variance of the error term is a constant with an unknown value, i.e. the parameter estimates which is β_1 to β_7 are estimated using the stata 11 econometric software. The standard

error R square value and the t statistics value and their P values are also computed by the same software stata 11.

The R square shows the variation in exchange rate that is explained by the identified determinants. The R^2 which is the square of correlation co-efficient or as it popularly known as the co-efficient of determination will show the percentage of the total variation of the dependant various being explained by the changes of the explanatory variables. It measures the goodness of fit of the model i.e., it measures the extent to which the explanatory variables are responsible for the changes in the dependent variable. The standard error test which is a measure of the dispersion of the estimates around the true parameter will be carried out, this judges the reliability or significance of the estimates, of the regression co-efficient i.e. the parameter estimates. The standard "t" ration performs the same function with the standard error test but given due consideration to the level of significance which are traditionally 95% and 99% level.

Again the validity of the model used in this study can be tested by conducting the 'F' test, which describes the overall significance of the model; it would also be used in this study. Tests shall basically be econometric in nature, which also extends to the test for presence of multicollinearity. This is the consideration of the co-efficient of determination "R" and correlation co-efficient 'r' if $r > R^2$, it means there is problem of multicollinearity which means that the explanatory variables are correlated.

IV. RESULT AND DISCUSSION

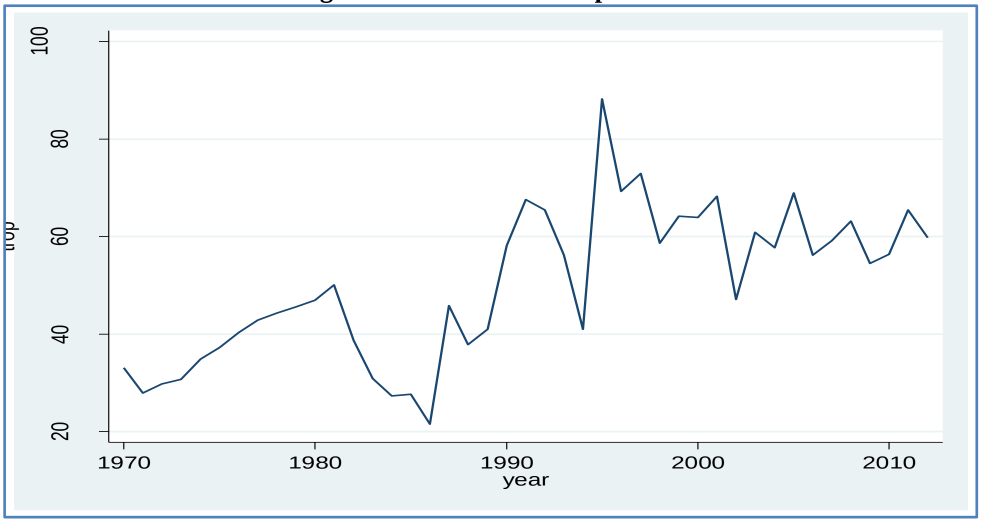
This section of the study presents that empirical result and interpretation of the results are also made. However, basic inferences are also drawn from the findings. As one of the objectives of the study is the assessment of the trend of trade and growth in Nigeria after and before trade liberalization.

4.1 Descriptive Statistics

The descriptive analysis employed in this study is the trend line graph. This shows the movement of important trade libralisation variables as well as the GDP which is proxy for Nigeria economic growth before and after economic deregulation which is as symbolic period in the trade liberalization process.

The trend of the trade openness is shown from the line trend graph. Note that trade openness shows the degree of access to the countries economy through trade. A high trade openness index indicates that the economy is very opened to outside world. In otherworld trade protection is at minimum level. From the figure it appears that since the adoption of SAP in 1985, the trade openness index is on the rise.

Figure 1: Trend of trade openness

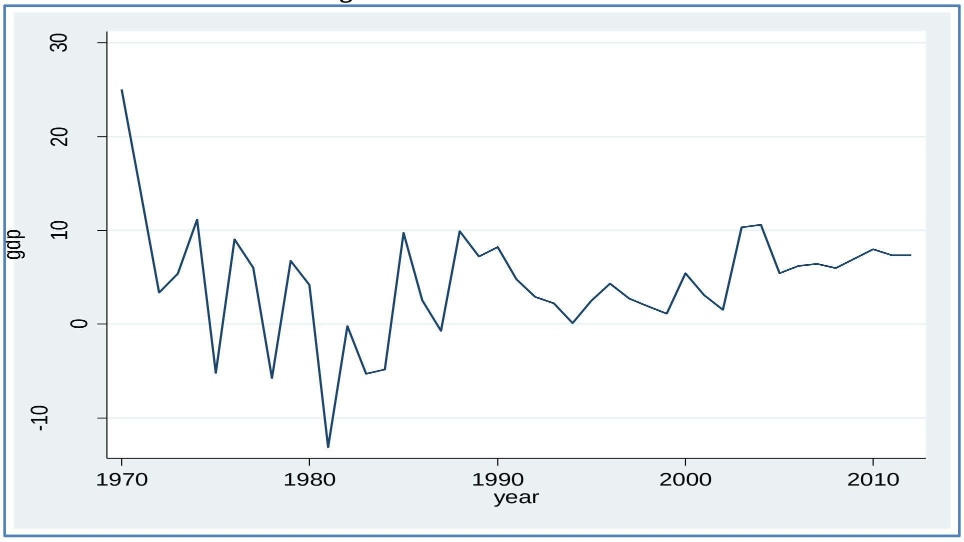


Source: Authors Computation

Notwithstanding, the trend has also been unstable in nature. The implication of this movement is that, Nigerian economy became more opened to the outside world since the adoption of SAP that is since the economy as been deregulated. It would be recalled that this is one of the conditionalities of SAP.

The second variable whose trend is assessed is the real GDP which is a proxy for economic growth. Figure 2 shows the trend of Nigeria economic growth before and after trade liberalization.

Figure 2: Trend of Real GDP

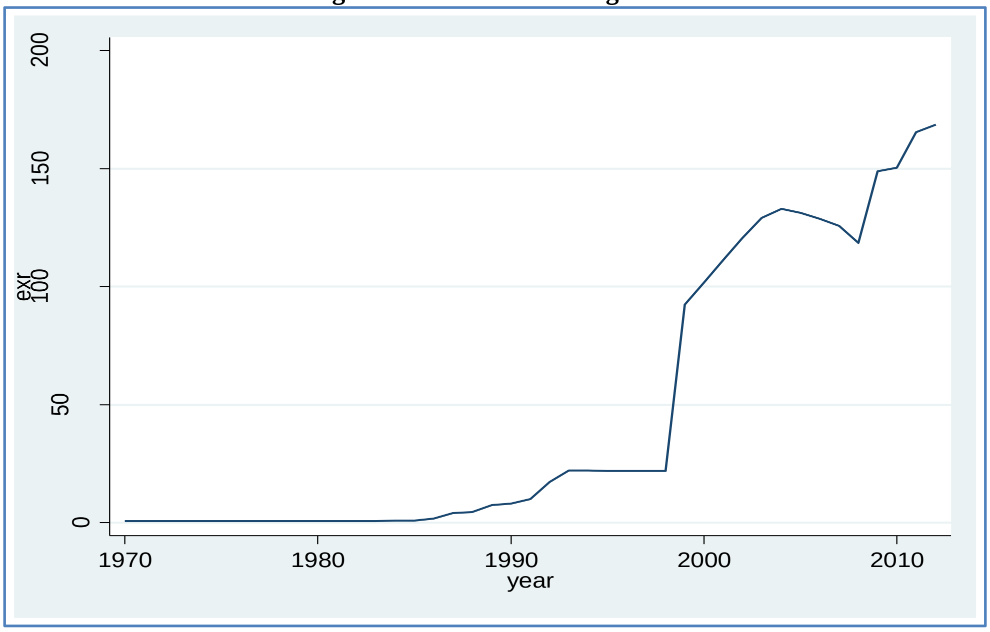


Source: Authors computation

The trend of Nigeria economic growth has also been unstable before and after trade liberalization. Figure 2 shows a falling trend in the real GDP before trade liberalization. But after trade liberalization there appears to be rise in the trend of the real GDP. However, the rising trend is not smooth, it follows a rise and fall trend. This is an indication that a consistent rising trend is not sustained even after the trade liberalization. Also it implies that the expected gains from trade liberalization might not be enough to propel a sustainable economic growth even after the adoption of SAP which marks a take-off of trade liberalization process in Nigeria.

Another variable that is germane to the trade liberalization exercise is the exchange rate. The trend is shown in figure 3.

Figure 3: Trend of exchange rate



Source: Authors computation.

The trend of exchange rate is a clear departure from the two previous perttern. The trend indicates a stable rising trend. The rising trend became more conspicuous after trade liberalization. Again the slope of the trend became steeper year 2000. This movement shows that the value of naira has been falling consistently since trade liberalization. It should be noted that a rise in exchange rate connotes currency depreciation. Therefore this phenomenon can be identified as an important feature of trade liberalization.

4.2 The Regression Results

Table 3 Regression equation for Nigeria economic growth

Variables	Coefficient	Standard Error
trop	-.1024217	.0833078
Exr	.0526145	.0737927
regim	3.505207	8.877953
sap	1.780756	2.754195
Constant	3.669339	9.251114

R^2 = 0.5200 F(6, 36) = 3.37***, Prob> F = 0.0096
**** Statistical significance at 1%, ** Statistical significance at 5%,*
Source: Authors Computation

Table 3 shows the result of the regression for the model. It explains the empirical relationship between economic growth and trade liberalization. From the table, the relationship between economic growth and trade openness is positive and not significant. The implication of this result is that trade openness as an important variable of trade libralization does not have significant impact on growth the Nigerian economy. However, the result shows that it has a direct relationship with economic growth, that is an increase in openness will lead to rise in economic growth but this relationship is not significant.

Exchange rate is another important variable under trade liberalization and the result has shown that it has a direct relationship with growth and this relationship is significant. The implication of this is that a rise in exchange rate which means currency depreciation will significantly affect the growth of the Nigerian economy.
The nature of the regime in the country is also included in the model and the result has shown that it has no significant impact on growth of the Nigerian economy. Notwithstanding it shows a direct relationship but this relationship is not significant.

The adoption of SAP shows a positive but not significant impact on the Nigerian economic growth. It should be noted that adoption of SAP in 1985 marks the beginning of trade liberalization in Nigeria. The result from this study has shown that SAP has not changed significantly the nature of trade in Nigeria and this has been shown not to have significant impact on the growth of Nigerian economy.

Moreover, other macroeconomic variables used in the study are money supply and capital formation. The result has shown that money supply as a macroeconomic variable will have significant positive impact on the growth of the Nigerian economy. Also capital formation shows a positive relationship with growth but the relationship is not significant.

The R square of 0.52 indicates that about 52% systemic variation in Nigerian economic growth is explained by trade liberalizationvariables and other macroeconomic variables. The test of overall significance of the model indicates that the model is statistically significant at 5% level.

V. CONCLUSIONS AND RECOMMENDATIONS

The study have shown that trade openness has a positive relationship with Nigerian economic growth. This implies that a rise in trade openness will lead to a rise in the real GDP. But this is not significant. We can conclude here that Nigeria might not have gained as expected from the openness of the economy.

The exchange rate as another trade liberalization variable has been shown to have significant positive impact on the Nigerian economy. Notwithstanding, currency depreciation has been shown to have the tendency of improving then growth of Nigeria. This goes along with trade protectionism theory. An increase in exchange rate discourages importation but encourages export. This result is corroborating what we obtained on the relationship between trade openness and growth. This simply means that by limiting import the growth of Nigerian economy will rise.

In addition, the adoption of SAP has been shown to have positive impact on the growth of Nigerian economy. Again the relationship is not significant. This implies that the adoption of SAP has not brought about enough expected outcomes in terms of economic growth.

The two macroeconomic variables namely; money supply and capital formation have positive impact on economic growth of Nigeria. But while money supply is significant, capital formation is not.
Finally, major conclusion from this study is that trade liberalization has not improved the growth of Nigerian economy significantly. Ultimately, the result have shown that Nigeria has not adequately benefited from her trade opeeness. This might be the reason while SAP fails to shown significant impact on growth of the Nigerian economy.

RECOMMENDATIONS

Considering the findings form the research work the following recommendations are made:

(i) **Trade protectionism:** The study has shown that trade protectionism is likely to benefit Nigeria. Trade openness has been shown not to have significant impact on economic growth of Nigeria.

(ii) **Currency devaluation:** Naira depreciation may likely encourage export but discourage import. This has also been shown to have significant positive effect on the economic growth of Nigeria.

(iii) **Nature of import:** The excessive import of goods that can be produced locally might be a reason why Nigerian gas not gained from her trade openness. Consequently, the nature of import in Nigeria should not be consumables but capital goods that cannot be produced locally.

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