

# Does Trade Liberalisation Hurt Nigeria's Manufacturing Sector?

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## Abstract

This study examines the role of trade liberalization in the growth of manufacturing output in Nigeria, focusing on the short to medium term period while not ignoring the very important long term on which most studies have focused. Data for the period 1980 to 2013 were obtained from CBN and WDI, with which parameter estimates were extracted for the short to medium term using the error correction mechanism. Trade liberalization was found to hurt manufacturing output in the short run although it showed a real potential to boost it in the long term. An overhaul of competition policy was recommended with a view to establishing Neutral Status in manufacturing export trade.

**Keywords:** trade liberalization, manufacturing output, manufacturing export, short run analysis, neutral status

## 1. Introduction

For many developing nations, the challenges of liberalization have brought new realities with uncertain implications for manufacturing output. Reacting to these realities, Nigeria has experimented with two distinct trade regimes, namely restricted or controlled trade regime and the open trade regime.

According to Kareem (2010), the philosophy of controlled trade regime embodies a regimen that features both direct and indirect instruments of control in the conduct of foreign trade and payment. Jennis and Sen (2006) believe that this is to achieve efficiency in the face of market failure since the condition for competitive equilibrium is often not satisfied. In the case of Nigeria, the desired efficiency has remained elusive. With the failure of strategies such as import substitution to lead to the desired goals, matters got worse. Turning to open trade regime was therefore not much of a policy leap for the country. The proponents of the open regime such as Krugman (1996) often argue that openness enhances the growth prospects of the participating countries. But in recent years, the negative pressures which the volatile capital market of the advanced capitalist economies exert on developing economies have brought to the fore the negative aspects of openness. Questions are therefore being asked as to whether developing countries actually share in the benefits of openness, for it is clear that pressures do arise from openness which impact the economy of such nations, and in particular, their manufacturing output. An example is the 2008 global economic meltdown which originated from the most advanced capitalist economy and spread rapidly through the world, hurting developing countries.

Governments in Nigeria did not shy away from taking steps to promote the manufacturing sector through policies and incentives over the years. For example, the Manufactures-in-Bond Scheme (MBS) designed to import duty free raw material inputs and other intermediate products for export. Also the Export Expansion Grant Scheme (EEG) aimed at the stimulation of export oriented activities capable of leading to significant growth of the non-oil export sector. Other government efforts towards promotion of manufacturing output include: the establishment of defunct National Economic Reconstruction Fund (NERFUND), removal of value added tax on industrial machinery, establishment of fast track procedure at the ports for bona fide manufactures, etc (Onuoha, 2009).

To fully take advantage of the opportunities and concessions available in international trade relations at bilateral, multilateral, regional or continental levels, Nigeria participates actively in the Economic Community of West African States (ECOWAS), African Union (AU), Cotonou Agreement, the African Growth and Opportunity Act (AGOA) as well as World Trade Organization (WTO). Nigeria's trade policy always acknowledged the role of international trade in the nation's development as a way of boosting trade and therefore even while practicing the controlled trade regime, she always engaged actively in bilateral, regional and multilateral trade negotiations.

With liberalization policy, it was expected that the Nigerian economy would receive a boost from exports of non-oil products. In particular, much was expected of the industrial sector by way of satisfying the huge and growing domestic demand for manufactures, and filling the gap in the ECOWAS sub-region in light manufactures. The growing domestic demand was consequent upon the growing fortunes of the country in the oil trade, which provided funding for development as well as the needs of the slowly re-emerging affluent middle class. The gap in ECOWAS sub-region was consequent upon increasing implementation of the ECOWAS concept, which opened up more room for intra-regional trade and the fact that none of the integrating economies was industrialized; also, the reality of globalization which allowed all peoples the wish for a lifestyle requiring light manufactures, wherever produced. These legitimate hopes were not met. Instead, the industrial sector recorded negative growth of -3.4% in 2008 which however increased dramatically to 5.6% in 2010. Thereafter, it declined, such that by 2012 its growth was only 1.2 %. This may be compared to the agricultural sector which grew at the rate of 6.3 % in 2008 and an average of 5.7 % between 2009 and 2011 (CBN, 2012).

A great deal of effort has gone into ascertaining the reasons for the poor performance of Nigeria's manufacturing sector. Many of such reasons have been identified. These include: poor investment climate, funding constraints (Thornton, 2010), lack of product and process innovation, currency volatility, infrastructural challenges (Jourmard et al., 2015), inadequate power supply, etc. It remains unclear, in the light of conflicting results obtained from these efforts, what role trade liberalization actually plays in the performance of the sector, most especially in the short to medium term, which period has not received much attention in the literature. Liberalization is of critical importance here because it is the principal instrument through which the manufacturing sector was expected to access world markets, foreign savings and technology, thereby providing the platform for domestic manufacturing undertakings to transform into world-class operators. The short to medium term period is very important because the innumerable distortions in the Nigerian economy and the seemingly endemic policy reversals or at least policy discontinuities, place premium on short to medium term strategies if progress is to be made. This paper contributes to this. The rest of the paper is organized as follows: in section 2 we look briefly at literature. Section 3 specifies methodology. Results, discussion and conclusion are in section 4.

## 2. Brief Literature Review

According to Adeyemi and Abiodun (2013) the Nigerian manufacturing sector has failed to grow beyond the infant industry stage although opportunities abound in developed as well as developing economies for firms such as those described by KPMG (2006) as displaying the ability to continuously innovate across their operations. This failure now constitutes a major challenge since, according to CIMA (2010), even though it had performed poorly over the years, manufacturing is now a corner stone for solving the economic trauma inflicted on poor nations by the financial crises of 2008/2009. Thornton (2010) opines that this role is anchored on the fact that the manufacturing sector is a source of stronger and more sustainable development, and thus a leading dynamic sector in world economic exchange. Such views typify the attitude of researchers and have encouraged continuous quest for more tenable answers to questions pertaining to the performance of the manufacturing sector, locally as well as internationally.

Cheng (2015) studied regional variations in trade liberalization outcomes in China. He found that lower tariffs on final goods reduce real output while lower tariffs on intermediate inputs increase real output. He concluded that the effectiveness of trade reforms depended on economic policies and local institutions. This explains in part the conflicting outcomes of trade liberalization recorded by researchers, especially with regard to the manufacturing sector.

Ojo and Olalade (2014) assessed the Nigerian manufacturing sector in the era of globalization, using OLS and found little effect of globalization on the Nigerian manufacturing sector. However, Ebong et al. (2014) found a positive effect of globalization on industrial development in Nigeria using the vector autoregression technique and an error correction framework for the period 1960 to 2010. Edeme and karimo (2014) found that trade openness in its interaction with financial deepening, dampened the performance of Nigeria's manufacturing sector. They employed Marginal impact estimation technique, incorporating standard errors corrected for serial correlation on a dummy variable Structural-break model. Umoru and Eborieme (2013) in their study of trade liberalization and industrial growth in Nigeria found a positive and significant correlation between globalization and the Nigerian economy in the periods of pre-globalization and post-globalization (1962-2009). Using co-integration, error correction as well as Simple Annual Growth Rate (AAGR) techniques, they also found a negative relationship between globalization and the manufacturing sector.

Mairerse et al. (2012) studied the effects of globalization, innovation and productivity in manufacturing firms in

China using firm level micro data and a structural model for the period 2005 to 2006. They found a positive effect from innovative input to output, and then to manufacturing firm performance. Onakoya, Fasana and Babalola (2012) examined openness and manufacturing sector performance in Nigeria and found a positive influence of trade openness while exchange rate had a negative influence. However, Ogunrinola and Osabuohien (2010) found several globalization related variables to be positively related to the Nigerian manufacturing sector. For the Tunisian economy, Mouelhi (2007) examined the impact of trade liberalization on the manufacturing sector using the generalized method of moments, and found that reduction in levels of tariffs and non-tariff barriers had no effect on manufacturing growth. Thus even on the part of those who studied the effect of liberalization on manufacturing performance, differing results have been recorded; some probably important determinants also remained unaccounted for. Equally important, attention has not been focused adequately on the short to medium term, bearing in mind the country's economic track record of failure to implement or carry through long term economic policies. In any case, action belongs to the short term even if its effect is to be fully effective in the long term. We take cognizance of this in this study and expressly address the short term dynamics.

### 3. Research Method

As much as is feasible, the approach is to fully account for the determinants of manufacturing output in Nigeria in order effectively to isolate the effect of trade liberalization on the performance of the sector. For trade liberalization we employ trade openness supported by export of manufactures. While trade openness indicates how liberal the trade policy has been, export of manufactures indicates the degree of success in accessing foreign markets. Our expectation is that with open doors the sector should be able to access foreign markets, to service which there will be need to expand output. Export is expected to directly deliver that result, partly by dampening the negative effects of imports of manufactures that can be self-produced, that is produced at relative competitive advantage. The results will indicate how well this role has been played over time. Once it is not a fixed regimen, exchange rate is also expected to be in the liberalization umbrella since it impacts pricing of both foreign inputs and imported finished products as well as external sale of domestic manufactured products. Inflation can be imported, more so when many raw materials and intermediate products are imported. If inflation turns out to be a drag, as expected, its source can assist in establishing if it can be situated within the liberalization umbrella or whether it is a domestic phenomenon, in which case real interest rate will be expected to so indicate. As a well known challenge, we account for power using electricity production. This should boost manufacturing output. Real income per head is indicative of demand or size of the market, and should positively affect manufacturing output as well as commercial bank credit to manufacturing, which directly ameliorates the constraint on manufacturing posed by inadequate funding. Using the constant elasticity specification, we estimate the following equation:

$$\ln mo = \alpha_0 + \alpha_1 \ln topn + \alpha_2 \ln rgdppc + \alpha_3 \ln rer + \alpha_4 \ln int + \alpha_5 \ln expm + \alpha_6 \ln elep + \alpha_7 \ln inf + \alpha_8 \ln cm + \varepsilon$$

Where the  $\alpha$ s are the parameters, while  $\varepsilon$  is the stochastic error term and  $\ln$  is natural logarithm. Other acronyms are as follows:

mo = manufacturing output; topn = trade openness; rgdppc = real GDP per capita; rer = real exchange rate; int = interest rate; expm = export of manufactures; elep = electricity generation; inf = inflation rate; and cm = bank credit to manufactures.

We investigate the time series property of the data by carrying out tests of stationarity and long run relationships as well as overall significance of the regression, etc. For the short run dynamics and estimates which are our main interest, we employ the error correction mechanism and obtain the parsimonious estimates using the general to specific approach.

Data were obtained from CBN Statistical bulletin except trade openness, real GDP per capita, real exchange rate and inflation which came from World Bank's World Development Indicators.

### 4. Results, Discussion and Conclusion

Using Augmented Dickey Fuller (ADF) procedure for the unit root test, all variables were found to be stationary at varying orders of integration (Table 2). Test of long run relationship using Johansen co-integration approach revealed 4 co-integrating equations and produced the long run estimates. The estimates show that, in the long term, all parameter estimates are significant except Export of Manufactures and Inflation Rate (Table 3). ECM result indicates convergence and significance at 5% level. From the parsimonious results which are our main interest (Table 1) we find that Trade openness is highly significant in the short term. It is also inversely related to manufacturing output in all periods. Its significance extends to the long term. Export of manufactures is however

not of significant effect in the short term. Neither are Interest and Exchange rates. As expected, Inflation rate is a drag on output but not in the long term.

From this study, trade liberalization shows a real potential to boost manufacturing output in Nigeria. This potential lies in the finding that trade liberalization has a significant and thus real effect on manufacturing output; this effect is positive, and as such it could operate in a supportive direction in the long term as anticipated by theory. However, it has not done so. In the short to medium term, it has an inverse effect. This short term outcome explains the dichotomy between theoretical postulation, some research findings and actual economic performance. Ogunrinola and Osabuohien (2010), for example, find from their study of globalization and the manufacturing sector in Nigeria that several globalization-related variables are positively related to the Nigerian manufacturing sector. When tapped, that is, exploited, such variables are expected to make a difference. In practice and on the ground, however, it all remains a potential, showing very little concrete outcome; poor manufacturing export performance continues to be recorded, notwithstanding efforts of decades at tapping the variables identified by studies and generally promoting both non-oil export and manufacturing.

This finding that liberalization hurts manufacturing output in the short to medium term in Nigeria (and perhaps some other lagging developing countries?) explains the failure to meet any of the two major sectoral expectations at the time of implementing the liberalization policy. As already indicated, the first unmet expectation was the satisfaction of the huge and growing domestic demand for manufactures; the second failure was the non-satisfaction of the equally huge and growing demand for light manufactures in ECOWAS region. These lapses were not left unexploited but were fully utilized by Multinationals. KPMG (2006) find that in the short to medium term, manufacturers in developed countries have substantial opportunities to expand both on the domestic and overseas front. However, for their survey respondents, globalization was more about market access than low cost manufacturing, a point often lost on local planners and managers but which always created a great deal of the opportunities that multinationals exploit, what with the growth of intra-industry trade as a counterpart to multi-nationalism in business and operations.

This situation calls for a re-examination of operating conditions of manufacturing activity beyond investment climate and traditional determinants, and calls attention to neutrality or *Neutral Status* as a constraint to export. Rhee (1985) defines Neutral Status as a 'set of arrangements that will enable exporters to compete on an equal footing in regard to undistorted markets and policies.' Uduebo (1994) interprets this to mean that policies similar to, or better than, those confronted by competitors must prevail locally. One does not need to look far, when considering manufacturing activity in China and Nigeria, for example, to conclude that this is an area that calls for attention.

We therefore recommend a critical overhaul of competition policy in Nigeria with a view to introducing Neutral Status as a baseline for manufacturing activity in Nigeria.

Table 1. Parsimonious ECM result

Dependent Variable: DLNMO

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLNMO(-1)	0.796356	0.147520	5.398301	0.0003
DLNMO(-2)	0.492523	0.108184	4.552646	0.0011
DLNTOPI(-1)	-0.508829	0.146255	-3.479058	0.0059
DLNTOPI(-2)	-0.306031	0.105015	-2.914155	0.0155
DLNRGDPPC(-1)	-0.169527	0.085142	-1.991107	0.0745
DLNRGDPPC(-2)	0.177107	0.067336	2.630202	0.0252
DLNRER	0.157864	0.119113	1.325330	0.2145
DLNRER(-2)	-0.271811	0.094315	-2.881936	0.0163
DLNINT	0.124163	0.091919	1.350791	0.2065
DLNINT(-2)	0.123471	0.081603	1.513077	0.1612
DLNEXPM	-0.058176	0.032817	-1.772707	0.1067
DLNEXPM(-2)	-0.150169	0.056123	-2.675696	0.0233
DLNELEP	0.448041	0.095505	4.691300	0.0009
DLNELEP(-1)	0.229025	0.079321	2.887323	0.0162
DLNELEP(-2)	-0.358260	0.072424	-4.946725	0.0006
DLNINF	-0.193775	0.067260	-2.880999	0.0164

DLNINF(-1)	-0.071021	0.033556	-2.116530	0.0604
DLNINF(-2)	-0.153180	0.058340	-2.625640	0.0254
DLNCM	0.188737	0.149450	1.262875	0.2353
ECM(-1)	-0.266625	0.092740	-2.874965	0.0165
C	-0.039313	0.040259	-0.976499	0.3518
R-squared	0.970163	Mean dependent var		0.125014
Adjusted R-squared	0.910489	S.D. dependent var		0.287822
S.E. of regression	0.086112	Akaike info criterion		-1.842907
Sum squared resid	0.074152	Schwarz criterion		-0.871496
Log likelihood	49.56506	F-statistic		16.25772
Durbin-Watson stat	2.275854	Prob(F-statistic)		0.000038

Table 2. Unit root test using ADF procedure

Variable	Level	1 <sup>st</sup> difference	2 <sup>nd</sup> difference	Order of integration
Lnmo	-1.646347	-4.263748	-5.884299	I(1)
Lntopn	-1.146471	-3.576054	-6.278341	I(1)
Lnrgdppc	-7.803300	-8.223970	-14.56602	I(0)
Lnrrer	-2.253430	-3.643580	-5.415936	I(1)
Lnint	-2.231467	-5.507734	-8.402909	I(1)
Lnexpm	-1.565398	-2.319664	-4.020452	I(2)
Lnelep	-1.734981	-6.364592	-8.058020	I(1)
Lninf	-3.484275	-5.961165	-7.493998	I(0)
Lncm	-0.622255	-2.525399	-5.214887	I(2)
Sig. level				
1%	-3.6496	-3.6576	-3.6661	
5%	-2.9558	-2.9591	-2.9627	
10%	-2.6164	-2.6181	-2.6200	

Table 3. Long run regression result using Johansen Co-Integration procedure

Dependent variable: Inmo

Variable	Coefficient	Std.error	T stat
Lntopn	2.118315	0.19790	10.703967*
Lnrgdppc	-1.397705	0.21935	-6.372031*
Lnrrer	1.413304	0.18847	7.488216*
Lnint	2.204743	0.23133	9.530727*
Lnexpm	0.035730	0.035730	0.035730
Lnelep	1.391511	0.16068	8.660138*
Lninf	0.082981	0.04949	1.676722
Lncm	0.212156	0.07923	2.677723*
C	-19.66603		

Note. \* Indicates significance at 5% level.

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