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Trade Restriction and Manufacturing Sector Performance in Nigeria

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Abstract:This study examined the impact of trade restriction on manufacturing sector performance in Nigeria from 1970 to 2018. Adopting the autoregressive distributed lag (ARDL) technique through bound testing to cointegration, the results revealed thatimport penetration has significant negative impact on the index of manufacturing production both in the short run and long run, export penetration has insignificant negative impact on IMP in the short but significant negative impact on IMP in the long run, while trade restriction has significant positive impact on IMP as against trade liberalization that revealed insignificant negative impact on IMP, this study concludes that trade restriction enhanced and positively impacted on the performance of the manufacturing sector in Nigeria. Consequently, the study recommended among others that, the federal government of Nigeria should be more deliberate and resolute in restricting the importation of consumer goods that can be produced locally into the country.

Keywords:*Trade Restriction, Index of Manufacturing Production, Import Penetration, Export Penetration, Autoregressive Distributed Lag (ARDL).*

I. Introduction

The World Bank(2016) attributed the prevalence of poverty and inequality in developing countries to slow job growth. Between 2000 and 2008, the African working-age population (15– 64 years) increased from 443 to 550 million, but only 73 million jobs were created over the same period (AfDB, 2012; ILO, 2011). To reduce poverty and inequality, the crucial option available to policymakers – at least in terms of industrial policy – is to create more jobs that are characterized by higher levels of productivity and remuneration accessible in manufacturing (Söderbom& Teal, 2003).

As Szirmai (2009) argued, since the late 18th century, the manufacturing sector has been the main engine of growth, development and catch up. He held that manufacturing is important for growth in that: (a) there is an empirical correlation between the degree of industrialization and per capita income in developing countries; (b) productivity is higher in the manufacturing sector than in the agricultural sector; (c) manufacturing is assumed to be more dynamic than other sectors; (d) developing countries with higher shares of manufacturing and lower shares of services show faster growth than the advanced service economies and (e) compared to agriculture, it is argued that the manufacturing sector offers special opportunities for capital accumulation.

Consequently, countries have opted to eitherimport substitution industrialization strategy or export-oriented industrialization strategy as viable foreign trade policies targeted at enhancing manufacturing production.The argument for trade policy has been depended on both theoretical and empiricalfactors. The theoreticalfactors are tied on two contradicting perspectives of trade liberalization. One viewpoint is that free trade impedes industrial productivity and retard production by opening up the economy to predominantly advanced foreign products, compelling newly startup firms to shut down. The other is that export-oriented industrialization strategy will

stimulate industrial efficiency in a country by exposing domestic firms to competition and in this way improving the allotment of factors across sectors and expanding the value of domestic product. The empirical factors on the other hand, are accounted for by the dramatic course in the global ascendency to trade openness following the recorded accelerated success of the East Asian countries who chose and stayed the course of outward oriented trade policy in contrast to countries of the Latin America that embraced import substitution model but registered less than impressive performance. This dramatic contrast marked the formal upsurge of export promotion or, more generally, trade liberalization, as a viable development route. Thus, by the 1980s, this strategy had obtained the endorsement of the World Bank, who overtly advocated it as a crucial component of structural adjustment programmes (SAPs) recommended for countries in economic and financial difficulties (Adenikinju&Chete, 2002)

The trade policy trajectory of Nigeria, according to Adenikinju (2005), has gone through periods of high protectionism to its current more liberal stance. The period between 1960 and 1985 was characterized by mainly import substitution industrialization strategy consistent with trade restriction while between 1986 and particularly from 1987 till date has been characterized by outward oriented industrialization strategy consistent with trade liberalization.

Despite implementing both policies aimed at protecting domestic industries and those for enhancement of free flow of merchandize and technological know-how over the years, their impact on manufacturing performance in Nigeria remains vague as the preference for imported manufactured goods particularly consumer goods continues to rise.The outcome has been that numerous firms have shut down, while rationalization and staff cutbacks are being acknowledged across firms. As further noted by MAN (2017), 30 % of firms have shut down, 60 % are debilitated and just 10 % are working at sustainable level. With the introduction of the ECOWAS free trade treaty for freer movement of goods within West Africa, many Nigerian and multinational manufacturers have relocated to other ECOWAS countries and produce for the Nigerian market.It is therefore on the basis of the persistent preference for manufactured goods and the near comatose of the manufacturing sector in Nigeria despite several years of implementation of government foreign trade policies particularly with the reiterated thrust of protecting domestic industries that ignited this study. Thus, this study seeks to unravel the following specific objectives: the impact of import penetration on the index of manufacturing production;the impact of export penetration on the index of manufacturing production as well asthe impact of trade policy on the index of manufacturing production through the use of dummy variables.

The rest of this paper is divided into the following sections: section two is literature review; section three is methodology; section four is results and discussion; section five is conclusion and recommendations for policy.

II. Literature Review

2.1 Theoretical Framework

Romer (1986) introduced a model of expanding returns in which there was a steady positiveequilibrium rate that came about because of endogenous amassing of knowledge. This was a significant break with the current writing, where technological advancement had to a great extent been treated as totally exogenous. In Romer's model, firm j's production function is of the structure

$$Y_t = A_t F(K_{t,j} L_{t,j}) \quad 2.1$$

Where$A_t$representstotal production enhanced by technicaladvancement. Increase in capital occurs holding the influence of capital wear off constant such that,

$$\acute{K}_{t,j} = i_{t,j} \quad 2.2$$

Producers and consumers operate within a probability distribution that sum up to unity in terms of aggregation and more essentially recognizing that the growth in population is zero. Hence, total investment is for instance given as,

$$I = \int_0^1 it, j \; dt \quad 2.3$$

Romer posits that the total knowledge reservoir in an economy is proportional to the cumulative sum of past aggregate investment

$\Xi_t = \int_{-\infty}^{t} Iv\ dv$2.4

This, intentionally, is similar to the volume of the total stock of capital,

$K_t = \int_{-\infty}^{t} Iv\ dv$2.5

Romer further posits that the impact of accumulated knowledge is a function of productivity attainable through

$At = \Xi_t^{\eta}$2.6

Where $\eta < 1$.

Thus, the rate of growth accelerates and remains steady which relies on the eagerness and zeal to know as well as the proportion of capital in production. Summarily, Romer held that for the purpose of sustainability of the accelerated growth, the public sector should intervene with a planning scheme in the form of

$C_t^{*} / C_t = \rho^{-1} (\alpha + \eta - v)$ 2.7

This, according to Romer is crucial in that the public sector takes into consideration the reality that externalities entail that the benefits accruable to investment are greater when the public sector intervenes in the provision of essential public and economic infrastructure. Hence, Romer submits that, investment in human and physical resources should be augmented or subsidized by the government if the objective of the government is to stimulate inclusive growth in a country.

2.2 Empirical Literature

Basha (2015) analyzed the effect of trade on the growth of total factor productivity of the manufacturing in Jordan for the time frame (1996-2013). The investigation utilized the OLS econometric strategy to accomplish its goals. Besides, the aftereffects of the investigation showed that the increase in total export proportionally influencethe index of manufacturing production, import increase stimulate increase in manufacturing production index. The investigation in this way recommended more private investment in the manufacturing sector.

Fujii (2017) considered a model of foreign trade with a domestic supply network, which gives rise to indirect exporters. These indirect exporters do not export but supply goods and services to exporters, and consequently, their value added is exported by implication. Utilizing the information of Japanese interfirm trade organizations and worldwide exchange, the highlights of indirect exporters are researched. The greater part of firms is associated with foreign business sectors having two foreign connections, and manufacturing and wholesale represent the biggest portions of both direct and indirect exporters. They consciously outlined the various variables that interplay in the process including sales or employment exists in direct, first level indirect, second level indirect, and non-exporters. A significant and positive spread impact is affirmed. Stuns to exporters, regardless of whether positive or negative, proliferate to their domestic providers and rot as they travel through stock chains. The first level indirect exporters get 2%-3% extra deals increase and 1%-1.5% for second level indirect exporters. In the event that a firm's supply to an extraordinary exporter, the size is bigger. This recommends the significance of following aberrant value-added exporters while thinking about the impact of exchange progressions on firm size disseminations or industry elements.

Araujo and Flaig (2017) investigated the impact of unilateral reduction in Brazil's relatively high restrictions to trade on manufacturing performance. Using a multi-region Computable General Equilibrium model that is particularly appropriate to check the effect of tradepolicy shocks in global value chains, their study documented the impacts of reducingrestriction to trade in Brazil: reducing import tariffs and local content prerequisites, and eliminating indirect taxeslevied on exports. The largest gains in production and exports would accrue to manufacturing sector, contradicting the widespread perception in Brazil that lifting trade protection would reduce the share of manufacturing in production. Besides, deeper integration into global value chains would

raise economic efficiency, and the higher share of foreign intermediate goods used in production would lead to lower prices, boost international competitiveness and also benefit Brazilian households.

Onakoya, Fasanya and Babalola (2012) analyzed the effect of trade openness on manufacturing performance in Nigeria, utilizing secondary data from 1975 to 2010. The impacts of stochastic stuns of every one of the endogenous variables were investigated utilizing Error Correction Model (ECM). The outcome shows that trade receptiveness is positively relatedtomanufacturing while inflation andexchange rate adversely affect manufacturing output. The error correction coefficient likewise shows that increase in the manufacturingtook place gradually in the economy. The viable advancement and improvement of the Manufacturing sector have not been truly approached in Nigeria,thus, the scarcity of study on their effect on the economy. This could, be ascribed to a variety of elements, including a fragile innovative base and low degree of capacity usage. Additionally, another significant finding from this research is that there are critical gains from the approach of free trade. The authors hence suggested that government ought to keep away from present moment fixes and front-stacked arrangements with different nations and advance ahead of action that emphasize exclusively on the oil area. Additionally, to advance the imports of capital merchandise, there is need for straightforward oversight generally checked by supervisory agencies.

Umoh and Effiong (2017) explored the impact of free trade on manufacturing outcomes between 1970 and 2013 using the autoregressive distributed lag. Their study used manufacturing index alongside other such interest rate spread, nominal exchange rate as explanatory variables. Their results showed the manufacturing sector better improved as a result of trade liberalization in both the immediate and long-term periods. The coefficient estimates were robust and stable over the time. They thus recommended that, the policy direction for the sector be focused more on open policies through trade liberalization as a long-term plan.

Ebenyi, Nwanosike, Uzoechina and Ishiwu (2017) evaluated the effect of trade openness on the index of manufacturing production in Nigeria somewhere in the range of 1970 and 2014 utilizing the autoregressive distributed lag. Their discoveries uncovered that the Nigerian economy has not changed its export structure over the 1970 - 2014 periods. The only changes that have occurred to its export were only a simple shift in export composition demonstrating an indication of export replacement from essential agro industry-based export to essential mining industry-based export (i.e crude oil). Subsequently, they discovered significant negative effect of intermediate import on the manufacturing sector. The investigation subsequently concluded that the fragility of the sector to react emphatically to the export possibilities inborn in exchange advancement is because of significant expense of production in the country that places producing output in a disadvantageous situation in worldwide market.

III. Methodology

The study made use of mainly macroeconomic secondary time series data which were sourced from National Bureau of Statistics, Central Bank of Nigeria data bank such as the statistical bulletin and annual report and statement of Accounts of various years as well as the World Bank Data Base. Periodicals and other internet sources were also of invaluable use to this study. These time series data covered the period from 1970 to 2018. The study employed pre-estimation tests to ensure accuracy of the parameter estimates and their forecasting power such as the correlation test for multicollinearity, Augmented Dicey Fully (ADF) test for unit root and autoregressive distributed lag bound testing for cointegration for the existence of cointegration. The post estimation tests includeRamsey RESET for evaluation of model specification and Breusch-Adopting the new growth theory by Romer (1986)with modifications and in line with Umoh and Effiong (2017), this study utilizedautoregressive distributed lag (ARDL) approach through bound testing to cointegration found as the appropriate econometric technique arising from the order of integration of the time series variables used for this study.

3.1. Model Specification

The functional form of the index of manufacturing production (IMP) model is given as follows:

IMP = f (IMGDP, EXGDP, IENEC, IRS, LnPCI, EXR, DSAP) (3.1)

Where:

IMP = Index of Manufacturing Production

IMGDP = Ratio of Imports to GDP (import penetration)
EXGDP = Ratio of Exports to GDP (export penetration)
IENEC = Index of Energy Consumption
IRS = Interest Rate Spread
LnPCI = Log of Per capita income (proxy for labour income and domestic demand)
EXR = Exchange Rate
DSAP = Dummy for structural adjustment programme

The ARDL procedure involves the estimation of equation (3.1) as:

$$IMP_t = \alpha + \sum_{i=0}^{n} \beta_{1i}\Delta IMP_{t-i} + \sum_{i=0}^{n} \beta_{2i}\Delta IMGDP_{t-i} + \sum_{i=0}^{n} \beta_{3i}\Delta EXGDP_{t-i} + \sum_{i=0}^{n} \beta_{4i}\Delta IENEC_{t-i} + \sum_{i=0}^{n} \beta_{5i}\Delta IRS_{t-i} + \sum_{i=0}^{n} \beta_{6i}\Delta LnPCI_{t-1} + \sum_{i=0}^{n} \beta_{7i}\Delta EXR_{t-1} + \sum_{i=0}^{n} \beta_{8i}\Delta DSAP_{t-i} + \beta_9 IMP_{t-1} + \beta_{10} IMGDPt_{-1} + \beta_{11} EXGDP_{t-1} + \beta_{12} IENEC_{t-1} + \beta_{13} IRS_{t-1} + \beta_{14} LnPCI_{t-1} + \beta_{15} EXR_{t-1} + \beta_{16} DSAP_{t-1} + \varepsilon_{1t} \quad (3.2)$$

where Δ is the first difference operator, β_{1i}, β_{2i}, β_{3i}, β_{4i}, β_{5i}, β_{6i}, β_{7i} *and* β_{8i} indicate the short-run dynamics in the above relations while β_9, β_{10}, β_{11}, β_{12}, β_{13}, β_{14}, β_{15} and β_{16} denote the long-run association in equation 3.2. To identify if all the series are cointegrated, the Bound test or F-statistic is computed to test the null hypothesis, H_0: $\beta_9 = \beta_{10} = \beta_{11} = \beta_{12} = \beta_{13} = \beta_{14} = \beta_{15} = \beta_{16} = 0$ against the alternative hypothesis, H_1: $\beta_9 \neq \beta_{10} \neq \beta_{11} \neq \beta_{12} \neq \beta_{13} \neq \beta_{14} \neq \beta_{15} \neq \beta_{16} \neq 0$ for model 3.2. The critical bound test values at 5% or 1% is compared with the bound or F-statistic. If the computed bound or F-statistic exceeds the upper bound I(1), the null hypothesis of no cointegration is rejected. The implication of this is that there exist long-run associations among all the series. However, if the bound or F-statistic falls between the upper and lower bounds, no conclusive inference is made. If the computed bound or F-statistic falls below the lower bound I(0), the null hypothesis of no cointegration is retained.The specific form of the ECM to be estimated for IMP takes the form:

$$IMP_t = \beta_0 + \sum_{i=0}^{n} \beta_1 IMP_{t-1} + \sum_{i=0}^{n} \beta_2 \Delta X_{t-1} + \beta_3 ECM_{t-1} + \varepsilon_{3t} \quad (3.3)$$

where X_t is the vector of matrix representing a set of explanatory variables, ECM_{t-1} is the error correction term and ε_{3t} is the stochastic error term.

IV. Results and Discussion

We begin this section with the presentation of the unit root test results, followed by the bound testing result for cointegration and then the ARDL results incorporating the long run and short run results as well as the results for serial correlation and model stability. Table 4.1 presents the ADF unit root test result.

4.1 Unit Root Test Result for IMP Model

From table 4.1 it is seen that all the variables were stationary after first difference except import penetration (IMGDP) and interest rate spread (IRS) that were stationary at levels.

Table 4.1 ADF Test Results for IMP Model

Variables	ADF Statistics	Probability Values	Order of Integration

	Levels	1st Difference	Levels	1st Difference	
IMP	-1.952425	-6.340764***	0.6117	0.0000	I(1)
IMGDP	-4.444790***	……ψ	0.0046	……ψ	I(0)
EXGDP	-2.926942	-7.189253***	0.1635	0.0000	I(1)
IENEC	-1.538079	-5.942605***	0.8022	0.0001	I(1)
IRS	-4.008331**	……...ψ	0.0149	……ψ	I(0)
LNPCI	-1.645637	-5.381245***	0.7596	0.0003	I(1)
EXR	-0.817055	-5.979236***	0.9567	0.0000	I(1)

Notes: ***, ** and * denote rejection of the null hypothesis of stationary at the 1%, 5% and 10%, significance level, respectively. The null hypothesis is stationary around a trend and intercept.
Source: Author's computation with the use of E-views9

4.2 Cointegration Analysis for IMP Model

We proceed to present the analysis of the long run relationship amongst the variables. The index for manufacturing production model followed the Pesaran et al. (2001) approach to use AIC in choosing lag length. Consequently, the selected model of ARDL (1, 3, 1, 1, 3, 2, 2, 2) was used to examine the long run relationship among all the variables. The Bound test result is shown on Table 4.2. The F-statistic of 5.237295 was found to be higher than the upper critical bound value of 3.2 at the 5 percent significance level benchmark and by extension higher than the critical upper bound value of 4.26 at the 1 percent significant level. Thus, the result concludes that there is a long-run relationship among all the variables, namely, index of manufacturing production, import penetration, export penetration, index of energy consumption, monetary policy rate, log of per capita income (proxy for labour income and domestic demand), exchange rate and the dummy for structural adjustment programme. In other words, these variables would move together in the long run.

Table 4.2 ARDL Bound Testing Cointegration Analysis for IMP Model

F-Statistics
5.237295

Pesaran, Shin and Smith (2001): Unrestricted trend and intercept, k = 6

	Critical Value Bounds	
Significance	Lower Bound	Upper Bound
10%	2.03	3.13
5%	2.32	3.5
2.5%	2.6	3.84
1%	2.96	4.26****

Notes: Critical values are obtained from Pesaran et al (2001) with trend and intercept, *,**,*** and **** indicate significance at the 10, 5, 2.5 and 1 percent levels; the dummy variable is not included.

Source: Author's computation with the use of E-views9

In view of the existence of cointegrating relationship among the variables, we proceeded to estimate the long-run coefficient estimates of the IMP model as explained and shown in table 4.3.

4.3 Long Run Estimates for IMP Model

Following the existence of a long-run relationship between the variables, we proceeded to estimate the disaggregated long-run coefficient estimates in for model 3.2. The long-run elasticities were estimated based on the AIC, with ARDL [1, 3, 1, 1, 3, 2, 2, 2] found to be the optimal model and the results presented in Table 4.3. In the long-run, both import penetration (IMGDP) and export penetration have significant negative impact on the index of manufacturing production (IMP) in Nigeria. Thus, an increase in the share of domestic demand for goods met by import and an increase in the share of foreign demand for goods met by export both decrease the index of manufacturing production. Specifically, the IMGDP coefficient of -2.164665 implies that a 1 percent

increase in IMGDP decreases IMP by 2.164665 percent. Also, the EXGDP coefficient of -3.684887 implies a 1 percent increase in EXGDP decreases IMP by 3.684887 person. While the EXGDP coefficient confirms the a priori economic expectation, the EXGDP coefficient contrast the a priori economic expectation. The explanation for this contrast could be for two reasons: first, the composition of exports in Nigeria that is dominated by primary product which do not add value to manufacturing production, and second, the increase in income arising from export most often ignite demand for foreign made goods thereby furthering the depletion of value added in manufacturing (Ademola, 2001). The index of energy consumption has a significant negative impact on IMP. The IENEC coefficient of -1.400828 implies that a 1 person increase in IENEC decreases IMP by 1.400828 percent. This result runs contrary to the a priori economic expectation. The reason for this contrast could be the result of high cost of energy in Nigeria where most manufacturing firms generate their own energy to sustain production often due to the near absence of public source of energy. A factor that has led many firms to relocate to other countries (Barberopoulos, 2011). Exchange rate exerts a significant negative impact on IMP. The EXR coefficient of -0.883832 implies that a 1 person increase in exchange rate (depreciation of the Naira) decreases IMP. This result confirms the a priori economic expectation. Per capita income has an insignificant positive impact on IMP. The LnPCI insignificant positive coefficient is an indication that domestic demand for locally produced goods has not been significant. Interest rate spread exert a significant negative impact on IMP. The IRS coefficient of -14.917538 implies that a 1 percent increase in IRS decreases IMP by 14.917538 percent. This result affirms the a priori economic expectation and the spread is inimical to IMP. With the constant coefficient positive and significant at the 1 percent level, it implies that trade restriction significantly impacted IMP. On the other hand, the negative coefficient of DSAP which is also statistically insignificant implies that trade liberalization impacted negatively on IMP during the period of this study. This is an indication that the policies implemented during the structural programme in Nigeria decreased value added to manufacturing production. Specifically, a 1 percent increase in trade liberalization decreased IMP by 22.40 percent approximately. Conversely, the statistically significant and positive coefficient of the constant term implies that the period of trade restriction (1970 to 1985) impacted positively on IMP. That is, a 1 percent increase in trade restriction increased IMP by 275.1 percent.

Table 4.3 ARDL Long Run Estimates for IMP Model

Dependent Variable: IMP

Variables	Coefficients	Std. Error	t-Statistic	Prob.
IMGDP	-2.164665	0.620687	-3.487531	0.0020
EXGDP	-3.684887	1.189584	-3.097628	0.0051
IENEC	-1.400828	0.355556	-3.939821	0.0007
EXR	-0.883832	0.342953	-2.577121	0.0168
LNPCI	0.031572	0.015730	2.007153	0.0566
IRS	-14.917538	4.490760	-3.321829	0.0030
DSAP	-22.399899	22.237581	-1.007299	0.3243
C	275.120285	46.560519	5.908875	0.0000

Source: Author's computation with the use of E-views9

Since the ARDL approach incorporates both long run and short run dynamics of the variables in a model, we proceed to examine the short run estimates in table 4.4 below.

4.4 Short Run Estimates of IMP Model

The result of the error correction model (ECM) is reported in table 4.4 as CointEq(-1) following the E-views9 statistical software. We used ECM model purposely to capture the dynamics in the index of manufacturing production equation in the short-run and to investigate the speed of adjustment as a response to departures from

the long-run equilibrium. The coefficient of the error correction term is found to be negative and statistically significant with speed of approximately 48.4 percent of long-run disequilibrium adjusted from lagged period error shocks. Diagnostic tests of serial correlation through Breusch-Godfrey(LM) test and parameter stability through the Ramsey reset test were conducted. The result of the LM test shows no serial correlation exist given the P-value of 0.5420 necessitating the retention of the null hypothesis of no serial correlation and the Ramsey reset test shows no evidence of instability of the error correction model. In other words, the error correction model can be said to be stable with a P-value of 0.5065. The adjusted R-squared (R^2) is consider high at 0.89 approximately.

Table 4.4 ARDL Short Run Estimates for IMP Model

Dependent Variable: D(IMP)

Variables	Coefficients	Std. Error	t-Statistic	Prob.
D(IMGDP)	-0.487478	0.163749	-2.976991	0.0067
D(IMGDP(-1))	0.254996	0.145464	1.752989	0.0929
D(IMGDP(-2))	0.132093	0.125528	1.052298	0.3036
D(EXGDP)	-0.848909	0.510166	-1.663986	0.1097
D(IENEC)	-0.433667	0.156225	-2.775920	0.0107
D(EXR)	-0.131853	0.189802	-0.694688	0.4942
D(EXR(-1))	-0.094771	0.247377	-0.383104	0.7052
D(EXR(-2))	0.653673	0.284274	2.299451	0.0309
D(LNPCI)	0.036929	0.009640	3.831008	0.0009
D(LNPCI(-1))	0.030435	0.010269	2.963759	0.0070
D(IRS)	2.693947	1.041765	2.585944	0.0165
D(IRS(-1))	-2.416484	1.051548	-2.298025	0.0310
DSAP	2.452578	13.324896	0.184060	0.8556
CointEq(-1)	-0.483785	0.121946	-3.967210	0.0006

Diagnostic Tests

Adjusted R^2 = 0.89

RamseyReset= 0.3455

LM Test = 0.5420

Notes: LM test is the Lagrange multiplier for serial correlation test. Ramsey reset test is used as test of stability of the residuals.

Source: Author's computation with the use of E-views9

In the short run, change in import penetration D(IMGDP) has a significant negative impact on IMP. This result affirms the a priori economic expectation that IMGDP decreases IMP. However, change in the one and two years lagged coefficient values of import penetration exert insignificant positive impact on IMP indicating that IMGDP is positive but insignificant to IMP in the short run. Change in export penetration D(EXGDP) has an insignificant negative impact on IMP. This result is in contrast with the a priori economic expectation that EXGDP impacts positively and significant on IMP. Change in the index of energy consumption D(IENEC) exerts a significant negative impact on IMP. The D(IENEC) coefficient of -0.433667 implies that a change in energy consumption decreases IMP by 0.433667 percent. This result like the long run estimate violates the theoretical expectation ostensibly due the high cost to firms of providing energy. Change in exchange rate D(EXR) and its lagged value D(EXR(-1)) both have insignificant negative impact on IMP except for the two

years lagged value D(EXR(-2)) that exerts a significant positive impact on IMP. Change in log of per capita income D(LnPCI) and its lagged value D(LnPCI(-1)) both exert significant positive on IMP in the short run. The D(LnPCI) magnitude of 0.036929 and D(LnPCI(-1)) magnitude of 0.030435 implies that the change and change in the lagged values increase IMP by 0.036929 and 0.030435 respectively. This result confirms the a priori expectation that LnPCI impacts positively on IMP. Change in interest rate spread D(IRS) exerts significant positive impact on IMP while its lagged value has significant negative impact on IMP. The dummy variable for SAP exerts insignificant positive impact on IMP in the short run. This implies that the policies implemented during the SAP were not significant to IMP in the short in Nigeria.

V. Conclusion and Recommendations

Following the outcomes of our empirical results which revealed that import penetration has significant negative impact on the index of manufacturing production both in the short run and long run, export penetration has insignificant negative impact on IMP in the short but significant negative impact on IMP in the long run, while trade restriction has significant positive impact on IMP as against trade liberalization that revealed insignificant negative impact on IMP, this study concludes that trade restriction enhanced and positively impacted on the performance of the manufacturing sector in Nigeria. Consequently, the study recommended that:

1. The federal government of Nigeria should be more deliberate and resolute in restricting the importation of consumer goods that can be produced locally into the country. To effectively achieve this, a review of trade treaties particularly the ECOWAS treaty on the free movement of goods is pertinent to curtail smuggling. Beyond documented review of the treaty, the country's borders should be strictly closed against smuggling.
2. The significant negative impact of EXGDP on IMP in the long run and insignificant negative impact in the short run are indications that exports do not comprise of manufactured products and hence, value is either depleted or not added to manufacturing through the index of manufacturing production (IMP). To reverse this trend, there is need for collaboration by investors, states, and local governments should take advantage of the "embedded generation regulation" of the Nigerian Electricity Regulatory Commission which allows for power generation plants (including renewable energy) to be directly connected to and evacuated through a distribution network, to generate and sell or utilize power without going through the transmission grid as an approach to addressing the perennial problem of energy supply that has crippled the manufacturing sector.
3. The Central Bank of Nigeria should compel deposit money banks to reduce the interest rate spread either by increasing the deposit rate or by reducing the lending rate with the latter requiring a reduction of the central bank's monetary policy rate to make borrowing more affordable so as to stimulate investment in the manufacturing sector.

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