

# TRADE LIBERALIZATION, SHOCKS AND ECONOMIC GROWTH IN NIGERIA

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## **Abstract**

*The motivation for this study is to find the impact of trade openness, shock emanating from the economic growth of Nigeria. The vector autoregressive (VAR) methodology was applied to analyse the data collected from the Central Bank of Nigeria (CBN) Statistical Bulletin from 1961-2014. The results show that the causality tests confirm the fact that exchange rate, inflation rate, trade openness, manufacturing output, and the size of public sector all have carnal relationship with output growth. Similarly, trade openness, inflation and the manufacturing output significantly affect the exchange rate; it was also observed that only the size of the public sector causes the inflation to change. While the shocks from inflation do not influence the output growth, shocks from exchange rate affect output growth seriously. Also, shocks from trade openness affects the output growth significantly, implying that volume of international trade significantly affect output of Nigeria. It is recommended that monetary authority should watch closely at the movement of price level so as to avoid its rapid movement, 'gyrations in exchange rates have the capacity to harm the economy and should be avoided by the monetary authority. Finally, since manufacturing sector is the hub of Nigerian economy, every effort should be geared to boosting the sector. The conclusion drawn from this study is that trade is also an important sector that should grow Nigerian economy and should attract serious attention.*

**Keywords:** Shocks, trade openness, economic growth, vector autoregressive (VAR)

## **1. Background to the Study**

The early classical theorists Ricardo and Heckscher already pointed out to possible gains from trade. These gains stem from specialization in production due to international trade. If countries specialize according to their comparative advantage enhanced resource allocation can be achieved. This improves (allocation) efficiency because resources which have formerly been employed in the production of other goods are now shifted to the production of the good(s) a country produces best. It has been shown in many studies that international trade plays a critically important role in the growth process for many economies. The contribution of trade to overall economic development is immense, owing largely to the obvious fact that most of the essential elements for development such as, capital goods, raw materials and technical know-how, are almost entirely imported because of inadequate domestic supply.

Nigeria introduced a comprehensive program of trade reform in history under the Structural Adjustment Programme (SAP) of the country which commenced in 1986. The SAP was designed to address the lingering problem of structural imbalances in the economy then. According to Okodua and Alege (2014) some of the problems that plagued the national economy then included an adverse balance of payments position, severe unemployment, a huge national debt profile, low capacity utilization in the industrial sector and a general decline in the quality of life. The country engaged a combination of fiscal, monetary and trade policies to re-direct the economy back on the path of a balanced, non-inflationary and self-sustaining growth.

According to Effiometal (2011), the corner stone of the SAP induced policy was the opening up of domestic economies to face increased competition in order to ensure efficiency in resource use, removal of wastages, elimination of persistent misalignment in the external and domestic sectors and a general redirection of the economy to the path of recovery and growth. According to Awonor, et al (2013), the term "trade liberalization" became pronounced in Nigeria through the adoption "of the IMF Structural Adjustment Programme (SAP) in 1986, which its primary aim was to restructure and diversify the productive base of the economy. In addition, the SAP was also designed to establish a realistic and sustainable exchange rate for the Naira through trade and 'payment liberalization, tariff reforms, commercialization and privatization of public enterprises (Oyejide, 1990).

## **2.0 Theoretical Literature**

A great deal of modern theoretical and empirical work on economic growth is based on the neoclassical growth model. This model features assumptions such as diminishing returns to capital investment and a common international technology, which give rise to the prediction of convergence (poor countries grow faster than rich once, converging ultimately to the same standard of living). This prediction is broadly consistent with the experience of industrial countries in recent decades.

Many varieties of endogenous growth theory predict that improvements in efficiency, such as those induced by trade liberalization, could have permanent rather than temporary effects on economic growth. However, the theories in general yield ambiguous results about the impact of trade liberalization on economic growth. Under some scenarios liberalization promotes growth, while under others it could retard growth (depending, for example, on how it influences firm's incentives to engage in individuals' incentives to acquire more schooling).

In the Solow model of neoclassical tradition, technological change is exogenous, unaffected by a country's openness to trade. But some of the 'new' endogenous growth theories suggest that trade policy affects long-run growth through its impact on technological change. In the models in this tradition, (for example, Grossman and Helpman, 1992) openness to trade provides access to imported inputs, which embody new technology, increases the size of the market faced by the domestic producers, which raises the returns to innovation, and facilitates a country's specialisation in research-intensive production (Harrison, 1996: 419-420). Grossman and Helpman (1992) point out that intervention in trade could facilitate long-run growth if protection encourages investment in research-intensive sectors. In view of the ambiguities in the theoretical literature, a number of empirical studies were undertaken to examine the relationship between trade liberalisation and growth. Due to the difficulty of measuring openness, different studies have used different measures to examine the effects of trade openness on economic

growth. So many cross-country studies used trade shares in GDP and found a positive and strong relationship with growth (as reviewed in Harrison, 1996).

### **3.0 Empirical Literature**

The empirical evidence, however, suggests that promoting openness, and supporting it with sound domestic policies, leads to faster growth. The earlier strategy of attempting to grow through import substitution has been conclusively shown to have failed, as there are no successful cases of fast-growing countries that followed this strategy in the recent past (see Krueger, 1980; Srinivasan and Bhagwati, 1999; Linc.er and Williamson, 2001).

Many developing countries have embarked on programs of trade and financial liberalization. The effect of the trend towards trade policy openness or per capita income growth is one of the most controversial issues as there is a tendency to improve imports more than exports leading to trade deficits and consequently contributing to slow economic growth in future. Many analysts believed that trade policy openness and higher rates of trade volumes were positively correlated with economic growth until Rodriguez and Rodrik (2000) raised some concerns about the robustness of these results as conclusions remained sensitive to difficulties in measuring openness, statistically sensitive specifications and collinearity of protectionist policies with other poorly executed policies in developing economies.

Wacziarg (2001) attempted the measurement of liberalization variable as Sachs and Warner classification posed problems on their categorization of open and closed economies. Like Wacziarg, they intend to use the updated data on income levels (Summers, Heston, and Aten, 2001) which provides them with the basic information to examine the relationship between trade openness and economic growth before and after liberalization and study the relationship between investment, liberalization and time period elapsed from liberalization.

Djeri-wake (2009) studied the impact of China investment and trade in Nigeria economic growth within the period of 1990-2007, employing the Augmented Dickey Fuller (ADF) growth model using OLS and Granger causality test. He discovered that both short-term and long-term analysis of Nigeria-China relationship shows bilateral trade doesn't contribute to Nigeria economic growth but long-term relationship enhance Nigeria growth. A different result was gotten from the study carried out by Osabuohien (2007) that trade openness and economic performance of ECOWAS members-reflection from Ghana and Nigeria using ADF/PP stationarity and co-integration tests. The scholar resolved that unique long-run relationship exist between economic performances, trade openness, government expend truelabour force and real capital stock for both Ghana and Nigeria.

Daumal and Ozyurt (2011) examined the impact if international trade flows on economic growth in Brazilian states using dynamic regression with system GMM estimator. The scholars give evidence that openness is more beneficial to states with a high level of initial per capita income and contributes to increased regional disparities in Brazil. Kareem (2007) explained a differentsituation under Nigeria economy studying trade flows and employment outcomes in Nigeria. Hediscovered that no significant trend between trade flows and employment in Nigeria both in the short-term and long-term period.

Also, in a recent study from Nigeria, Alimi md Atanda (2011) examined the effect of globalization on economic growth in Nigeria between 1970 and 2010 amidst cyclical fluctuations in foreign investments. They employed autoregressive model that regress trade openness, cyclical foreign investment to gross domestic products, external reserves, debt stock and exchange rate on real gross domestic product revealed that globalization has positive and

significant effect on economic growth in Nigeria, while the positive of business cycle on real output growth was insignificant. Also, external reserves tends to significantly shield the economy from external shocks and the international relative prices stabilize the growth rate of real output in Nigeria. Therefore, the paper concludes that globalization and cyclical movement in foreign investment have significantly enhanced economic growth in Nigeria.

Similarly, Ajayi and Atanda (2012) investigated the trade and capital flow channels of globalization on macroeconomic stability as proxy by real output growth rate in Nigeria between 1970 and 2009. The employed autoregressive model indicated that the first lag of real output growth rate has significant positive effect on real current growth rate, while the second autoregressive term is found to exert insignificant negative effect on current real output growth rate.

#### 4.1 Theoretical Framework

Following the study by Alimi and Atanda (2011) on the effect of globalization on economic growth in Nigeria between 1970 and 2010, even in the midst of cyclical fluctuations in foreign investments, there exist a lot of fluctuations in the economy especially whenever foreign trade is discussed. Due to the cyclical fluctuations usually exhibited in this type of analysis, they employed autoregressive model that would take care of these gyrations. As a result of this, this study used the Vector auto-Regressive (VAR) model so as to capture the effect of fluctuations inherent in the system. The VAR model is expected to verify the impact of shocks emanating from the trade liberalization on the dependent variable: the source of such shocks, and the influence of those shocks.

The use of VAR model would also help the researcher to be able to test how the exogenous variables cause and are in turn caused by the dependent variable

#### 4.2 Methodology and Model specification

In order to analyse the volatility of some macroeconomic variables and to determine the sources of shocks to the output growth of Nigerian economy, a vector autoregressive (VAR) technique. The estimations were designed to ascertain if output responds to trade openness and some other macroeconomic variables like inflation rate, exchange rate, manufacturing output, the size of public expenditure. In this research work, a VAR technique is employed to determine the influence of trade openness and other economic variables on the economic growth and also to determine the sources of shocks, and their impacts.

The variables are transformed into logarithms to reduce the sizes, except for inflation and exchange rates which are relatively small when compared with the other variables. Causality test between these economic variables was carried out. The Granger causality test was used for this,

which can be specified as follows:

$$Lgdp_t = \alpha_1 + \beta_{11} \Sigma^{gdp}_{t-1} + \beta_{12} \Sigma^{exr}_{t-1} + \beta_{13} \Sigma^{top}_{t-1} + \beta_{14} \Sigma^{inf}_{t-1} + \beta_{15} \Sigma^{lmanuf}_{t-1} + \beta_{16} \Sigma^{lsize}_{t-1} + I_1 \dots \dots \dots 4.1.1$$

$$exr_t = \alpha_1 + \beta_{21} \Sigma^{exr}_{t-1} + \beta_{22} \Sigma^{lgdp}_{t-1} + \beta_{23} \Sigma^{ltop}_{t-1} + \beta_{24} \Sigma^{inf}_{t-1} + \beta_{25} \Sigma^{lmanuf}_{t-1} + \beta_{26} \Sigma^{lsize}_{t-1} + I_2 \dots \dots \dots 4.1.2$$

$$ltop_t = \alpha_1 + \beta_{31} \Sigma^{ltop}_{t-1} + \beta_{32} \Sigma^{exr}_{t-1} + \beta_{33} \Sigma^{lgdp}_{t-1} + \beta_{34} \Sigma^{ltop}_{t-1} + \beta_{35} \Sigma^{lmanuf}_{t-1} + \beta_{36} \Sigma^{lsize}_{t-1} + I_3 \dots \dots \dots 4.1.3$$

$$inf_t = \alpha_1 + \beta_{41} \Sigma^{inf}_{t-1} + \beta_{42} \Sigma^{lgdp}_{t-1} + \beta_{43} \Sigma^{exr}_{t-1} + \beta_{44} \Sigma^{ltop}_{t-1} + \beta_{45} \Sigma^{lmanuf}_{t-1} + \beta_{46} \Sigma^{lsize}_{t-1} + I_4 \dots \dots \dots 4.1.4$$

$$lmanuf_t = \alpha_1 + \beta_{51} \Sigma^{lmanuf}_{t-1} + \beta_{52} \Sigma^{lgdp}_{t-1} + \beta_{53} \Sigma^{exr}_{t-1} + \beta_{54} \Sigma^{ltop}_{t-1} + \beta_{55} \Sigma^{inf}_{t-1} + \beta_{56} \Sigma^{lsize}_{t-1} + I_5 \dots \dots \dots 4.1.5$$

$$lsize_t = \alpha_1 + \beta_{61} \Sigma^{lsize}_{t-1} + \beta_{62} \Sigma^{lgdp}_{t-1} + \beta_{63} \Sigma^{exr}_{t-1} + \beta_{64} \Sigma^{ltop}_{t-1} + \beta_{65} \Sigma^{lmanuf}_{t-1} + \beta_{66} \Sigma^{lsize}_{t-1} + I_6 \dots \dots \dots 4.1.6$$

where:

gdp= output growth rate, exr= exchange rate, inf= inflation rate, top= degree of trade openness, manuf= manufacturing output, size= size of the public expenditure (total public expenditure divided by the total GDP) and  $I_t$  = error term

$$y_t = \phi + \sum_{i=1}^k \alpha_i x_{t-i} + \sum_{j=1}^k \beta_j y_{t-j} + \mu_t \quad (3.7)$$

$$\sum_{i=1}^k \alpha_i = 0 \quad \sum_{j=1}^k \beta_j = 1 \quad (3.8)$$

where:

$y_t$  &  $x_t$  = the variables which are of interest to know the causal links. Included in the model are those variables used in equations 4.1.1 to 4.1.6, and  $\mu_t$  = error terms which are assumed to be uncorrelated.

### 5.1 Empirical Analysis

#### 5.2 Unit Root Tests

The results of the unit root tests can be discussed with the help of table 1. The results show both the augmented Dickey-Fuller and Phillip-Perron unit root tests. Both tests show similar results as what is obtained in on; is found in the other, Phillip-Perron unit root tests confirming the augmented Dickey-Fuller tests. From table 1, only inflation rate is stationary only at 1% level of significance, but not in 5% and 10% levels, while other variables are stationary at the three levels of significance.

**Table 1: Unit Root Tests**

Augmented Dickey-Fuller test for unit root					Phillips- Perron test for unit root			
Variable	Test Statistic Z(t)	1% Critical value	5% Critical value	10% Critical value	Test Statistic Z(t)	1% Critical value	5% Critical value	10% Critical value
Output	0.836	-3.579	-2.929	-2.600	0.735	-3.579	-2.929	-2.600
Exchange rate	0.419	-3.579	-2.929	-2.600	0.304	-3.579	-2.929	-2.600
Inflation rate	-3.329	-3.579	-2.929	-2.600	-3.246	-3.579	-2.929	-2.600
Manufacturing output	-1.228	-3.579	-2.929	-2.600	-1.214	-3.579	-2.929	-2.600
Trade Openness	-1.564	-3.579	-2.929	-2.600	-1.498	-3.579	-2.929	-2.600
Size of Public	-0.797	-3.579	-2.929	-2.600	-0.912	-3.579	-2.929	-2.600

**Source:** Computed from data obtained from statistical Bulletin of CBN

#### 5.3 Discussion of the Vector Autoregressive (VAR) Results

Due to the fact that VAR models produce results that are difficult to interpret (that do not make much economic meaning), the causality relationships among the variables are presented. The causality relationship between the output of Nigeria and other variables can be seen in table 2. The result shows that exchange rate, inflation rate, size of the public sector caused output

changes in Nigeria. The implication is that little changes in all the variables will cause changes in the output of Nigeria.

**Table 2: Causality Relationship between Output and other variables.**

Variables	Excluded	Chi <sup>2</sup>	df	Prob> chi <sup>2</sup>
log_gdp	log exr	6.6507	2	0.036
log_gdp	log top	0.87867	2	0.064
log_gdp	log manuf	3.2592	2	0.053
log_gdp	log inf	3.1774	2	0.204
log_gdp	log size	2.3153	2	0.118
log_gdp	ALL	13.998	10	0.173

**Source:** Computed from secondary data obtained from statistical Bulletin of CBN

A look from table 3 shows that degree of trade openness, inflation rate and manufacturing output caused exchange rate to change, while output growth and size of the public sector do not cause it to change. It implies that the larger the total output and the size of the public sector the less the fluctuation of the exchange rate, but the larger the degree of trade openness, inflation and manufacturing output the larger the fluctuations in the exchange rate.

**Table 3: Causality Relationship between Exchange Rate and other variables.**

Variables	Excluded	Chi <sup>2</sup>	df	Prob> chi <sup>2</sup>
log_gdp	log exr	6.6507	2	0.036
log_gdp	log top	0.87867	2	0.064
log_gdp	log manuf	3.2592	2	0.053
log_gdp	log inf	3.1774	2	0.204
log_gdp	log size	2.3153	2	0.118
log_gdp	ALL	13.998	10	0.173

**Source:** Computed from secondary data obtained from statistical Bulletin of CBN

The causality relationship between degree of trade openness and other variables can be found in table 4. From the table it could be observed that only output growth rate causes trade openness to change, while other variables (exchange rate, inflation, manufacturing output, and the size of the public sector) do not cause the trade openness to change. The implication could be that the size manufacturing output is small to seriously affect the volume of trade in Nigeria. Also, the size of public sector does not have direct link with, it passes through other channels, the volume of trade and that could be the reason for not directly influencing trade openness.

**Table 4. Causality Relationship between trade Openness and other variables**

Variables	Excluded	Chi <sup>2</sup>	Df	Prob> chi <sup>2</sup>
log top	log gdp	27.393	2	0.000
log top	log exr	0.09815	2	0.952
log top	log inf	1.3384	2	0.512
log top	log manuf	0.4935	2	0.781
log top	log size	0.03809	2	0.981
log top	ALL	44.812	10	0.000

**Source: Computed from secondary data obtained from statistical Bulletin of CBN**

The causality relationship between inflation and other variables can be seen in table 5. From this table, it is observed that only the size of the public sector (size of government expenditure) causes inflation to rise. All other variables (i.e. output growth, exchange rate, volume of trade, size of manufacturing output) do not significantly cause inflation to rise. In other words, growth in these variables would bring the rate of inflation down.

**Table 5: Causality Relationship between Inflation and other variables.**

Variables	Excluded	Chi <sup>2</sup>	Df	Prob> chi <sup>2</sup>
log inf	log gdp	0.30836	2	0.857
log inf	log exr	0.24341	2	0.885
log inf	log top	0.30129	2	0.860
log inf	log manuf	0.2231	2	0.989

log inf	log size	1.8224	2	0.402
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log inf	ALL	2.6553	10	0.988
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**Source: Computed from secondary data obtained from statistical Bulletin of CBN**

In table 6 the causality relationship between manufacturing output and other variables shows that only the size of public sector does not significantly cause the size of manufacturing output to rise (change). This may imply that as the size of government rises, the size of investment in the manufacturing sector declines, because increase in government expenditure crowds out private domestic investment. Whereas the size of government does not cause manufacturing output to change, other explanatory variables (output growth exchange rate, volume of trade, and moderate inflation) cause the size of manufacturing output to increase. For instance, an increase in exchange rate, makes imports more costly and increases the incentive to local producers to step up their production activities, thereby raising the size of manufacturing output (sector) of the economy. Similarly, moderate increase in inflation raises the possibility for the producers to increase their profits, and hence, moderate inflation is good for producers to increase their profits.

**Table 6: Causality Relationship between manufacturing output and other variables.**

Variables	Excluded	Chi <sup>2</sup>	Df	Prob> chi <sup>2</sup>
manuf	gdp	13.263	2	0.001
manuf	exr	6.6666	2	0.036
manuf	top	7.6361	2	0.022
manuf	inf	2.4196	2	0.298
manuf	size	0.1192	2	0.942
manuf	All	17.2	10	0.070

**Source: Computed from secondary data obtained from statistical Bulletin of CBN**

Among all the explanatory variables being discussed, nine of them causes the size of public sector to rise, as can be seen in table 7. This result shows that opinion held in some quarters that increase in income (national wealth) raises the expenditures of the government, may not necessarily be true at all times. It also means that the increase in national income is not a significant factor for government expenditure rise.

**Table 7: Causality Relationship between Size of public sector and other variables.**

Variables	Excluded	Chi <sup>2</sup>	df	Prob> chi <sup>2</sup>
Size	gdp	0.1532	2	0.926
Size	exr	0.01264	2	0.994
Size	top	0.00559	2	0.997
Size	inf	0.92243	2	0.631
Size	manuf	0.56126	2	0.755
Size	All	2.3791	10	0.993

**Source:** Computed from secondary data obtained from statistical Bulletin of CBN

### 5.3 Results of Volatility (Response) of output to Shocks in Macroeconomic Variables

Since the interpretation of the results of Vector auto-regressive (VAR) model is difficult and often times produce no economic meaning, it is possible to provide basic relationships between and among the variables being explained in charts so as to provide lucid explanation of such relationships. In this case, the shocks produced from a variable can provide an answer to the kind of relationship between and among variables, and thus, show how such shocks can significantly affect the other variables.

As can be seen in table2, the influence of shocks arising from inflation is positively affecting the trade openness significantly. The relationship between shocks emanating from manufacturing output and the response from the degree of trade openness is worth noting; it shows that shocks from manufacturing output significantly and positively affect the degree of trade openness. There is no significant impact of shocks from the size of public sector on the trade openness. There appears to be a smooth link between the shocks coming from the public sector size and their impact on trade openness.

### 5.4 Policy implications of the Research Findings

The causality relationships discussed above show that exchange rate, inflation, trade openness, manufacturing output, and size of the public sector granger cause the output growth in Nigeria to change. The implication is that changes in these variables cause changes in output growth. For instance, a little change in trade volume would significantly affect the output growth: a little change in the volume of export would, of course, significantly affect economic growth of the country since part of the output produced would be for export. Similarly, fluctuations in exchange rate would affect the output growth since it affects the volume of trade through the volume of export. Also, the size of the public sector also influences the rate at which the economy is growing. An increase in government size crowds out private domestic investment and therefore reduces output in the economy.

In a similar way, trade openness, inflation and the manufacturing output significantly affect the exchange rate. The implication is that fluctuations in price level (inflation) cause relative prices of goods and services to change, including exports, thus affecting the rate at which the country (Nigeria) exchanges with other countries. The manufacturing output would influence the exchange rate because the higher output from the manufacturing sector, the lower would be the likelihood of exchange rate to change (decline). In the case of causal link between trade openness and other variable, it was observed that only output growth causes trade openness to change. This is true because changes in output growth cause changes in the volume of trade, which invariably affects the degree of trade openness.

It was also observed that only the size of the public sector causes the inflation to change. Rising government expenditure raises the price level (inflation), a consequence which is detrimental to the economy. From the findings, it was also observed that output growth rate, moderate inflation and exchange rate, all cause manufacturing output to change. The implication of this is that moderate inflation is good for manufacturers to make more profits, whereas rising exchange rate makes imports expensive and creates incentive for producers for more production for local consumption and exports.

## **6.0 Summary and Conclusion of Research Findings**

This research has been able to x-ray the influence of trade liberalization (openness) and other variables of interest on the rate at which Nigerian economy grows. The study first carried out stationarity test to verify whether the variables used in the study have unit roots. From the unit root tests, only inflation is statistically significant at 1% level of significance, whereas other variables are significant at other levels. However, it should be noted that they all became integrated at order one  $\{1(1)\}$ . The causality tests confirm the fact that exchange rate, inflation rate, trade openness, manufacturing output, and the size of public sector all have causal relationship with output growth; this means that these variables cause output growth to change.

In a similar way, trade openness, inflation and the manufacturing output significantly affect the exchange rate. The implication is that fluctuations in price level (inflation) cause relative prices of goods and services to change, including exports, thus affecting the rate at which the country (Nigeria) exchanges with other countries. The manufacturing output would influence the exchange rate because the higher output from the *manufacturing* sector, the lower would be the likelihood of exchange rate to change (decline).

It was also observed that only the size of the public sector causes the inflation to change. Rising government expenditure raises the price level (inflation), a consequence which is detrimental to the economy. From the findings, it was also observed that output growth rate, moderate inflation and exchange rate, all cause manufacturing output to change. The implication of this is that moderate inflation is good for manufacturers to make more profits, whereas rising exchange rate makes imports expensive and creates incentive for producers for more production for local consumption and exports.

So far we have seen that trade is an important activity for Nigeria. The impact of trade and its policies on the economy of Nigeria cannot be overemphasized. Policies of trade among nations can influence other activities in economic sectors. From this study, it was seen that degree of trade openness - proxy for trade liberalization has a lot of influence on exchange rate, manufacturing output, economic growth rate, price level. It therefore behooves on the public policy makers to ensure that any policy on trade liberalization be made to be consistent with

what would not jeopardize other sectors of the economy. This is because trade is an important hub of economic growth of many countries, Nigeria inclusive.

### 7.1 Recommendations

From the findings of this study, the following recommendations are suggested:

- i. Since the impact of inflation on output growth is moderate, but not negative, it implies that moderate inflation is good for business firms to make profits. Therefore, the monetary authority should watch closely at the movement of price level so as to avoid rapid movement.
- ii. The result of this study shows that fluctuations in exchange rate is inimical to growth of Nigerian economy. On this note, we recommend that the monetary authority should manage the exchange rate effectively so as to eschew gyrations in exchange rates which has the capacity to harm the economy.
- iii. It was also found from the study that fluctuations in manufacturing sector affect the output of Nigeria. Therefore, it behooves on the government to ensure that this important sector of the economy does not dwindle, because any disturbance in this sector puts the whole economy in danger.

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