

TRADE LIBERALIZATION AND AGRICULTURAL PRODUCTIVITY IN NIGERIA 1985-2017

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Abstract: This study examined the impact of trade liberalization on agricultural productivity in Nigeria using an annual time series data from 1985 to 2017. Taking into account the causal relationship between trade liberalization and agricultural productivity. The variables used in this study are foreign direct investment, degree of trade openness, tariff as proxy for trade liberalization and fertilizer consumption and capital expenditure as proxy for agricultural productivity. The bounds test/ ARDL approach to co-integration was used in the study to examine the long-run equilibrium relationship between trade liberalization and agricultural productivity in Nigeria. The ARDL ECM was however used to determine the short run dynamics of the variables; while the pair-wise granger causality test was used to determine the dimension of causality between the relationship of trade liberalization and agricultural productivity. Results from the study however showed a positive and significant relationship between trade liberalization and agricultural productivity in Nigeria. The study revealed that Foreign Direct Investment, Tariff, Fertilizer Consumption, and Capital Expenditure conformed to the a priori expectation and were significant apart from Foreign Direct Investment and Tariff which were found to be insignificant. Degree of Trade Openness did not conform to the a priori expectation but was found to be significant. The study thus suggests that more foreign investment should be encouraged and directed towards the agricultural sector to improve agricultural sector productivity.

Keywords: Trade Liberalization, Agricultural Productivity, Foreign Direct Investment, Tariff, Fertilizer Consumption, Capital, and Degree of Openness.

1. INTRODUCTION

Over the years, agricultural sector has been observed to play a significant role in the development and industrialization process of any country. As agricultural sector develops other sectors in the economy benefits from its resources, this has been observed to be the foundation on which developed economies such as Japan, China, United States and other countries in Europe built their industrialized economy. Agricultural development, therefore, has become an important structural framework for economic transformation towards industrial development. This is because agricultural development promotes industrialization (Adelman and Morris 1998).

Agricultural sector in Nigeria is observed to be an important sector in the economy and equally regarded as a key determinant for sustainable economic development. Prior to the discovery of oil, agricultural sector in Nigeria was the main source of revenue for the country. With the discovery of oil, however, and the oil boom in the seventies, agricultural sector was neglected hence its contribution to the Gross Domestic Product (GDP) declined from 65.7% in 1960 to 35% in

2014. This reality, therefore, gave rise to the problem of increase in the poverty level and food insecurity in the country. According to the Nigerian Bureau of Statistics (2014), the poverty level increased to 33.1% in 2013.

Due to the dwindling contribution of the agricultural sector, the government became more involved in reviving and boosting the sector, with several agricultural programmes and projects launched, and also concessionary interest rate structure was adopted with cheap and direct credit to the sector.

Over the years, Nigeria has adopted considerable measures of trade liberalization, this includes and effective rates of protection & reduction in average tariff rates as a way of achieving sustainable economic growth and development of which agriculture is one of the key drivers. This is been motivated from the urgent need to promote economic diversification, since relying on only crude oil portends great risk to the economy. Given the level of Nigeria's trade openness of 2016 which is over 20% compared to the 49% of year 2000 (CBN 2016), the trade openness data has shown a fluctuating decline in the degree of openness for the Nigerian economy, part of the reasons for this could be a deliberate effort by the government to discourage foreign goods from flooding the Nigerian market and to encourage local production, however this reality has a negative impact on the economy as competitions in the market is reduced. According to Martin (1997) the relationship between trade openness and economic growth is positive, his view is in accordance with economic orthodox which presupposes that the higher the intensity of competition inspired by trade openness the better the economic performance of the country.

While the volumes of previous studies are attempting to reach a theoretical consensus on trade liberalization and economic growth and/or agricultural output, it will be of interest to examine in the same vein the pathway of agricultural productivity in the wake of trade liberalization. Most empirical studies on trade liberalization such as Ugagu (2012) carried out a research on the contribution of Trade Liberalization to agricultural outputs in Nigeria. Anowor et al (2013) on the impact of trade liberalization on Nigeria agricultural performance with particular attention to the export sub-sector. Akims (2017) on trade liberalization and manufacturing sector in Nigeria. However these studies provide evidence only for the influence of trade liberalization on agricultural output, agricultural performance, and manufacturing sector respectively. However not much work has been done regarding the relationship between Trade Liberalization and Agricultural productivity. One other issue largely overlooked in the related literature is the possibility of a casual dimension to the relationship between trade liberalization and productivity in agricultural sector.

The relationship between trade liberalization and productivity of agricultural sector in Nigeria is the main focus of this study. This will be carried out using secondary data from 1985-2017. The study contributes to the literature by accounting for the possibility of reserve causality in the relationship. The study in addition, adds to the literature by extending the relationship in question beyond the common issue of economic and/or agricultural output and addressing the core question of agricultural productivity in Nigeria.

2. LITERATURE REVIEW

2.1 Concept of trade liberalization and agricultural productivity

Ogunlana, (2002) posited that trade liberalization is the removal of restrictions that can hamper free trade particularly in export & adoption of several incentives for export & a more realistic exchange rate policy. In building up this general idea, Ajakaiye et al (2005) included that the start of trade liberalization episode coincided with the reduction or elimination of quota restriction on trade. Trade liberalization could likewise mean a decrease in all trade barriers, for example, tariff and increasing openness of import restriction in every economy so as to make and encourage competency in the global economy, proficiency in asset allotment and specialization underway through increase in competition of world market force, and tolerance of differing society, law and institutional frame work of participating nations (Ugagu 2012).

Shafi (1984) defined agricultural productivity as the ratio of index of local agricultural output to the index of total input used in farm production. Singh, (1966) saw agricultural efficiency as productivity expressing the varying relationship between agricultural produce and one of the major inputs, like land labour or capital, while other complimentary factors remaining the same. Productivity, as observed from the expression is a physical component rather than a broad concept. In a broad sense, productivity is a measure of how effective & efficient resources are utilized as inputs produce products & services needed by the society in the long-run.

Empirical Review

Akinmulegun, (2018) carried out a study on the impact of globalization on agricultural productivity in Nigeria. Annual time series from 1986-2015 was utilized in the study. The study adopted the bound test/ARDL approach to co-integration. The data analysis result revealed that degree of openness, foreign exchange and foreign direct investment were no statistically significant. On the other hand, consumer price index was seen to be significant and positively influenced agricultural productivity in Nigeria. The study concludes that globalization has not significantly influenced the growth of agricultural productivity in Nigeria.

Ugagu (2010) studied the impact of trade liberalization on the agricultural sector output in Nigeria from 1986-2009. The study adopted OLS method of estimation. The study found that trade liberalization on an aggregate exact a significant impact on the output of agriculture in Nigeria. It was recommended in the study that the government should take deliberate steps towards increasing the small scale enterprises in Nigeria. This is necessitated because most enterprises in the country are mostly agro-allied that depend on the supply of raw materials from the agricultural sector and also through improved technological innovation increase productivity per capita income of the people.

Olowe et al (2015) studied the impact of trade liberalization on the economic growth of Nigerian economy. Both descriptive and econometric analysis was used in the study. The descriptive analysis showed that the trend of trade openness in Nigeria and economic growth has been positive but relatively unstable. The ordinary least square estimate technique revealed a negative relationship between trade openness & the Gross Domestic Product of Nigeria which is used as a proxy for economic growth. While other variables such as exchange rate, regime of administration and SAP showed positive non-significant relationship with growth. Major conclusion from the study is that Nigeria has not benefited significantly from trade liberalization.

3. METHODOLOGY

To proffer solution to the problems identified, the study adopted an econometric analysis. This study examines the impact of trade liberalization on agricultural productivity in Nigeria. To carry out this study, time series data from 1985-2017 were used. Research design used is the ex-post facto research design. This research design describes the statistical association between the dependent and independent variables with the intention of exploiting the causal relationship between them. Hence, the study employed bounds test/ARDL approach to co-integration to examine the impact of trade liberalization on agricultural productivity in Nigeria. The variables used are foreign direct investment, trade openness, and tariff as proxy for trade liberalization and fertilizer consumption and capital expenditure as proxy for agricultural productivity. The Augmented Regressive Distributive Lag ECM model was adopted to determine the models short run dynamics. The pair-wise Granger Causality approach was employed to test for possibility of a casual dimension to the relationship between Trade liberalization and agricultural productivity.

3.1 Theoretical Framework

The study main objective is to examine the impact of trade liberalization on agricultural productivity in Nigeria. To achieve this objective, the theoretical structure is built on the Cobb-Douglas production theory and Heckscher-Ohlin theory of trade. The analysis of agricultural productivity necessitates the understanding of production technology in agricultural sector, under which agriculture sector is believed to be interested in attaining technical efficiency in production given a combination of factor inputs. Production function that characterizes this production technology is represented below;

$$Y = f(L, K, M, Ld, Fe,) \text{ --- (1)}$$

Where Y represents Gross agricultural output, L is Labour inputs, K represents capital input, & M represents machinery input Fe is fertilizer consumption.

Capturing equation (2) to take an appropriate form of the Cobb-Douglas production function, we have:

$$Y_t = A_t I_t^{\beta_l} K_t^{\beta_k} M_t^{\beta_m} Ld_t^{\beta_{Ld}} Fe_t^{\beta_{Fe}} e_t^{\mu_t} \text{ --- (2)}$$

Where $\beta_l, \beta_k, \beta_m, \beta_{Ld}$ and β_{Fe} denotes the gross output elasticity of labour, capital, intermediate machinery input, land & fertilizer consumption respectively, the subscripts represents the agricultural sector time period respectively. Taking logs of equation (2) to linearize the function, we have:

$$\log y_t = \alpha + \beta_l \log l_t + \beta_k \log k_t + \beta_m \log m_t + \beta_{ld} \log ld_t + \beta_{fe} \log fe_t + \mu_t \text{ --- (3)}$$

Where:

$$\alpha = \text{Log}A \text{ (constant)}$$

$$y_t = \text{log of gross output of agriculture in period } t$$

$$l_t = \text{log of labour input employed in period } t$$

$$k_t = \text{log of capital input employed in period } t$$

$$m_t = \text{log of machinery input utilized in period } t$$

$$fe_t = \text{log of fertilizer input utilized in period } t$$

$$ld_t = \text{log of arable land input utilized in period } t$$

$$\mu_t = \text{error term}$$

The contributions of L, K, M, Ld and Fe to Y output at a particular point in time can be estimated from equation (3).

The production function in equation (3) shows the agricultural sector's output which can be obtained with a given set of inputs and which equally provides basis for deriving the total factor productivity adopted in analyzing the effects of trade liberalization on the productivity of agricultural sector in Nigeria. The productivity of the agricultural sector is measured by total factor productivity method, generated by dividing the values of real outputs with a given amount of inputs. This can be mathematically explained as:

$$TFP = \frac{Y}{L} + \frac{Y}{K} + \frac{Y}{M} + \frac{Y}{Ld} + \frac{Y}{Fe} \text{ --- (4)}$$

Where;

TFP is the total factor productivity, Y represents gross output, L is labour input, K is capital input, and M represents machinery input, Ld represents land input and Fe is fertilizer consumption.

In linking trade liberalization and agricultural sector productivity is the Hecksher-ohlin theory of trade. The argument is that, countries export what they can plentifully and most efficiently produce. Trade is evaluated with it, more precisely, the equilibrium of trade laying more emphasis on the exportation of goods which needs factors of production that the country possesses in abundance. It equally lays emphasis on the importation of commodities that the country can't produce as efficiently. It's of the view that a country should export resources which they have in abundance; while proportionately import the resources they need.

3.2 Model Specification

This study focuses on the impact of trade liberalization on agricultural productivity in Nigeria. Cobb-Douglas production function and the Heckscher-Ohlin trade theory are the theoretical foundation of this study. Thus, to establish the relationship between trade liberalization variables and agricultural productivity, we have:

$$AP = (FDI, DTO, TAR, Fe, K) \text{ --- (5)}$$

$$AP_t = A_t FDI_t^{\beta_1} DTO_t^{\beta_2} TAR_t^{\beta_3} Fe_t^{\beta_4} K_t^{\beta_5} e_t^{\mu_t} \text{ -----(6)}$$

Adopting a double-log model to help linearize the model, or smoothen the data, as well as to interpret the coefficients as elasticities, we have:

$$\log AP_t = \alpha_0 + \beta_1 \log FDI_t + \beta_2 \log DTO_t + \beta_3 \log TAR_t + \beta_4 \log Fe_t + \beta_5 \log K_t + \mu_t \text{ -----(7)}$$

Where:

- log = Logarithm
- AP_t = Agricultural productivity in period t
- FDI_t = Foreign direct investment in period t
- DTO_t = Degree of trade of openness in period t
- TAR_t = Tariff in period t
- Fe_t = Fertilizer inputs utilized in period t
- K_t = Capital input utilized in period t
- α_0 = Log A (Intercept or autonomous parameter estimates)
- $\beta_1 - \beta_5$ = Coefficient of FDI, DTO, TAR, Fe and K
- μ_t = The white noise error terms

3.3 A priori Expectation

The expected sign of the parameters in line with the economic theory is stated by the a priori expectation. The following relationship is expected between the independent variables. Degree of trade openness (DOP) + positive and foreign direct investment + positive, Tariff (TAR) – negative. The sign expected of the coefficients of the explanatory variables are, $\beta_0 > 0; \beta_1 > 0; \beta_2 > 0; \beta_3 < 0; \beta_4 > 0; \beta_5 > 0$

4. ANALYSIS AND DISCUSSION OF RESULTS

The parameter estimates were subject to different econometric test. Stationarity analysis were conducted, the auto-regressive distributive lag or the bounds test approach to co-integration was used in this study, granger causality test is used in the study and some post-estimation diagnostics test.

4.1 Unit Root Test

Time series data are non-stationary and stochastic. Unit root test therefore is a test of non-stationarity or stationarity of the time series data adopted in the model. This study adopted the Augmented Dickey-Fuller and Philip-Perron Techniques to verify and test the unit root property of the series & stationarity of the model, table 2 and 3 below presents the result

Table 2: Augmented Dickey-Fuller Table.

Variables	ADF t-stat	Critical Value	Order of integration	Remark
AP	7.083770	-2.957110	1(0)	Stationary
FDI	-11.5495	-2.9604	1(1)	Stationary
DTO	-2.9794	-2.9571	1(0)	Stationary
TAR	-3.7070	-2.9571	1(0)	Stationary
Fe	-3.8121	-2.9571	1(0)	Stationary
K	-6.6481	-2.9640	1(1)	Stationary

Source: Researcher’s Computation, 2019 (Eviews-10)

Table 3: The Philip-Perron table

Variables	PP t-stat	Critical value	Order of integration	Remark
AP	6.5211	-2.9571	1(0)	Stationary
DTO	-2.8991	-2.9571	1(0)	Stationary
FDI	-10.7171	-2.9604	1(1)	Stationary
TAR	-3.7653	-2.9571	1(0)	Stationary
Fe	-3.8139	-2.9571	1(0)	Stationary
K	-6.6481	-2.9604	1(1)	Stationary

Source: Researcher’s Computation, 2019 (Eviews-10)

The unit test result thus showed that the two stationarity results (that is, ADF and PP test) are consistent with each other; and also, the variables were found to be stationary at mixed orders. Since all the variables were discovered to be stationary at different order, it is safe for the study to employed ARDL bound test approach to validate or test for the presence of Co-integration.

4.2 Co-Integration Test Results

If variables have a long run relationship between them or equilibrium relationship the variables are said to be co-integrated. This is carried out in order to avoid situations of spurious regression. Table 4 presents the results of the co-integration test using the ARDL bound test approach to Co-integration.

Table 4: Results of ARDL-Co-integration Test

F-bounds test		Null hypothesis: no levels relationship		
test statistic	Value	Significance	I(0)	I(1)
f-statistic	10.96814**	10%	2.37	3.2
k	5	5%	2.79	3.67
		2.50%	3.15	4.08
		1%	3.65	4.66

Notes: ** significant at 5%.

Source: Researcher’s Computation, 2019 (Eviews-10)

From the results obtained, it was observed that the variables are cointegrated. The value of f-statistics was found to be 10.96814 which is greater than both the upper & the lower bound values at 5% significance level. Thus, sufficient proof exists to show that there is a longrun relationship between the trade liberalization & agricultural productivity in Nigeria. The result thus showed that trade liberalization has longrun sustainability on agricultural productivity within the period under study.

4.3 Model Estimation

4.3.1 Long-Run Results

The study also carried out an estimate of longrun coefficients. The obtained result is presented in Table 5 below

Table 5: long-run Results

Dependent Variable: log(AP)				
variable	coefficient	std. Error	t-statistic	prob.
Log (FDI)	0.1647	0.1671	0.9853	0.3439
DTO	-0.0263	0.0072	-3.6438	0.0034
TAR	-0.0037	0.0067	-0.5476	0.5940
LOG(FE)	0.5311	0.4021	1.3206	0.2113
LOG(K)	0.6783	0.1117	6.0720	0.0001
C	-2.4509	0.8299	-2.9534	0.0121

Source: Researcher’s Computation, 2019 (Eviews-10)

From Table 5.4, it could be observed that Foreign Direct Investment has a positive and insignificant relationship with agricultural sector productivity (AP). It was observed that a percent change in FDI, on the average increases the AP by 0.16 percent between 1985 & 2017.

Degree of trade openness (DTO) was seen to have a negative & significant relationship with agricultural productivity AP. It reveals that 1% increase in DTO, on the average, reduces AP by 0.02% within the period under review. This result however is not in line with the *a priori* expectation

Tariff (TAR) was further found to have a negative & insignificant relationship with productivity of agricultural. This negative relationship is in-line with the *a priori* expectations of this study. It shows that a percent increase in TAR, on the average reduces AP by 0.003 percent between 1985 and 2017.

As regards to the contribution of fertilizer (FE), it shows that FE has a positive (which is in agreement with our *a priori* expectations), but insignificant relationship with agricultural productivity AP. This positive relationship shows that a percent change in FE, on the average, increased AP by 0.53 percent between 1985 and 2017.

Lastly, from the long-run results, it was discovered that capital (K) met the *a priori* expectations of the study by having a positive relationship with agricultural productivity AP. This relationship was also found to be significant. It shows that a percentage increase in K, on the average, increases AP by 0.67 percent between 1985 and 2017.

4.3.2 ARDL-ECM Results

Table 6: ARDL error correction regression result

dependent variable: Dlog(AP)				
selected model: ARDL(2, 1, 2, 2, 2, 3)				
Sample: 1985 2017				
variable	coefficient	std. Error	t-statistic	prob.
Dlog(AP(-1))	0.325047*	0.064748	5.020166	0.0003
Dlog(FDI)	0.170976*	0.045253	3.778186	0.0026
D(DTO)	-0.0067*	0.001516	-4.42089	0.0008
D(DTO(-1))	0.005528*	0.001541	3.58777	0.0037
D(TAR)	0.00231**	0.000804	2.873737	0.014
D(TAR(-1))	-0.00137*	0.00075	-1.82615	0.0928
DLOG(FE)	0.13151**	0.052482	2.505826	0.0276
DLOG(FE(-1))	-0.15444**	0.051535	-2.99685	0.0111
DLOG(K)	0.010497	0.016324	0.643072	0.5323
DLOG(K(-1))	-0.22247*	0.026104	-8.52255	0.0000
DLOG(K(-2))	-0.16735*	0.021114	-7.92615	0.0000
CointEq(-1)*	-0.3648	0.033993	-10.7315	0.0000
R-square	0.910637			
Adjusted R-square	0.856026			
DW stat	1.504061			

*Notes: ***, ** & * shows statistical significance at 10%, 5% & 1% levels respectively*

Source: Researcher’s Computation, 2019 (Eviews-10)

The error term coefficient as expected is negative, less than unity & statistically significant at 5 percent. From the result it is observed that the coefficient value of minus 0.3648 means that 36.48% of errors accrued in each period are corrected in the subsequent period. The coefficient value of minus 0.3648 indicates that as soon as there is disequilibrium in the system, in an average speed of 36.48% it adjust itself back towards long-run equilibrium.

The adjusted coefficient of 0.856, measures the goodness of fit of the model estimated, it shows that the model is reasonably fit for prediction. It showed that 85.60% variations in agricultural productivity are explained by the independent variables FDI, DTO determination, TAR, FE and K while 14.4 percent unaccounted variations were captured by the error term.

4.3.3 Granger causality test result

The granger causality test was carried out to establish the causal link or relationship between trade liberalization and agricultural sector productivity & the result obtained is presented in Table 5.6.

Table 7: Pair-wise granger causality tests Result

null hypothesis:	obs	f-statistic	prob.	decision rule
FDI does not granger cause AP	31	0.30016	0.7432	accept
AP does not granger cause FDI		1.19738	0.3181	accept
DTO does not granger cause AP	31	0.40080	0.6738	accept
AP does not granger cause DTO		2.57185	0.0957	accept
TAR does not granger cause AP	31	0.22866	0.7972	accept
AP does not granger cause TAR		3.36120	0.0503	reject
FE does not granger cause AP	31	1.25039	0.3031	accept
AP does not granger cause FE		5.09264	0.0136	reject

Source: Researcher’s Computation, 2019 (Eviews-10)

Form the result of the pair wise granger causality test, it could be seen that there is no causal relationship between trade liberalization and agricultural productivity.

4.3.4 Post-Estimation Analysis

Various post estimation diagnostic test where carried out to determine the model appropriateness & its stability and also the robustness of the results. Hence, for reliability of the model estimates, series of residuals are obtained and stability test like the serial correlation, the heteroscedasticity test and the normality test. The f-statistics and the probability values were also obtained.

The decision rule guiding the decision making on the acceptance of the null hypothesis for any of this test is that the probability-value of each has to be higher than 0.05 which is at 5% significance level.

Table 8: Summary of Results of post-estimation test

Tests	Statistic	Results	
		Coefficient	Probability
Serial-Correlation Test	F-stat.	0.7036	0.5177
Normality Test	Jarque-Bera (JB)	1.3135	0.5185
Heteroscedasticity Test	F-stat.	0.6337	0.8103
Ramsey Reset	F-stat.	0.2027	0.6613

Source: Researcher’s Computation, 2019 (Eviews-10)

The result as presented in table 8 showed no evidence of heteroskedasticity & serial correlation in the estimated ARDL-ECM model as the probability-value of both (0.5177 & 0.8103) were observed to be higher than 0.05. in addition, Jarque-bera test for normal distribution indicated that obtained result reached a normal distribution with a bell shaped symmetrical distribution which is at 5percent level of significance. This was captured by the Jarque bera probability value of 0.5185 which is observed to be higher than 0.05. Furthermore, the specification test of the model is rightly specified. The probability value of 0.6613 was seen to be higher than 0.05 level of significance.

Lastly, the cumulative sum (CUSUM) stability tests (CUSUM and CUSUMSQ) in figure 5.2 and figure 5.3 (which was used to explain stability of the coefficient and explains the variables long-run relationship) revealed that the model is stable as the plots of the charts lie within the Critical Bounds at 5percent level of significance.

5. CONCLUSION AND RECOMMENDATIONS

In accordance with the study objective, which is to determine the impact of trade liberalization on agricultural productivity in Nigeria, the ARDL test for co-integration was adopted to test for the variables long-run relationship. But before the afore was done, a test for stationarity was carried out using both the ADF & the Philip-Perron test for stationarity, it was found that the series were found to be stationary at 1(1) and 1(0). The ARDL-ECM was used to estimate the speed of adjustment of the variables; the Pair Wise Granger causality test was used to determine the direction of causality among the variables. Other test such as the normality test, Autocorrelation test, reset test, CUSUM/CUSMSQ test.

The findings discussed in this study is in line with the research objectives that are stated in chapter one. Findings from the study indicated that there is no bi-causal relationship between trade liberalization & agricultural productivity. However, it was discovered from the study that trade liberalization has a significant and long-run impact on the productivity of agricultural sector in Nigeria. This finding agrees with one of the advantages of trade liberalization in the literature, which is increases in economic efficiency and productivity; in this case increases in agricultural productivity. This study found out that FDI has a positive & significant impact on the productivity of agricultural sector. Trade Openness was observed to have a negative impact on agricultural productivity; Tariff was however discovered to have a negative & insignificant impact on the productivity of agricultural sector. In addition, fertilizer consumption and capital contribution where found to have a positive & significant impact on agricultural productivity.

The ARDL-ECM result showed the coefficient value of minus 0.3648 which means that 36.48% of errors accrued in each period is corrected in the subsequent period. The coefficient value of minus 0.3648 showed that as soon as there is disequilibrium in the system, in an average speed of 36.48% it adjust itself back towards long run equilibrium level. However this magnitude is quite weak which implies that the explanatory variables are weak to respond to shock in the dependent variable.

The pair-wise Granger Causality result showed that there is no bi-causal relationship between trade liberalization & agricultural productivity.

With the study findings, the study thus conclude that trade liberalization has a significant and long-run impact on agricultural productivity in Nigeria.

The study thus recommends that more foreign investments should be channelled to the agricultural sector, the government should encourage and attract more foreign investment to the agricultural sector through a conscious effort of making the sector a priority in its development policies and plan realistically and sourcing of competent manufacturing FDI.

Secondly make provision for improved infrastructure in the agricultural sector, third; encourage more local mass production investment in agricultural sector and lastly there should be improved technological practices in the agricultural sector in order to spur more and better productivity growth in the sector.

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