
EMPIRICAL ANALYSIS OF GLOBALIZATION AND ADMINISTRATIVE REGIMES IN TERMS OF AGRICULTURAL SECTOR PERFORMANCE IN NIGERIA (1981 - 2018)

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ABSTRACT: *The study investigates the impact of globalization on the performance of the agricultural sector with emphasis on the various administrative regime in the economy from 1981 to 2018. The study employs time series data, source from secondary sources in both national and international bodies, using the Johansen cointegration approach to complement the classical least square method to analyze the data. Globalization was proxied with ODA, FDI, global oil price (GOP), trade openness and portfolio investment in the sector, while capital formation serve as control variable with dummy variable measuring the administrative performance effects in managing the processes of globalization on the sector performance. The short run result estimate reveal that globalization is not a determinant of the sector performance, what drives the performance of the sector is previous performance level of the sector, the Johansen cointegration test shows the existence of long run relationship with 0.8 percent degree of adjustment coefficient. Trade openness has negative and insignificant effect on the sector performance and this was affirmed with the effects of the administrative regime wherein the military foreign policy mitigates the sector performance with negative effects. Furthermore, civilian administrative trade policy favour the sector with positive effects on performances, the computed R^2 and Durbin Watson statistics shows that the estimated model has a good fit and there is no evidence of autocorrelation. We therefore recommend for ban of food importation while encourage agricultural technology importation.*

Keywords: *globalization, global oil price, agriculture output, administrative regime*

INTRODUCTION

Globalization is a geographical shift in economic activities across the globe; it is the geographic dispersion of industrial and service activities and the cross-border networking of companies. Today the world is seen as a global village wherein exchange of goods and services are now between two poles; the domestic and the rest of the economies (Steger, 2005). To some this is a blessing while others believe to be a curse with much negative effects on the domestic economy with reference to international competition (Yousuo, 2018). Rodrik (2011) argued, from the mercantile monopolies of seventeenth century empires to modern day authority of the World Trade Organization, International Monetary Fund, and World Bank, economies across the globe have struggled to effectively harness

globalization's promise. The economic narratives that underpinned these eras; the gold standard, the Britton Woods regime, the Washington Consensus brought great success and failure. Hence, there is need for complementary evaluation of government and the market in attaining and sustaining economic stability from globalization promise.

There is no doubt that the expansion of trade and the diffusion of techniques which globalization promises are necessary ingredients for structuralizing of the economy. The challenge, however, is whether Nigeria have taken advantage of the liberalization process, at the same time avoiding or minimizing the disruptive consequences of globalization on her economy in sustaining inequalities, poverty, low output, import inflation, and unemployment with reference to the recent performance indicators of the various sectors (Central Bank of Nigeria, 2018). A critical examination of the Nigerian economy shows that the contribution to world trade is still low with little contribution to Gross Domestic product as against economies that trade on manufactured or finished goods (Nabine, 2009). Similarly, the impact of globalization processes, such as trade intensity index, portfolio investment stock and trade restrictions in relation to sectors have not been judiciously felt. Which weaken the productive base of these sectors in more competitive global environment and aftermath contribution to the economy?

Empirical literature on globalization in Nigeria concentrate more on economic growth with scanty studies in sectoral analysis, and most of these studies shows degree of mixed effects of globalization on economic growth, manufacturing, financial subsectors without looking at the role played by the macroeconomic manager Feridun, Olusi, and Folorunso (2006); Gatawa, Aliyu and Musa (2013) Hassan (2013); Danladi, Akomolafe, Babalola, and Oladipupo (2015); Yousuo, (2018); Ali, Obayori, and Obayori, (2018)). The economy as a whole has witness good degree of resource inflows from the nature and processes of economic globalization in the last three to four decades, by apriori knowledge we expect some level of changes in the social welfare indices of the country emanating from the structural and sectoral adjustment to such inflows.

On the contrary resource inflows were not harmonized with adequate public investment, safety nets, good governance, and donor geopolitical motives. The findings of scholars on the nature of globalization in the economy is abysmal in countries like Ghana, Tanzania, Kenya, South Africa, etc. based on ineffective policy administration of such economic processes or misplacement of priorities by political office holders. These are issues we intend to investigate by delving into the role of the administrative regime in the macroeconomic management of the economy's diversification from the proceeds of economic globalization, which has been the limitation of previous studies among others. Hence, the study intends to examine the economic implications of globalization on the structural changes of the economy, with reference to some specific real sector performance indicators.

The study aims at examining the economic implication of globalization on some real sector performance indicators of the Nigerian economy taking cognizance of the different administrative regimes of the country within the period under review. In order to achieve the set goal, the following specific objectives will serve as a guide:

To ascertain the impact of globalization on the performance of the Agricultural sector in different administrative regime

LITERATURE REVIEW

Roa and Storm (2002) give a comprehensive account how agriculture in the developing economies has become an integral part of the foreign markets. Most developing economies (DEs), in the 1980s witnessed economic crisis due to liberal policy reforms; liberalization of agriculture, followed by emergence of international Agreement on Agriculture within the aegis of World Trade Organization which enhanced agricultural globalization in most developing economies (Shehu, 2018). However, this increase in trade flows were not complemented by relative price convergence between economies due to asymmetric information, and the significant effects of agricultural trade between developed and developing economies remain complementary rather than competitive (Ajibola, 2019).

Whether a country, regions within countries and societies gain or lose in the process of globalization depends on where they are in the process of agricultural transformation and the extent to which they can adjust as categorize below;

- those at the low end of the agricultural transformation process
- those in the process of agricultural modernization and
- those at high end of the transformation process.

Empirically, Yusuff et al., (2015) looked on the impact of foreign direct investment in agriculture on agricultural sector and its contribution to economic growth in Nigeria using descriptive statistics and simple linear regression to analyze the data. With the share of agriculture in Gross Domestic Product (GDP) as a function of foreign direct investment in agriculture, (AGRFDI) and the result shows that inflow of Foreign direct investment to agricultural sector did not follow a regular pattern, but that the sector's contribution to gross domestic product was in direct relationship with the inflows of Foreign Direct Investment. The researchers recommended that the government should put in place the necessary infrastructure and find permanent solution to the problem of insecurity as this would enhance the flow of foreign direct investment into the economy as a whole and the agricultural sector in particular. Daniel and Maiwada (2015) analyzed the nature and volume of Chinese trade and investment in Nigeria's Agricultural sector and its impact on the economy. The study revealed that that the sector which dominated the economy as source of revenue generation will soon give way to crude oil and that Chinese trade and investment in the sector is very low compared to other sectors and have not focused much in the development of the sector in Nigeria.

Ojo (2018) examined the relationship between globalization and agricultural productivity from 1986 to 2015 of annual time series data. He used FDI, degree of trade openness, foreign exchange as proxies for globalization impact on agricultural output. The study adopted the autoregressive distributed lag model, bound test, and the result revealed FDI, degree of openness, and foreign exchange not to be statistically significant in predicting favourable trend of agricultural productivity in Nigeria. While consumer price index has positively significant effects on agricultural productivity and the study conclude that globalization has no significant impact on the growth of the Nigerian agricultural sector productivity. He then recommended a redirection of economic policies towards agricultural driven system through aggressive diversification of the economy in order to key into the global train.

Akinwale, Adekunle and Busayo (2018) scrutinize the impact of foreign direct investment on agricultural productivity in Nigeria. The study employed Augmented Dickey Fuller (ADF), Johansen test and Error Correction Model (ECM) to measure the effect of

foreign direct investment and agriculture sector productivity. The unit root test results revealed that all the variables were stationary at first difference. The results of the co-integration test show the existence of long run relationships among the variables. The result of the error correction model indicated that both foreign direct investment and bank credit to agricultural sector had significant effect on agricultural. In their conclusion, there is need for further exploration of the sector by foreign investors in order to benefit from the huge potentials of agricultural sector. They recommended that, adequate infrastructures in the area of road networking to create massive rural-urban linkages to attract foreign private investments.

Dogo and Ismailia (2019) also examined the impact of globalization on agricultural productivity in Nigeria using annual time series data from 2008 to 2018 with degree of fairness, and production output as proxies for globalization and agricultural productivity respectively. They concluded that the impact of globalization has not significantly improved on the growth of agriculture activities in Nigeria. Despite the role played by the sector in creating employment and contributing immensely to the economy.

Finally, Ajibola (2019) take a cursory looked at the Nigerian economy with global perspective through agricultural sector and forestry sub sector to evaluate and concluded that Nigeria has benefitted from globalization but not as much as she should, giving the imbalance of the outcome within subsector of the economy especially forestry subsector of the economy. He employed secondary data sourced from the Central Bank of Nigeria Statistical bulletin, using degree of openness and growth as proxies for globalization and Agricultural outputs, he then established that Nigerian economy has had its share in the benefits of international trade through agriculture, couple with the effects of fluctuation in world market. That agro forestry land use practice is desirable and capable of enhancing the needed production in agricultural sector vis54S a vis exportation, hitherto, enhancing the desired growth and development to the country.

METHODOLOGY

The study made used of time series data sourced from secondary sources; national and international bodies. The variables considered in this study are divided into two groups; the explained and the explanatory variables. Variable's selections in econometric research are either by adoption, adaptation, derivation, intuition, or combination, in this study variable were selected by combination.

The study employs a dynamic model and stating the relationship between the explained and the explanatory variables with reference to our objectives in mathematical (functional) and econometric nature as

$$ASP = f (FDI, FPI, GCF, TO, ODA, GOP, DM) \dots\dots\dots 1$$

$$ASP = \pi_0 + \pi_1 FDI + \pi_2 FPI + \pi_3 ODA + \pi_4 GCF + \pi_5 TO + \pi_6 GOP + \pi_7 DM + \mu \dots\dots\dots 2$$

Where ASP is agriculture sector performance indicator, FDI is foreign direct investment, FPI is foreign portfolio investment, GCF is gross capital formation of the economy, TO is trade openness, ODA is official development assistance, GOP is global oil price and DM is a dummy/binary variable which measure the effect of administrative regime in management of globalization processes, assuming the value of one under military administration and zero for democratic administration, and μ is the random term assumed to be independently and identically distributed. And the apriorism expectations; $\pi_i > 0$

RESULT AND DISCUSSION

Model Estimation on the Relationship between Globalization and Agric Sector Performance

$$ASP = C(1) + C(2)*GOP + C(3)*FPI + C(4)*FDI + C(5)*TROPEN + C(6)*ODA + C(7)*DUM$$

	Coefficient	Std. Error	t-Statistic	Prob.
C (1)	15404.15	3568.705	4.316454	0.0002
C (2)	-28.56896	32.22930	-0.886428	0.3822
C (3)	-8.28E-07	2.07E-07	-3.998944	0.0004
C (4)	-0.014749	0.007155	-2.061391	0.0477
C (5)	-7231.678	5994.710	-1.206343	0.2368
C (6)	-1.07E-07	3.98E-07	-0.269500	0.7893
C (7)	-11531.21	1995.077	-5.779835	0.0000

R² = 0.773, AIC = 19.6759, DW = 0.8240, F-stats = 17.5710 (0.0000)

The above estimated model shows the true nature of agricultural sector performance as determined by globalization at different administrative regimes of government. The estimated model shows a negative effects of globalization processes on the sector performance. The intercept of 15404.15 shows the level of agricultural sector performance during civilian administration, that the sector performance is positive revealing the true nature of policy maker and political office holder in the country towards agricultural development. During military administration the sector performance is negative (-11531.21), hence, the performance of the sector at the economy relate with the outside world under the two regimes liberalization policy implication varies as indicated by the computed estimated parameters. The civilian administration drive on diversification of the economy by encouraging the agricultural sector and trade policy implementation has truly enhance the sector performance. Ceteris paribus as macroeconomic managers continue liberalizing the economy as at today the sector will be enhance from 3872.94.

The result further reveals that all the explanatory variables have an inverse relationship with agricultural sector performance in Nigeria. A unit change in the level these globalization processes will mitigates the performance of the sector by -28.5690, -8.28E-07, -0.0147, -7231.68, and -1.07E-07 for global oil price, foreign portfolio investment, foreign direct investment, trade openness, and official development assistance respectively. This implies that the responsiveness of the sector to globalization is inelastic nature

Theoretically, the estimated result is in line with our apriori expectations except for foreign direct investment. The reason for this contradiction is due to poor utilization and diversification of human and material resources within and other sectors. Secondly, the mode of production in the sector is still crude with little mechanization, and globalization which seems to transfer technology to the sector experience poor coordination in terms of market and credit accessibility to boost production. Trade partners see the economy as a large market for profit maximization and partner with compradors in retard government efforts of revamping the sector. The agricultural sector of the country as at today is still at the nursing stage which call for productive collaboration and partnership of private and public sectors to enhance the sector output. The sector is the drive of industrialization and proper management of the sector will aid the performance of other sector and the economy at large.

Statistically, the processes of globalization are true determinants of the agricultural sector performance in the short term. With reference to their computed probability value foreign direct and portfolio investments are statistically significance at 5% level, while global oil price, official development assistance and trade openness are not significance. The coefficient of determination estimate shows that the regression line has a good fit, and that globalization processes explain 77% of the total variability of the sector performance in Nigeria. This was also affirmed by the computes f-statistics that the overall regression estimated is significance despite the insignificance status of some of the explanatory variables in the short term. Hence, as processes of globalization, foreign direct and portfolio investments are true determinants of agricultural sector performance in the short run.

The computed Durbin Watson statistics is a clear indication that the estimated regression line satisfy the classical least square assumption and there is no autocorrelation based on the rule of thumb. The stationarity of the residual or error term at level also implies that the variables are cointegrated, that they a long-term relationship. This Engel-Granger two step analysis enable us to test for the Johansen cointegration test.

Table 4.17: Johansen Cointegration test for Objective three (3)

Series: ASP FDI FPI GOP ODA TROPEN

Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized	Trace	0.05		
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.950740	204.4933	95.75366	0.0000
At most 1 *	0.648414	96.10980	69.81889	0.0001
At most 2 *	0.561739	58.47896	47.85613	0.0037
At most 3	0.326849	28.78107	29.79707	0.0651
At most 4	0.228043	14.53281	15.49471	0.0694
At most 5 *	0.134859	5.215041	3.841466	0.0224

Comparing the trace value with the eigen values there is possibility of three cointegration equation from the variables of interest. Based on this finding we then proceed in examining the true determinant of the sector performance by estimating the overparameterized model which result to the table below.

Table 4.18: Over parametrized Estimation Result for objective three (3)

Dependent Variable: ASP

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ASP (-1)	1.145858	0.019902	57.57397	0.0000
FDI	-0.001481	0.000840	-1.762717	0.0902
FDI (-1)	0.001104	0.000771	1.430528	0.1649
FPI	-3.56E-08	2.83E-08	-1.259765	0.2194
FPI (-1)	1.15E-07	3.69E-08	3.114091	0.0046
GOP	1.236026	6.051392	0.204255	0.8398
GOP (-1)	-6.382269	5.904121	-1.080985	0.2900
ODA	-2.51E-08	4.49E-08	-0.557910	0.5819
TROPEN	-823.6596	993.2590	-0.829250	0.4148
TROPEN (-1)	1251.473	910.5342	1.374438	0.1815

ECM (-1) -0.087159 0.029425 -2.962064 0.0066
 C 193.9707 289.0210 0.671130 0.5083
 R2 = 0.9981, AIC = 15.1888, DW = 2.1734, F-stats = 1185.343 (0.0000)

From the estimated result we discovered that past level performance of the sector and portfolio investment, and foreign direct investment are true determinants of the current level performance of the sector, although foreign direct investment is not significance at 5% but significance at 10% level of significance. And that trade openness, global oil price, and official development assistance are not true determinants of the sector performance. This result further show, that official development assistance which has a negative sign implies that foreign aid for the sector development over the years in competing with the global world has not been beneficial after all. This cast some doubt on the volume of aid received from advance economy in developing the sector over the years and global agreements enter into by the Nigerian government such as World Trade Organization, various international commitments between Nigeria and China, US, etc. has not being beneficial to the Nigerian economy. In short it shown in our result that that international agreement to foster trade liberalization and trade openness to both African countries in the global world has not been sustainable in improve Nigerian economy. Policy on the sector development should be inward driven, for continuous ban of food importation will encourage the sector performance as recently experienced. The model estimated is generally significance and also have a good fit, this motivated us to estimate our parsimonious model or the error correction model as given below.

Table 4.19: Parsimonious Estimation Result

Dependent Variable: ASP

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ASP (-1)	1.133940	0.014917	76.01783	0.0000
FPI (-1)	7.95E-08	3.03E-08	2.623050	0.0131
RESID_0(-1)	-0.055043	0.024095	-2.284465	0.0289
C	71.67188	95.79167	0.748206	0.4596

R2 = 0.9975, AIC = 15.0350, DW = 1.9630, F-stats = 4339.035 (0.0000)

The estimated result still reveals that at a state of Autarky the sector performance is positive as measure by the intercept of the regression line (71.67188). The degree of adjustment coefficient is -0.055 which implies that an equilibrium error of a naira will induces the sector performance to converses to stability by 0.055. Furthermore, in the long-term effects of past sector performance and foreign portfolio investment on the current level of the sector performance is 1.1339 and 7.95E-08 respectively.

The coefficient of determination and the f-statistics still sustain the fitness and significance of the estimated regression line, as well as the Durbin Watson statistics values. The AIC value is more preferable than previous estimated regression line. Hence, globalization is not true determinant of agricultural sector performance in Nigeria rather the sector is self-driven and self-sustaining, policy makers must as a matter of contingency take cognizance of previous performance of the sector while evaluating the prospect of economic liberalization on the sector performance.

CONCLUSION

What drives the sector performance is not globalization but past level of the sector performance in the economy, complement with foreign portfolio investment in the sector.

Furthermore, trade openness having a negative and insignificant effects on the sector implies that opening of the economy to the global environment has not been productive to the sector rather retard the performance of the sector and as such should be discourage. This is worrisome that successful government continue with global trade agreements with the hope of developing the sector, rather than looking inward, as argued by Ayadi and Balonga (2006), Yousuo (2021), that trade liberalization has had negative effects on the Nigerian environment. Secondly, the insignificance status of official development assistance on the performance of the real sectors is another concern, indicating the existence of economic sabotage in the utilization of this flows into the economy.

For the purposive policy implementation, we recommend that

- 1 Global agreements with emerging and developed countries should be one of symbiotic relationship. That is the Nigerian government should go into agreement that will have benefit to the domestic economy rather than opening its economy for exploitation in the name of globalization.
- 2 Policy on agriculture should discourage food importation while encourage agricultural farm implements importation to boost the sector productivity. This will promote the sector competitiveness in the global market and create employment for the population.

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