PAPER • OPEN ACCESS

Agricultural Exports and Economic Growth in Nigeria: An Econometric Analysis

View the article online for updates and enhancements.

Agricultural Exports and Economic Growth in Nigeria: An Econometric Analysis

R Osabohien D Akinpelumi2 O Matthew3 V Okafor4 E Iku5 T Olawande6
U Okorie7

1,2,3,4,5,7. Department of Economics and Development Studies, Covenant University, Ota, Nigeria
6. Department of Sociology, Covenant University, Ota, Nigeria

Abstract. It has been observed that export promotion drive boosts economic growth of developing countries (Nigeria inclusive) through the multiplier effects that the income earned from exports has on the economy. Prior to the discovery of oil, agriculture has been the main contributor to the Nigerian external sector. It is in the light of this that this study sets out to examine the impact of agricultural export on Nigeria's economic growth. This study used the Autoregressive Distribution Lag (ARDL) econometric technique to analyze the long run relationship and the impact of agricultural exports on Nigeria's economic growth. Economic growth is the dependent variable, and is proxied by the real gross domestic product, the explanatory variables include: agricultural export, foreign direct investment, inflation rate and the labour force. The results from the ARDL technique revealed that agricultural exports significantly affect Nigeria's economic growth; this suggests that, a 1percent increase in agricultural export will boost economic growth in Nigeria by approximately 25percent.Therefore, from the results, the study recommended that agricultural export need to be promoted through the increase in agricultural production base.

1. Introduction

The performance of the sub-Saharan African (SSA) economies (Nigeria inclusive) has shown an improvement for the past two decades, this is reflected in upward trend of the Gross Domestic Product [1]. The Gross Domestic Product (GDP) of SSA countries grew by approximately 60%, with the middle class growing by 90% [2]. The SSA economies have been observed to be the fastest growing economy than any other region of the developing countries of the World, apart from South Asia and the growth of SSA economies have brought about the demand for agricultural commodities [2]
The SSA agricultural imports have also shown a rapid growth, this shows an average of 13 percent increase per year. In 2014, total imports of agricultural commodities was estimated at $485billion (United States Dollars), representing the second of the largest in the world. As a comparison, Asian countries, especially; India, imported only 17.6 billion USD in agricultural commodities, irrespective of the Indian population, which is about 300 million people more than that of the SSA countries [2]. The SSA total agricultural imports are about 11.7 billion USD from other countries within the region and 36.8 billion USD from other countries and regions of the world [2]

Economists, scholars and researchers across the world have drawn attention to the study of   the connection between the horticultural yields and the financial advancement of an economy. It has been theoretically argued that the difference in the rate of export rates could lead to differences in economic growth [3]. The export growth is recognized as the major contributor to productivity and the growth of employment of an economy evidenced in GDP growth rate [3]. The favourable climatic conditions combined with good vegetation enable SSA countries to produce crops and livestock in particular [4, 3]. The increase in agricultural exports has greatly benefited Nigeria; therefore, the relevance of exports to the financial development and progress of a country cannot be overemphasised as it helps to accelerate a country's overall progress [5]. In addition, exports are a means of foreign exchange earnings, due to the fact that trade activities between countries are settled in foreign exchange [6] Job openings are created for their citizens consequently reducing the social costs of unemployment [7]

In the work of [8] they opined that the drive towards export promotion will boost an emerging nation's economic growth through the multiplier effects of export on the income level of the country; this is because income earned through exports help to enhance the aggregate demand in the country. Over the

years, trade openness had attained a high degree in the Nigerian economy, thus, its efficiency should be promoted via the advancement of the efficiency of external trade. Primarily, agriculture has been the main dominant sector of the Nigerian external sector [9]

Agriculture has the distinguished features of low prices, unfavourable terms of trade earnings resulting from export instability [10]. The low earnings from export of agricultural commodities are due to decrease in production of agricultural commodities that made emerging economies rely on importation of food. Among the very important objectives of emerging economies in general and Nigeria to be specific, is the achievement of accelerated overall wellbeing of the nation. In this regard, exports are seen as a promoting factor for economic growth [10, 11, 12]

Two schools of thought (Adam Smith and Ricardian) are of the opinion that foreign trade remains as the major determinants of economic growth, through which higher benefits via specialization of a specific good. From the view of export led growth theory; exports as the main determinants of the growth of the economy, which have theoretical justifications like; first, in the Keynesian theory, higher exports generate higher earnings in the short term through the effect of foreign exchange multipliers. Second, higher exchange rises through higher exports, making purchases of machinery, electrical and transportation equipment. It is also used to buy fuel and food that can serve as a catalyst for any country's economic growth. Third, the economic growth of a country is promoted indirectly via competition improvement, scale of economies, development of technical know-how among others; fourth, externalities which are positive in nature such as the effective control of inefficiencies in organisations, production management and control, this can be done by learning from foreign firms and experts who are knowledgeable about product design to enhance productivity [11, 12]

Two schools of thought with different views about agricultural export are considered in this study: the first school of thought focused on the elements, which are exogenously determined to the individual country; such elements are minimal growth rate resulting from low production of primary products market and the terms of trade, which are unfavourable. On the other hand, the second school of thought focused on the elements, which are endogenously determined by a country, those factors are, the local institutions which have hampered agricultural export [4, 1, 13]. There is an obvious situation where no country is self-sufficient, nations inevitably trade with several others in order to enjoy goods and services for which it has a comparative weakness in its production while at the same time giving those goods a comparative advantage in its production, for example, Nigeria, where the masses are engaged in the agrarian section, while some are engaged in the manufacturing and tertiary sections.

However, recent information has it that Nigerian agricultural exports have experienced decreases in revenue because of price instability at the international market [14]. Compared to manufactured products imported from advanced countries around the world, these agricultural products are made less competitive, resulting in trade deficits. This has had a major impact on the share of agricultural products in Nigeria's economic growth. It is pertinent to study the previous and recent trend of such agricultural exports. With the above issue raised, coupled with agriculture-related issues have necessitated the need for a study in that regard. This study is therefore divided into five sections; following this introductory section is section two, which is the review of related literature, section three provides the data source and method used for the study, section four presents the results and discussions, and the fifth section presents the study's summary and conclusion.

2. Literature Review and Stylised Facts
2.1 Literature Review
As argued, agricultural exports have undoubtedly played a crucial role in boosting Nigerian economy growth as well as other sub-Saharan countries, contributing to foreign-exchange earnings in Nigeria and the SSA countries used to promote other capital projects. [15] Based on the Ordinary Least Square (OLS) regression model, the study analyzed the link between exports of agricultural commodities and economic growth in Nigeria. OLS results showed that agricultural exports in Nigeria have a positive impact on GDP. The agricultural sector was said to contribute about 34.4 percent to GDP growth between 1970 and 2010. Exports of agricultural products accounted for about 75 percent of total annual exports in the 1960s, according to studies of [16, 17].

In addition, Nigeria had been known to be the major producer and exporter of certain major produce in the world in the pre-independence period. Nigeria was the highest palm producing exporter (oil and

kernel) while ranking second in cocoa to Ghana and third in groundnut production. [16] It is also stated that a long-term link exists between agricultural exports and Nigeria's economic growth. Akin to [16, 1], using the ARDL approach unveils the various factors, which determine the food production level in Nigeria. These included technical know-how, others entails savings, change in technology, infrastructure and so on.

In the empirical work of [9], they used the propensity score matching approach and they noted that social protection laws and regulation driven towards the agricultural sector will help boost the production capacity of the sector and in return, economic growth. This is because, the agricultural sector is the major driving force of the economy, through the provision job opportunities and means of livelihood for the teeming population, especially in rural areas in which about 85 percent of the population depends solely on agriculture. Similarly, [4] Using qualitative discourse, it was pointed out that the institutional quality of local communities affects the production, processing and distribution of agricultural commodities, in particular rice production, the main food consumed by more than 90% of Nigerian households.

These institutions and social protection programmes could be in form of controlling emissions greenhouse gases, which negatively affects farmers' health status and causes damages to controls and livestock alike [11] In line with this, it is good to point out that as at independence in 1960, the agricultural sector accounts for more than 50 percent of the Nigerian economy's GDP. Nonetheless, the sector's growth rate has been declining over the years due to the crude oil discovery.

According to [18], it is generally agreed that food production in Nigeria is adequate and that economic liberalization has had a positive impact on food production. There were substantial benefits in aggregate and per capita indices of agricultural food production, following the economic deregulation between 1980-1989 and 1990-1998 periods, all major food products in the economy recorded substantially positive output trends, with a significantly higher percentage change in production for the post-SAP era. The era of pre-deregulation has seen negative growth in almost all agricultural sub-sectors. A very high rate of growth in agricultural yields was experienced immediately following the economic deregulation, most of which occurred in the staple food sub-sector.

Evidence from previous studies has shown that the recent global warming and emissions of greenhouse gasses have affected health status of farmers and the production level of agricultural commodities which has led to the reduction in the level of food production [11, 6]. In an attempt to satisfy the ever growing food and non-food requirements as a result of population growth, fertile soils, fossil fuel are indiscriminatingly been depleted across the globe to meet their demands via the adoption of ICTs and good institutions [19, 20, 21, 22]

According to [16], they examined the contribution of agricultural export commodities to economic growth and found that agricultural export commodities accounted for about 75% of total annual merchandise exports in 1960. In the pre-independence period, Nigeria was also known to be the world's leading producer and exporter of major food crops. Nigeria was the largest exporter of palm oil and palm kernel products, only second in cocoa to Ghana and third in groundnut production [17]. They also found a long-term relationship between Nigeria's agricultural exports and economic growth. Evidence from [11] has shown a positive impact on economic growth in less developed countries, including Nigeria, from agricultural exports.

2.2 Stylised Facts
This study sub-section presents the facts of stylization as shown in Figure 1.
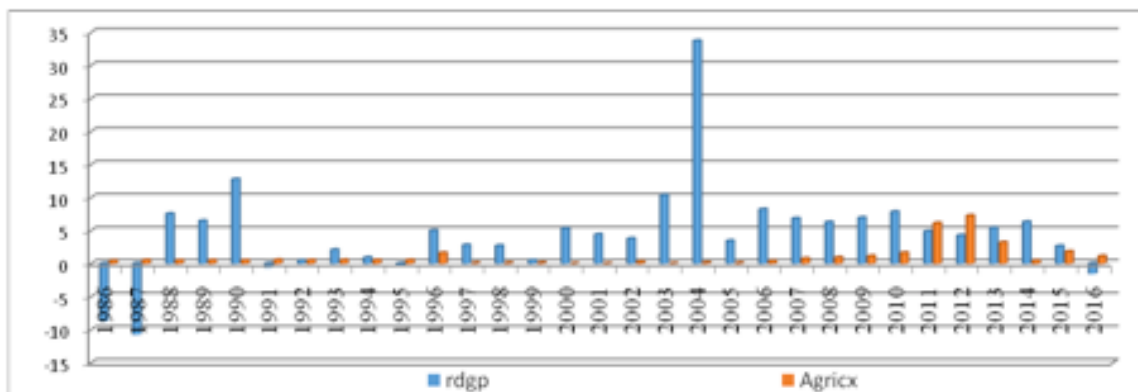
Figure 2.1. Trend of Agricultural Export and Economic Growth of Nigeria
Source: Authors' Computation

Figure 1 showed the trend of agricultural export between the periods of 1986 and 2016. The agricultural exports signify the percentage of agricultural raw materials as a fraction of total merchandise export. In 1986, the percentage contribution of agricultural raw materials to total merchandise export was approximately 41percent, which later increased to 51percent in 1987. However, from 1988 to 1990, the agricultural export average percentage of merchandise was 47percent. This further increased to an average of 52percent from the period of 1991 to 1995. The continuous rise in agricultural export can be traced to the effect of the Structural Adjustment Programme (SAP) in 1986. Agricultural export percentage of merchandise export increased to over a hundred percent in 1996. In the same period, the real gross domestic product (rgdp) grew at an increasing rate.

However, from 1996 to 2006 the agricultural export percentage of merchandise export experienced a continuous decline. By 2007, Agricultural exports accounted for only 7percent of export. According to [23], Nigeria became an importer of the basic food items formerly exported. This could also be explained by the shift of focus to oil exportation which led to the agrarian section been neglect. Nonetheless, the contribution of agriculture to export has been increasing although at a low rate since 2007 as seen in figure1. This can be as a result of the various intervention programmes such as social protection programmes and policies, [1] that have surfaced over the years for the purpose of reviving the agriculture sector. Notwithstanding, the agricultural sector is still growing at a low rate and is not utilising its full potential.

3. Methodology
3.1 Model Specification
Based on empirics, this study adopts the vent surplus theory adapted from the study of [17]. The vent surplus hypothesis featured the operation of remote exchange as promoted by Adam Smith [17]. The hypothesis recommended that in rising economies, the nearness of surplus assets and being worked on of human capital has prevented their productivity [11, 17]. Moreover, [24, 25] opined that the vent surplus theory concentrated on the effectiveness of creation strategies, with the goal that the resultant yield surpasses the underlying contributions because of surplus generation. Consequently, the model is specified as:

$$rgdp \ = \beta_0 + \sum_{t=1}^{n} \beta X + e \qquad (1)$$

Where; rgdp represents gross domestic product economic growth as used in the studies of [25, 26]. β is consistent; X speaks to the factors exogenously determined in the model and e speaks to the error term capturing the other logical variables not in the model Equation (1) is implicitly and explicitly specified in equations (2) and (3) respectively:

RGDP = f(AGRICXPORT,FDI, REALXR, INFLR,LAB,)   (2)

$loggrdp = \alpha_0 + \alpha_1 logagricxport + \alpha_2 logfdi + \alpha_3 logrealxr + \alpha_4 loginflr + \alpha_4 logabf + e$ (3)

Where: rgdp represents economic growth, agricxport represents rural fare as used in the studies of [17, 27, 28]. fdi represents foreign direct investment. Realxr represents real exchange rate, inflr represents inflation rate and labf represents labour force

3.2 Data Sources and Description
Table1: Variables Definition and Source

Variable Name	Identifier	Source of Data	Definition and Measurement
Real gross domestic product	Rgdp	WDI, 2017	In this study, real gross domestic product (GDP) measures the inflation-adjustment showing the total volume and value of goods and services produced in an economy.
Agricultural export	Agricxport	WTI, 2017	Agricultural raw materials exports (% of merchandise exports)
Foreign direct investment	Fdi	WDI, 2017	Foreign direct investment refers to foreigners making investments in a host country. It is measured as net (percentage of GDP) inflows.
Real exchange rate	Realxr	WDI, 2017	This is the official rate of exchange (LCU per US$, average period). The real exchange rate measures the ratio of foreign currency's price level and local currency's domestic price level if the foreign price level is converted via the current nominal exchange rate into domestic currency units.
Inflation rate	Inflr	WDI, 2017	The rate of inflation refers to the percentage increase in goods and services prices. It is measured as (yearly percent) consumer prices.
Labour force	Labforce	WDI, 2017	The rate of participation in the labor force refers to the number of people working in the agricultural sector. It is measured as a percentage of the population over 15 years of age. (Estimate model of the International Labor Organization)

Source: Authors' Compilation, 2019

4.   Results and Discussion
4.1 Econometric Technique
The first step of the econometric analysis is to conduct the summary statistics of the variables selected as shown in Table 2. For analysis, descriptive statistics are used. Table 2 illustrates the results for Nigeria's descriptive statistics.

Table 2: Summary Statistic of the Variables

Variable	Mean	Standard Deviation	Minimum	Maximum
Rgdp	141399.7	185425.6	872.868	552097.4
Agricx	1.04169	1.659659	0.0059455	7.268343
Fdi	2.95e+09	2.69e+09	1.93e+08	8.84e+09
Realxcr	88.68143	70.20631	1.754523	253.4922
Inflrate	20.28164	18.82513	5.382224	72.8355
Labforce	53.09946	9.455727	15.69685	56.964

Source: Authors' Computation, 2019.

4.2 Unit Root Test
[29] It was suggested that the use of slacks in the Augmented Dickey-Fuller (ADF) was traded for the stationary unit root test, which in error terms was self-assertive of the sequential connection [30]. Another test for the unit root was carried out and the report confirmed that at their first difference all variables that were non-stationary at levels were stationary. That is, the application one, I (1)

incorporates all factors. Since a similar request co-ordinates all arrangements, a vital condition is met for the co-integration of the test investigation.

A co-integration test was conducted to determine the presence of a long-run relationship between variables to ensure that the variables relapse is significant and non-deceptive. It would also appear if the variables have a long-term connection. In the event that the follow measurement and the Max-Eigen measurement are more prominent than the 5% basic qualities, the invalid speculation of no co-coordination will be dismissed for the elective theory at that dimension [1]. The Max-Eigen measurement showed that a long-run relationship is co-integrated among the variables. This shows that agricultural exports have a long-term relationship with economic growth in Nigeria (see Table 2). This was also based in the unit root test (see Table 3).

Table 3: Unit Root Test Results

Series	ADF Statistic	CV @ 1%	CV @ 5%	CV @ 10%	Order of Integration	Remark
Rgdp	-4.456	-3.723	-2.989	-2.625	I(1)	Stationary
Agricxport	-4.460	-3.723	-2.989	-2.625	I(1)	Stationary
Fdi	-6.219	-3.723	-2.989	-2.625	I(1)	Stationary
Realxcr	-5.644	-3.723	-2.989	-2.625	I(1)	Stationary
Inflr	-4.781	-3.723	2.989	-2.625	I(1)	Stationary
Labforce	-8.912	-3.723	2.989	-2.625	I(1)	Stationary

Source: Authors' Computation using STATA 13, 2019. Note: CV is the critical value.

The co-integration test was evaluated with a slack length of 1 using the Johansen co-integration technique, and the unrestricted co-integration rank test with no intercept or pattern in co-integrating condition (CE) was conducted with follow-up insights showing 5 co-integrating vectors and most extreme self-value measurements showing 5 co-integrating vectors with a noteworthy dimension of 5 percent. The cointegration test by Johansen is the result as shown in Table 4.

Table 4: Co-integration Test Results

Maximum Rank	Eigen Value	Trace Statistics	Critical Value (5%)
0	-	128.9644	94.15
1	0.78959	83.7621	68.52
2	0.74938	43.6317	47.21
3	0.53291	21.5562	29.68
4	0.39266	7.0949	15.41
5	0.15268	2.2901	3.76

Source: Authors

Table 5: Cointegrating Equation Result

Rgdp	Agricxport	Fdi	Realxr	inflrate	Labforce
Coefficient	146234.3*	0.00025	1543.708**	241.13*	28817.66*
(P-value)	(0.000)	(0.213)	(0.025)	(0.000)	(0.000)

Source: Authors' Computation, 2019. Note: *, ** mean significant at 1 and 5% levels respectively. The Lag Selection was based on the Akaike Information Criterion (AIC), Schwarz Information Criterion (SIC), and Hannan-Quinn Information Criterion (HQIC).

The ECM was used to address disequilibrium in the co-incorporating relationship (see Table 6). This system filled in with its long-term conduct as a method for accommodating short-term disequilibrium behavior of an economic variable of enthusiasm. The parameter coefficient and the t-

statistical or probability estimate are the two parameters used in the model for error correction (ECM). The coefficient is relied on to have negative sign, demonstrating that after each time of disequilibrium, a union of factors returns to balance. The p-value is used to check the essence of 5 percent (0.05) testing factors as shown in Table 6.

Table 6: Estimates from Vector Error Correction Model (VECM)

Regressand → Regressors ⇩	D_rgdp	D_agricxport	D_fdi	D_realxcr	D_inflrate	D_labforce
ECterm	0.0350***	-2.83e-06*	-10.82917	-.0000118	-9.44e-07	-0.0000*
	0.019840	4.36e-07	657.3528	.0000115	.0000113	1.71e-06
	(0.078)	(0.000)	(0.987)	(0.306)	(0.933)	(0.000)
rdp(LD)	0.042429	0.00003*	-16435.77**	0.0000384	-0.000022	0.0000185
	0.204662	4.50e-06	6780.959	.000119	0.000112	0.000018
	(0.836)	(0.000)	(0.015)	(0.746)	(0.850)	(0.293)
agricxport(LD)	-1019.199	.4539935*	4.51e+08**	0.6450548	-.2744291	5.272116*
	5479.1	.1203691	1.82e+08	3.177664	3.108375	0.4716604
	(0.852)	(0.000)	(0.013)	(0.839)	(0.930)	(0.000)
fdi(LD)	7.86e-06	-8.04e-11	-.2212347	-3.08e-09	-1.49e-09	2.05e-09*
	5.29e-06	1.16e-10	.175266	3.07e-09	3.00e-09	4.55e-10
	(0.137)	(0.489)	(0.207)	(0.315)	(0.619)	(0.000)
realxr (LD)	895.6451**	-.0017212	-1.94e+07	.1677323	.0532155	0.0219126
	441.419	0.0096974	1.46e+07	0.256006	0.2504237	0.0379989
	(0.042)	(0.859)	(0.184)	(0.512)	(0.832)	(0.564)
inflrate (LD)	45.78822	0.0102778	3718235	0.058061	.0768034	0.023178
	380.5723	0.008361	1.26e+07	0.22072	0.2159044	0.032761
	(0.904)	(0.219)	(0.768)	(0.793)	(0.722)	(0.479)
labforce (LD)	-808.9527	-.0032429	-2.19e+07	0.18572	0.08751	-0.7180526*
	909.3257	0.0199768	3.01e+07	0.527374	0.515874	0.078278
	(0.374)	(0.871)	(0.467)	(0.725)	(0.865)	(0.000)
Adj. R-sq	0.4654	0.7796	0.4201	0.2870	0.0268	0.9182
AIC	93.90622					
HQIC	94.68883					
SBIC	96.40507					

Source: Author's Computation, 2019. Note: *, ** means significant at 1% and 5%levels of significance respectively. LD signifies that they were lagged and differenced. The probability values are in parenthesis.

4.3 Discussion of Results

Statistics showed Nigeria earned $730m (N143bn) from its agricultural export in the fourth quarter of 2015. This is a pointer to the fact that Nigeria's agricultural exports are still underused; this is because the country is still heavenly dependent on crude oil. When most of the population of a country starts mainly in agriculture, it is generally necessary to increase agricultural productivity to generate transformative income growth. [1, 31]. Evidence from previous studies has shown that the prospect of agriculture in sub-Saharan African countries is a major determinant of economic growth. From 1990 to 2013, agricultural production increased by approximately 120%, crop production as a share of the total production of agricultural commodities, on the average, contributed more than 75%.

However, this contribution varies across region, ranging from Southern Africa (53%) to more than 90% in West Africa, as confirmed in [1]. In line with the study of [32, 33, 34, 35] who also used the approach of co-integration to examine the long-term contribution of agricultural exports to Nigeria's economic growth, he pointed out that exports of agricultural products were much more widespread among tropical African countries. Generally speaking, the increase in agricultural exports has been a significant success story and has brought many benefits to Africa. Agricultural exports are usually, in most developing countries, a rational policy for expanded foreign exchange earnings in the non-oil sector. This is confirmed in this study, as shown in Table 5; long-term increases in agricultural exports will contribute 0.25% to economic growth; while foreign direct investment, effective exchange rate and labour force will contribute 0.29%, 0.185% and 0.034% respectively to Nigerian economy growth.

The political implications of these findings are; first, this study reveals that agricultural exports have a long-term relationship with economic growth, meaning that the agricultural sector will contribute to economic growth in the long run. As agricultural exports boost economic growth, the implication of this result is that it is important that the government should encourage more people to practice agriculture which will in turn increase agricultural output, when output is increased the foreign exchange earned from exports will increase, and hence bring about the growth of the Nigerian economy. Second, the implication of the positive relationships between foreign direct investment (FDI), exchange rate and economic growth in Nigeria is that FDI boosts economic growth, when agricultural output increases, this will attract foreign investors into Nigeria to establish firms that will make use of the agricultural produce as raw materials, and this will bring about an improvement in the exchange rate as exports will become cheaper and imports will be more expensive. Finally, the implication of the positive relationship between labour-power and economic growth is that increasing farm labour-power would increase agricultural output, exports, and economic growth.

5. Summary and Conclusion

This study looked at the impact of agricultural exports on economic growth in Nigeria. It found that increasing agricultural exports will have a positive impact on Nigeria's economic growth, as well as foreign direct investment, effective exchange rates and labor will also have positive effects on economic growth. Against this backdrop, agricultural productivity growth in Africa and Asia is widely viewed as a major catalyst for the continent's structural transformation process. Agriculture is the backbone of socio-economic development in Nigeria as it serves as a catalyst for job creation and a major foreign exchange earner. To this end, the study supported the hypothesis of Nigeria's economic growth in agricultural exports. The domestic agro-processing sector should be encouraged in order for Nigeria to experience a favourable trade balance in agricultural trade. This would reduce the country from over-reliance on foreign food and increase the country's self-sufficiency, export, and economic growth rate of agricultural production.

References
[1] Osabohien R, Afolabi A and Godwin A 2018. Agricultural credit facility and food security in Nigeria: An analytic review. *The Open Agriculture J.*12 227-39.
[2]. Global Insight (2015). Productivity Report http://www.global-insight.net/
[3] Ramos RF 2001. Exports, Imports and Econmic growth in Portugal: evidence from causality and cointegration analysis. *Economic modelling.* 18(4): 613-23.
[4] Osabuohien E, Okorie U and Osabohien R2018. Rice production and processing in Ogun State, Nigeria: Qualitative insights from Farmers' Association. In Obayelu, E. (Eds).*Food Systems Sustainability and Environmental Policies in Modern Economics* (pp. 188-215)*, Hershey, PA: IGI Global.
[5] Abou-Stait F 2005. Are exports the engine of economic growth? An application of cointegration and causality analysis for Egypt, 1977-2003. *Economic Research Working Paper No. 76.*
[6] Matthew OA, Ede UC, Osabohien R, Ejemeyovwi J, Fasina FF and Akinpelumi D 2018. Electricity Consumption and Human Capital Development in Nigeria: Exploring the implications for economic growth, *Int'l J. of Energy Econs and Policy*, 8(6):1-8
[7] Osabohien R and Bamigbola A2017. Sustainable agricultural investment and employment generation in Nigeria: The role of institutional framework. *FUTA J. of Management and Tech*2(1):113-23

[8] Usman O and Salami A 2008. The contribution of Nigerian export-import (NEXIM) Bank towards export (non-oil) growth in Nigeria. *International Business Management.* 2(3): 85-90.

[9] Osabohien R and Osuagwu E2017. Social protection policies and agricultural output in Nigeria: Empirical investigation using household survey data. *Presented at the 4th Covenant University International Conference on E-Governance in Nigeria (CUCEN),* Covenant University, Ota, Nigeria, 7-9 May 2017.

[10] Iyoha Mand Oriakhi D 2002. *Explaining African Economic Growth Performance: The case of Nigeria.* African Economic Consortium Research.

[11] Matthew AO, Fasina FF, Olowe O and Adegboye FB 2010. Empirical modeling of the   impact   of financial innovation on the demand for money in Nigeria, *International   Research J. of Finance and Econs* 58 73-90, December.

[12] Adeleye N,Osabuohien E, Bowale E, Matthew O andOduntan E 2017. Financial   reforms   and   credit growth in Nigeria: Empirical insights from ARDL and ECM   techniques, *Int'l Review of Applied Econs* 1-14.

[13] Amin S 1996. The challenge of globalization. *Review of Int'l Political Economy.* 3(2): 216-59.

[14] Osabuohien, E., Obiekwe, E., Urhie, E. and Osabohien, R. (2018). The inflation rate, exchange rate volatility and exchange rate pass-through nexus: The Nigerian experience, *Journal of Applied Economic Sciences, Volume XIII, Spring,* 2(56):574-585

[15] Olajide O, Ajayi BH and Tijani A2012. Agriculture resources and economic growth in Nigeria. *European Science J. 8(6):*12-25

[16] Ekpo A and Egwaikhide F 1994. Exports and Economic growth in Nigeria: A Reconsideration of the evidence. *J.of Economic Management.* 1(1): 100-15.

[17] Ijirshar VU 2015. The empirical analysis of agricultural exports and economic growth in Nigeria. *J. of Dev and Agric Econs* 2(3):24-36

[18] Idachaba F 2000. Food policy in Nigeria. *Agric. Research Bulletin,*1(162):16-24.

[19] Abrahamson, W 1989. Nutritional quality of animal dispersed fruits in Florida sandridge Habitats. *Bulletin of the Torrey Botanical club. Volume 116, No. 3*, 215-228.

[20] Ehrlich P R and Ehrlich AH 1990. How the rich can save the poor and themselves: lessons from the global warming In Global warming and climate change: perspectives from developing countries. *Tata Research Institute*.

[21] Ejemeyovwi JO, Osabuohien ES and Osabohien R 2018. ICT investments, human capital development and institutions in ECOWAS, *Int'l J. of Econs and Bus Research,* 15(4):463-74.

[22] Matthew O, Osabohien R, Fagbeminiyi F and Fasina A 2018. Greenhouse gas emission and health outcomes in Nigeria: Empirical insight from ARDL technique, *Int'l J. of Energy Econs and Policy*, 8(3):43-50

[23] Bakare A S2011. The crowding-out effects of corruption in Nigeria: An empirical study.   *J. of Bus. Management and Econs*2(2): 059-068.

[24] Michael R 2001. Crude Oil Politics. *Atlantic* 3(5):19-30.

[25] Ayodele M 2004. *The elusive curse of oil foreign policy in focus.* Washington DC: Silver City University Press.

[26] Gilbert NA, Linyong SGand Divine GM2013. Impact of agricultural export on economic growth in cameroon: case of Banana, Coffee and Cocoa. *International J. of Bus. and Management Review* 44-71

[27]] Verter N and Becvarova V2016. The impact of agricultural exports on economic growth in Nigeria. *ACTA Universitatis Agriculturae Et Silviculturae Mendelianae Brunensis*.

[28] Gbaiye O G, Ogundipe A, Osabuohien E, Olugbire O O, AdeniranOA, Bolaji-Olutunji KA, Awodele OD and Aduradola O 2013. Agricultural exports and economic growth in Nigeria. *J. of Econs and Sustainable Dev.* 4(16):11-24.

[29] Nyong MO 2003. Predicability and Volatility of stock return in three emerging markets: Nigeria, South africa and Brazil. *Nigeria Journal of Economic and Development matters.* 2(1): 12-9.

[30] Gujarati D Nand Porter DC2009. *Basic Econometrics, (5th Edition).* Singapore: McGraw-Hill.

[31] Jayne T S, Chamberlin J and Benfica R 2018. Africa's Unfolding Economic   Transformation

[32] Gralla F, Abson D J, Møller A P, Lang D J and von Wehrden H2017. Energy transitions and national development indicators: A global review of nuclear energy production. *Renewable and Sustainable Energy Reviews*, *70* 1251-65.

[33] Ojo E J, Awe I and Ogunjobi OJ 2014. Agricultural export and economic growth in Nigeria: A multivariateJjohansen cointegration analysis. *International Journal of Arts and Commerce.* 3(3):20-34.

[34] Osabohien R, Matthew O, Aderounmu B and Olawande T 2019. Greenhouse gas emissions and crop production in West Africa: Examining the mitigating potential of social protection, *Int'l J. of Energy Econa and Policy* 9(1):57-66.

[35] Osabohien R, Osabuohien E and Urhie E 2017. Food security, institutional framework and technology: Examining the nexus in Nigeria using ARDL approach. *Current Nutrition and Food Science.* 13(4):1-10.