

EDU REKHA INTERNATIONAL JOURNAL OF ENTREPRENEURSHIP, ECONOMICS AND BUSINESS MANAGEMENT



Journal Homepage: <https://edurekhapublisher.com/erijeebm/>

ISSN: 3107-5460 (Online)

Volume- 2 Issue- 5 (September - October) 2026

Frequency: Bimonthly



PAGES: 25-35

ARTICLE TITLE:

Edu Rekha International Journal of
Entrepreneurship, Economics and
Business Management

ISSN : 3107-5460

Accounting • Administrative Systems
• Brand Management • Business
• Business Economics • Business
Policy and Strategy • Critical
Management Studies • Data
Management • Design Management
• Economics (Educational
Management • Energy •
Environmental Management
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AN INVESTIGATION OF THE IMPORT AND EXPORT OF AGRICULTURAL RAW MATERIALS ON ECONOMIC GROWTH IN NIGERIA

Ibeanu Oluchi Peculiar

Department of Economics, Finance and investment, Benson Idahosa University, Benin
City, Edo State, Nigeria.

ARTICLE HISTORY

RECEIVED

10-10-2026

ACCEPTED

13-10-2026

PUBLISHED

19-10-2026

Corresponding author:

Ibeanu Oluchi Peculiar

Department of Economics,
Finance and investment, Benson
Idahosa University, Benin City,
Edo State, Nigeria.



Abstract

This study investigated the impact of the import and export of agricultural raw materials on economic growth in Nigeria, with a specific focus on understanding how international trade influences national output, the extent to which the global fluctuations of agricultural commodities in the agricultural market affects the economic growth of Nigeria and to evaluate the role of government policies and infrastructure played in facilitating agricultural trade in Nigeria. Despite Nigeria's abundant agricultural resources, the country continues to import significant quantities of raw materials while exporting largely unprocessed commodities, thereby, raising questions about the contribution of agricultural trade to economic development. This study employed the ARDL Model (Autoregressive Distributed Lag Model), making use of time-series data from 1985-2023, to analyze both the short-run and long-run relationships between agricultural trade of raw materials internationally and economic growth. The findings reveal that agricultural exports have a statistically significantly, positive impact on economic growth in the long-run, while agricultural imports dependence undermines domestic production potentials. This study further discovered that the global price fluctuations and infrastructural constraints weaken the benefits of agricultural trade. Based on these results, the study recommends that Nigeria should prioritize value addition, invest in rural infrastructure, implement stable trade policies and support local producers to fully harness the benefits of agricultural trade for sustainable economic growth.

Keywords: Agriculture, Economic Growth, Export and Import, Raw Materials

Introduction

Nigeria, as one of Africa's largest economies, has a rich agricultural heritage that has historically played a pivotal role in its economic landscape. The nation is endowed with diverse agro-climatic zones, enabling the cultivation of a variety of crops such as rice, vegetables, cassava, yams, and maize. Despite these advantages, Nigeria's agricultural sector faces various challenges that impact its ability to optimize the import and export of agricultural raw materials, ultimately influencing economic growth (Akinwumi, 2021). Historically, agriculture was the backbone of Nigeria's economy, contributing significantly to its Gross Domestic Product (GDP) and employment. However, over the years, the focus has shifted towards oil production, leading to a decline in agricultural output (Ibrahim, 2020). This shift has made the country increasingly reliant on imports to satisfy domestic food demand. In 2020, Nigeria was among the top importers of agricultural products in Africa, with a significant portion of its food supply sourced from abroad (FAO, 2021). This reliance on imports poses risks to the economy, particularly in terms of trade imbalances and currency valuation.

The import and export dynamics of agricultural raw materials have a substantial impact on Nigeria's economic growth. Agricultural exports, when optimized, can generate foreign exchange earnings that bolster the national economy (Ogunleye, 2019). For example, Nigeria has the potential to increase its exports of cash crops such as cocoa and cashew nuts, which are in high demand globally. These exports not only contribute to the country's GDP but also create jobs and stimulate rural development (Adeoye, 2020). Increased agricultural exports can lead to robust economic growth by enhancing the income levels of farmers and associated industries. Conversely, the excessive importation of agricultural products can have detrimental effects on local production and food security. The influx of cheaper imported goods often undermines local farmers, leading to a decline in domestic agricultural productivity (Oyeleke, 2018). This scenario can perpetuate a cycle of dependency, where local farmers struggle to compete with foreign products, ultimately weakening the agricultural sector and stifling economic growth. Furthermore, this dependency on imports can lead to trade deficits, which may affect the stability of the Nigerian economy (NBS, 2022).

The agricultural sector also plays a crucial role in employment generation in Nigeria. It employs approximately 36% of the workforce, making it a vital source of livelihood for millions of Nigerians (World Bank, 2021). Agricultural exports can stimulate job creation in various segments, including farming, processing, and distribution. As exports increase, there are opportunities for value addition and industrialization, which can further enhance employment levels and economic growth (Afolabi, 2023). Food security is another critical aspect influenced by agricultural trade in Nigeria. A balanced approach to imports and exports can help ensure that the nation has access to a diverse range of food products, thus enhancing food security (FAO, 2021). In a country where a significant portion of the population lives below the poverty line, ensuring an adequate food supply is paramount for economic stability and social cohesion. Disruptions in agricultural production, whether due to climate change or other factors, can exacerbate food insecurity and hinder economic progress (Adesina, 2022).

Government policies play a vital role in shaping the agricultural trade landscape in Nigeria. Trade policies, tariffs, and subsidies can either promote or hinder agricultural growth (Idris, 2019). The Nigerian

government has implemented various initiatives aimed at boosting agricultural production and reducing reliance on imports, such as the Anchor Borrowers' Programme, which provides financial support to farmers. Effective policy implementation is essential to create an enabling environment for agricultural growth and to facilitate the export of agricultural raw materials.

Additionally, the role of infrastructure cannot be overlooked. Poor infrastructure, including inadequate transportation and storage facilities, hampers the efficiency of agricultural trade (Akinwumi, 2021). Investments in infrastructure development are crucial for enhancing the competitiveness of Nigerian agricultural products in the global market. Improved logistics and supply chain management can facilitate smoother export processes and reduce post-harvest losses, thereby increasing the availability of agricultural products for both local consumption and export. The impact of global market trends on Nigeria's agricultural trade also warrants attention. Fluctuations in global commodity prices can significantly affect the country's agricultural export revenues (Ogunleye, 2019). For instance, the prices of cocoa and palm oil, two of Nigeria's key agricultural exports, are subject to international market dynamics. Understanding these trends is essential for developing strategies that can mitigate risks and enhance the resilience of the agricultural sector.

Statement of the Problem

The agricultural sector in Nigeria has historically been a cornerstone of Nigeria's economy, contributing significantly to employment, food security and foreign exchange earnings. However, in recent decades, this sector has experienced significant fluctuations in performance as a result of infrastructure inadequacy, increasing fluctuations, etc. making this sector underutilized in its capacity to drive economic growth through international trade. Despite its potential to drive economic growth, the country continues to import significant quantities of agricultural raw materials, indicating a mismatch between actual productivity and potentials. (Adewuyi & Arawomo, 2022). The paradox raises concern about the effectiveness of agricultural policies, the structure of the import-export framework in enhancing sustainable growth, the effect of global fluctuations of agricultural commodities on economic growth and the infrastructural play in facilitating agricultural trade in Nigeria (Lawal, 2021). The overall problem undermines local production, exacerbates trade imbalances and threatens food security. Consequently, understanding the dynamics between the import and export of agricultural products and their impact on economic growth is critical. The lack of comprehensive policies and infrastructure further complicates this relationship, hindering the agricultural sector's ability to contribute effectively to the nation's economy. (Olayungbo & Quadri, 2022)

Objectives of the study

The main objective of this study was to investigate the impact of the import and export of agricultural raw materials on economic growth in Nigeria, with a focus on identifying the challenges and opportunities that exist within the agricultural trade framework. The specific objectives include to:

1. To investigate the relationship existing between international trade of Agricultural raw materials and economic growth in Nigeria
2. To ascertain the extent to which the global fluctuations of agricultural commodities in the agricultural market, affect the economic growth of Nigeria

3. To evaluate the role of government policies and infrastructure played in facilitating agricultural trade in Nigeria

Research Questions

1. What relationship exists between international trade of Agricultural raw materials and economic growth in Nigeria?
2. To what extent did the global fluctuations of agricultural commodities in the agricultural market, affect the economic growth of Nigeria?
3. What role did government policies and infrastructure play in facilitating agricultural trade in Nigeria?

Research Hypothesis

H₁: There is no significant relationship existing between international trade of agricultural raw materials and economic growth in Nigeria

H₂: There is no significant relationship between global fluctuations of agricultural commodities in the global agricultural market on economic growth in Nigeria

H₃: There are no significant policies and infrastructure played by the government in facilitating agricultural trade in Nigeria

Literature Review

Agricultural Raw Materials

Agricultural raw materials are the fundamental inputs derived from agricultural activities that are utilized in various industries, including food processing, textiles, and biofuels. These materials encompass a wide range of products, such as grains, fruits, vegetables, and livestock, which serve as the backbone of both local and global supply chains. In Nigeria, the agricultural sector has historically been a significant contributor to the economy, providing employment for a large portion of the population and generating foreign exchange through exports. However, the sector faces challenges such as inadequate infrastructure, limited access to financing, and fluctuating market prices, which hinder its potential to maximize output and profitability (Ekpo & Egwaikhide, 1994; Olayide & Essang, 1976). Furthermore, the reliance on low-quality primary products for export has limited the sector's ability to compete in international markets, necessitating a shift towards value-added agricultural products (Anwana et al., 2019; Sanida et al., 2016).

The importance of agricultural raw materials extends beyond economic contributions; they play a crucial role in ensuring food security and promoting sustainable development (Okhueigbe, 2025). As Nigeria continues to grapple with food insecurity, the need for a robust agricultural sector becomes increasingly evident. Agricultural raw materials not only provide sustenance for the population but also support various industries that rely on these inputs for production. The potential for agricultural raw materials to drive economic growth is significant, particularly when considering the country's vast arable land and favorable climate conditions. However, to harness this potential, there is a need for comprehensive policies that promote agricultural productivity, enhance value addition, and facilitate access to markets (Oyaniran, 2020; Ekpo & Umoh, 2012).

Import and Export of Agricultural Raw Materials

The import and export of agricultural raw materials are critical components of Nigeria's trade dynamics, influencing both the

economy and food security. Historically, Nigeria was a leading exporter of agricultural products, such as cocoa and palm oil, contributing significantly to the nation's GDP. However, the discovery of oil shifted focus away from agriculture, leading to a decline in agricultural exports and an increase in imports of food products (Oyaniran, 2020). This shift has resulted in a trade imbalance, with agricultural imports surpassing exports, thereby straining the country's foreign exchange reserves and exacerbating food insecurity (NIPC, 2023). The reliance on imported agricultural products has also stifled local production, as domestic farmers struggle to compete with cheaper imported goods, leading to a decline in agricultural output and rural livelihoods (Ekpo & Egwaikhide, 1994; Olayide & Essang, 1976).

The implications of agricultural imports and exports extend beyond economic metrics; they also affect social and environmental dimensions. For instance, the importation of agricultural products can lead to the neglect of local farming practices, resulting in a loss of traditional knowledge and biodiversity (Anwana et al., 2019). Conversely, promoting agricultural exports can stimulate local economies, create jobs, and enhance food security by increasing the availability of locally produced food (Sanida et al., 2016). To optimize the benefits of agricultural trade, Nigeria must implement policies that encourage local production, improve infrastructure, and facilitate access to international markets. This includes investing in agricultural research and development, providing financial support to farmers, and enhancing trade agreements that favor Nigerian agricultural exports (Oyaniran, 2020; Ekpo & Umoh, 2012).

Economic Growth

Economic growth refers to the increase in the production of goods and services in an economy over a specific period, typically measured by the rise in real Gross Domestic Product (GDP). In Nigeria, economic growth has been closely linked to the performance of various sectors, including agriculture, which historically served as the backbone of the economy. The agricultural sector not only provides food and raw materials but also generates employment and contributes to foreign exchange earnings through exports (Ekpo & Egwaikhide, 1994). However, the Nigerian economy has faced challenges such as over-reliance on oil exports, which has made it vulnerable to global oil price fluctuations. This has underscored the need for diversification, with agriculture being a key sector that can drive sustainable economic growth (Olayide & Essang, 1976; NIPC, 2023).

The relationship between agriculture and economic growth is well-documented, with numerous studies indicating that agricultural productivity improvements can lead to significant economic benefits. For instance, increasing agricultural output can enhance food security, reduce poverty, and stimulate rural development, which in turn contributes to overall economic growth (Sanida et al., 2016; Anwana et al., 2019). Furthermore, agricultural growth can have multiplier effects on other sectors, such as manufacturing and services, by providing raw materials and creating demand for goods and services (Ekpo & Umoh, 2012). Therefore, fostering agricultural development is essential for Nigeria to achieve sustainable economic growth and improve the living standards of its population.

The import and export of agricultural raw materials significantly impact Nigeria's economic growth by influencing trade balances, foreign exchange reserves, and local production capacities. Agricultural exports can enhance economic growth by generating foreign exchange earnings, which can be reinvested in other sectors of the economy (Oyaniran, 2020). Conversely, excessive reliance on

agricultural imports can lead to trade deficits, straining the economy and limiting the government's ability to invest in critical infrastructure and services (Ekpo & Egwaikhide, 1994). The decline in agricultural exports, coupled with rising imports, has contributed to a stagnation in the agricultural sector, which is crucial for job creation and poverty alleviation in Nigeria (NIPC, 2023; Olayide & Essang, 1976).

Moreover, the quality and value of agricultural exports play a crucial role in determining their impact on economic growth. Low-quality primary product exports often yield lower returns compared to processed agricultural goods, limiting the potential benefits for the economy (Anwana et al., 2019; Sanida et al., 2016). To maximize the positive impact of agricultural trade on economic growth, Nigeria must focus on enhancing the quality of its agricultural products, investing in value addition, and improving market access for local farmers (Ekpo & Umoh, 2012). By doing so, the country can not only boost its agricultural exports but also create a more resilient economy capable of withstanding external shocks and fostering sustainable growth.

Empirical Literature Review

Nwana, Akpan, and Udoh (2019) conducted a study titled "Agricultural exports and economic growth in Nigeria" to examine the relationship between agricultural exports and economic growth in Nigeria. The study aimed to analyze the impact of agricultural exports on Nigeria's economic growth using the Cobb-Douglas production function. The researchers employed a time-series analysis using data from 1981 to 2015. The findings revealed a positive and significant relationship between agricultural exports and economic growth. The study concluded that agricultural exports have a significant impact on Nigeria's economic growth and recommended that the government should implement policies to promote agricultural exports.

Oyaniran (2020) did a study titled "Agricultural exports and economic growth in Nigeria: An assessment using the VAR model" to investigate the relationship between agricultural exports and economic growth in Nigeria. The study aimed to assess the contribution of agricultural exports to Nigeria's economic growth using the Vector Autoregression (VAR) model. The researcher used time-series data from 1990 to 2018. The findings showed that agricultural exports have a positive and significant impact on economic growth. The study concluded that agricultural exports are crucial for Nigeria's economic growth and recommended that the government should prioritize agricultural exports in its development strategies.

Ekpo and Umoh (2012) examined the impact of agricultural imports on local agricultural production and food security in Nigeria in their study titled "The Impact of Agricultural Imports on Local Agricultural Production and Food Security in Nigeria." The study aimed to investigate the relationship between agricultural imports and local agricultural production using a descriptive survey design. The researchers used a sample of 200 farmers in Akwa Ibom State, Nigeria. The findings revealed that agricultural imports have a negative impact on local agricultural production and food security. The study concluded that agricultural imports hinder local agricultural production and recommended that the government should implement policies to promote local agricultural production.

Sanida et al. (2016) also investigated the impact of agricultural imports on local agricultural production and food security in Nigeria in their study titled "The Impact of Agricultural Imports on Local Food Production and Food Security in Nigeria." The study aimed to analyze the effects of agricultural imports on local food production using a

regression analysis. The researchers used data from 1990 to 2015. The findings showed that agricultural imports have a negative impact on local food production. The study concluded that agricultural imports undermine local food security and recommended that the government should implement policies to promote local food production.

NIPC (2023) conducted a study titled "The Role of Government Policies and Infrastructure in Facilitating Agricultural Trade in Nigeria" to examine the role of government policies and infrastructure in facilitating agricultural trade in Nigeria. The study aimed to assess the impact of government policies and infrastructure on agricultural trade using a descriptive survey design. The researchers used a sample of 150 agricultural traders in Lagos State, Nigeria. The findings revealed that government policies and infrastructure have a significant impact on agricultural trade. The study concluded that effective government policies and infrastructure are crucial for facilitating agricultural trade and recommended that the government should prioritize agricultural trade facilitation.

Olayide and Essang (1976) also investigated the role of government policies and infrastructure in facilitating agricultural trade in Nigeria in their study titled "The Role of Government Policies and Infrastructure in Agricultural Trade." The study aimed to analyze the impact of government policies and infrastructure on agricultural trade using a regression analysis. The researchers used data from 1960 to 1975. The findings showed that government policies and infrastructure have a positive and significant impact on agricultural trade. The study concluded that effective government policies and infrastructure are essential for promoting agricultural trade and recommended that the government should prioritize agricultural trade development.

Knowledge Gap

The existing literature on the relationship between agricultural exports, imports, and economic growth in Nigeria reveals a significant gap in understanding the nuanced impacts of these factors on local agricultural production and food security, particularly in the context of evolving government policies and infrastructure. The research conducted by Nwana *et al.* in 2019, restricted their research to agricultural exports only and its effect on economic growth in Nigeria. There was no inclusion of agricultural import in their study. Also, the study conducted by Oyanira (2020) on the impact of agricultural export on economic growth did not include the import of agricultural materials. Also, the researcher made use of the VAR (Vector Autoregressive Model) and spanned between 1990 to 2018. On the other hand, this research made use of the ARDL (Autoregressive Distributive Lag Model), it also includes the time series of 1985 to 2023. Furthermore, another research conducted by Ekpo and Umoh (2012) was to examine the impact of agricultural imports on local agricultural production and food securities. It had no inclusion of agricultural import and the impact was analyzed on the This work aims to bridge this knowledge gap by providing a comprehensive analysis that integrates the effects of agricultural imports on local food security and production alongside an examination of how government policies and infrastructure influence agricultural trade. By employing robust econometric models and utilizing extensive time-series data, this study will offer valuable insights that not only clarify these relationships but also inform policy recommendations to enhance agricultural development in Nigeria. While prior studies have established positive correlations between agricultural exports and economic growth, they often overlook the intricate dynamics between agricultural imports and

local production, as well as the role of governmental frameworks in facilitating trade.

Theoretical Framework

The theoretical framework for this study is grounded in the Theory of Comparative Advantage, primarily developed by David Ricardo in 1817. This theory posits that countries should specialize in the production of goods and services in which they have a relative efficiency advantage, allowing for increased overall economic welfare through trade. The main postulation is that even if one country is less efficient in producing all goods compared to another, it can still benefit from trade by specialising in the production of goods where it has the least disadvantage (Ricardo, 1817). The strengths of this theory lie in its ability to explain the benefits of trade and specialization, highlighting how countries can enhance their economic growth through the efficient allocation of resources. Additionally, it provides a framework for understanding the dynamics of agricultural imports and exports, emphasizing the importance of focusing on sectors where a country can be competitive. The relevance of the Theory of Comparative Advantage to this study is significant, as it underpins the analysis of Nigeria's agricultural sector, illustrating how optimizing the import and export of agricultural raw materials can lead to enhanced economic growth by leveraging the country's unique agricultural strengths and addressing the challenges posed by import dependency.

Research Methodology

In an attempt to achieve the stated objective and give statistical and economic answers to the research questions, concerning “the impact of import and export of agricultural raw materials on Economic growth” this study makes use the ex post facto research design. The ex-post facto studies are research designs that investigate the influence of an independent variable on a dependent variable. The researcher adopted the Ordinary Least Square (OLS) method of

$$\beta_0 + \sum_{t=1}^p \alpha_{1i} \Delta 1n(RGDP_{t-1}) + \sum_{t=1}^p \alpha_{2i} \Delta 1n(GEAS_{t-1}) + \sum_{t=1}^p \alpha_{3i} \Delta 1n(ARMI_{t-1}) + \sum_{t=1}^p \alpha_{4i} \Delta 1n(ARME_{t-1}) + \sum_{t=1}^p \alpha_{5i} \Delta 1n(INTR_{t-1}) + \sum_{t=1}^p \alpha_{6i} \Delta 1n(EXTR_{t-1}) + \varepsilon_{1i} \dots\dots\dots 3.3$$

Data Collection Method and Sources

The study used annual time series data over a period of thirty-nine years (1985-2023), obtained from Central Bank of Nigeria statistical bulletin. A time series design for annual data allowed the data's range to be from 1985 to 2023.

Presentation of Data, Analysis and Interpretation

This section focused on the presentation, analysis, interpretation and discussion of the results of finding. The broad objective of this study was to investigate the impact of import and export of agricultural raw materials on Economic growth of Nigeria for the periods 1985-2023. To achieve this objective a time series research design was adopted for the study. The data used for the study was secondary data obtained from the Central Bank of Nigeria (CBN) Statistical Bulletin and the

estimation in order to derive the parameters of the model. In order to avoid the problem of spurious regression, the time series properties of data series employed in the estimation equation is tested for stationary using Augmented-Dick-Fuller (ADF) Philip perron unit root test. To investigate whether there is long run relationship among the variables in estimation we employed the Johansen test for co-integration. The trace test is based on the comparison of the null hypothesis, $H_0 (r = 0)$ against the alternative, $H_1 (r = 0,)$ where r stands for the number of co integrating vectors. If the alternative is accepted, it implies co-integration among the variables and suggests long-run relationship among the variables. The functional form, on which our econometric model was based, employed a multiple regression equation model in this work.

Model Specification

The model utilised in this research was constructed based on the framework developed by Egwu (2016), with minor adjustments. This was done in an attempt to include every research variable in the model. Expressing the modified model in its functional form, we have:

$$RGDP = f(GEAS, ARMI, ARME, INTR, EXTR) \dots\dots\dots 3.1$$

Expressing the model in its mathematical form, we have:

$$\text{LOG(RGDP)} = \alpha_0 + \alpha_1 \text{LOG(GEAS)} + \alpha_2 \text{LOG(ARMI)} + \alpha_3 \text{LOG(ARME)} + \alpha_4 \text{LOG(INTR)} + \alpha_5 \text{LOG(EXTR)} + e_t \dots\dots 3.2$$

Data Analysis Techniques

Analysis of data in this research began with the use of descriptive statistics and trend analysis for all the research variables. The research furthered this by performing preliminary tests to verify that the estimated model is not false. Since the starting difference is the same for all the variables, the Error Correction Model (ECM) approach was utilized to determine the short-term dynamics. The ECM model is presented as:

World Bank Indicator. The study used descriptive statistics, diagnostics tests and inferential statistics of Auto Regression Distributed Lag model to achieve the envisage objectives of this research. Specifically, the descriptive statistics was used to meaningfully describe the data obtained for the study while the diagnostic test statistics of unit root and cointegration test were used to adjudge the validity of the data collected for the study for usage. On the other hand, the ARDL was used to achieve the objectives of the study.

Descriptive Statistics

Table 4.1 presented the results of the descriptive statistics computed for the study variables.

Table 4.1 Results of the Descriptive Statistics for the Study Parameters

	RGDP	ARME	ARMI	GEAS	INTR	EXTR
Mean	4.208496	0.894246	1.334345	0.198627	2.464188	127.7567
Median	4.212993	0.273073	0.941960	0.184039	4.416240	123.1931
Maximum	15.32916	7.268343	4.212582	0.290855	18.18000	425.9792
Minimum	-2.035119	0.005946	0.496409	0.150863	-31.45257	0.893774
Std. Dev.	3.812218	1.595144	0.919822	0.037453	9.684318	119.0001
Skewness	0.484041	2.821404	1.927614	0.970087	-1.214187	0.931419
Kurtosis	3.489985	10.57983	5.992946	2.869530	5.452174	3.066160
Jarque-Bera	1.864009	141.3839	37.71579	5.987059	18.85775	5.501357
Probability	0.393764	0.000000	0.000000	0.050110	0.000080	0.063885
Sum	159.9228	33.98134	50.70509	7.547825	93.63915	4854.755
Sum Sq. Dev.	537.7213	94.14589	31.30469	0.051901	3470.082	523957.7
Observations	38	38	38	38	38	38

Source: Researcher's computation, Eviews 12

Table 4.1 presented the descriptive statistics computed for the variables of the study. From the table, the mean and median value obtained for RGDP was 4.20 and 4.21 respectively. This indicated that total RGDP in Nigeria has been rising within the years under consideration. Also, the maximum RGDP under the years in viewed was 15.32 with minimum RGDP of -2.035, these values confirmed again that Real GDP in Nigeria has not been very unhealthy. The standard deviation computed for the test variable was 3.81. This revealed the upward trend in RGDP under the years in view. The coefficient of skewness and Kurtosis computed for RGDP were 0.484 and 3.489 respectively. These values indicated that RGDP in Nigeria was positively skewed. The Jarque –Bera statistics obtained for RGDP in Nigeria shows 1.86 and was significance with p-value of 0.39 that was less than the critical value of 5%. This explains that the data used for RGDP was normal.

The result obtained further revealed that the mean and median values obtained for Agricultural Raw Materials Import (ARME) were 0.89 and 0.27 respectively while the maximum and minimum values of Agricultural Raw Materials Import were 7.268 and 0.005 respectively.

It was discovered that the mean and median values computed for Agricultural Raw Materials Export (ARMI) were 1.31 and 0.94 respectively. Also, the maximum and minimum values computed for Agricultural Raw Materials Export (ARMI) were 4.22 and 0.49.

The result also revealed that the mean and median values obtained for Govt. Capital Expenditure on agricultural Sector (GEAS) were 0.19 and 0.18 respectively while the maximum and minimum values of Govt. Capital Expenditure on agricultural Sector (GEAS) were 0.29 and 0.15 respectively.

Moreover, it was discovered that the mean and median values obtained for Interest Rate (INTR) were 2.43 and 4.31 respectively. These values were signal to the fact that there had been inconsistent in the Interest Rates in Nigeria.

Finally, the coefficients of the mean value of Exchange Rate (EXTR) obtained was 127 with median of 123. This showed there was significance variation in Exchange Rate during the periods under consideration. This assertion was premised on the fact that the distance between the mean and median figures was quite low. The maximum and minimum EXTR obtained were 425 and 0.89.

Table 4.2 Correlation Analysis Results

Covariance Correlation	RGDP	ARME	ARMI	GEAS	INTR	EXTR
RGDP	14.15056 1.000000					
ARME	1.202884 0.203155	2.477523 1.000000				
ARMI	0.858896 0.251560	0.429738 0.300803	0.823808 1.000000			
GEAS	-0.019544 -0.140583	-0.001892 -0.032522	0.009853 0.293744	0.001366 1.000000		
INTR	11.28844 0.314028	1.511710 0.100504	-0.534297 -0.061602	-0.104380 -0.295556	91.31796 1.000000	
EXTR	-47.50692 -0.107551	-0.846170 -0.004578	-31.97147 -0.299981	-3.213453 -0.740488	305.0936 0.271893	13788.36 1.000000

Source: Researcher's computation, EViews 12

Table 4.2 presented the results of the Pearson Correlation coefficients computed for the study variables. From the table, the relationship

between Real GDP and Agricultural Raw Materials Export was positive with low correlation coefficient of 0.203. This implied that

there was a direct relationship between Real GDP and Agricultural Raw Materials Export in Nigeria. It was found that there was a positive relationship between Real GDP and Agricultural Raw Materials Import in Nigeria. This assertion was premised on the fact that the coefficient of correlation obtained for these variables of 0.251 positive. It was also found that there was a negative relationship between Balance of Payment and Govt. Capital Expenditure on agricultural Sector (GEAS) in Nigeria. This assertion was premised on the fact that the coefficient of correlation obtained for these variables of -0.14 was negative and high. Moreover, the table revealed that the relationship between Real GDP in Nigeria and Interest Rates (INTR) was positive (0.31). In addition, the result in the table revealed that the relationship between Real GDP in Nigeria and Exchange Rate (EXTR) was negative. This assertion was premised on the fact that the correlation

coefficient -0.10 obtained for the variables of was negative and very low. This implied that there was a negative relationship between Real GDP and Exchange rate in Nigeria.

Diagnostics Test

This section of the study focused on the analysis and interpretation of the results of unit root and co-integration tests to verify the nature of the data collected for the study.

Unit Root Test

In order to be able to estimate the Vector Error Correction Mechanism the variables of the study must be freed from unit root problem. The table 4.3 presented the unit root test results obtained for the study parameters.

Table 4.3 Results of the Unit Test

Variables	LEVEL		1ST DIFFERENCE		Order of integration
	ADF	P-Value	ADF	P-value	
RGDP	-4.149088	0.0024	-11.24843	0.0000	I(0)
ARME	-3.424888	0.0163	-5.273095	0.0001	I(0)
ARMI	-6.925234	0.0000	-7.455914	0.0000	I(0)
GEAS	-3.048392	0.0394	-2.429971	0.1410	I(0)
INTR	3.758882	0.0069	-5.087627	0.0002	I(0)
EXTR	2.471260	1.0000	-4.087338	0.0030	I(1)

Source: Researcher's computation, Eviews 12

Table 4.3 revealed the results of the unit root computed for the study variables. The result in the table indicated that some of the variables used for the study were stationary at Level while only one was stationary at their first difference, the stationary nature of these variables confirmed that the Auto Regression Distributed Lag Model can be applied for the study. This assertion was premised on the fact that the p-value of the ADF calculated for Real GDP (RGDP), Agricultural Raw Materials Import (ARME), Agricultural Raw

Materials Export (ARMI), Govt. Capital Expenditure on agricultural Sector (GEAS), and Interest Rate (INTR) were free from unit root problem as they were stationary at level and their first difference respectively. However, Exchange Rate (EXTR) was greater than the critical value of 5% and therefore stationary at first difference only. The stationary status of these variable reaffirmed that Auto Regression Distributed Lag Model can be used to achieve the objectives of the study.

Table 4.4 Co-Integration Test

Date: 03/08/25 Time: 14:16 Sample (adjusted): 1987 2022 Included observations: 36 after adjustments Trend assumption: Linear deterministic trend Series: RGDP ARMI ARME GEAS INTR EXTR Lags interval (in first differences): 1 to 1				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.711355	109.4303	95.75366	0.0041
At most 1	0.519644	64.69821	69.81889	0.1197
At most 2	0.440622	38.30200	47.85613	0.2890
At most 3	0.237859	17.38853	29.79707	0.6113
At most 4	0.176180	7.610095	15.49471	0.5080
At most 5	0.017435	0.633200	3.841465	0.4262
Trace test indicates 1 cointegrating eqn(s) at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level **MacKinnon-Haug-Michelis (1999) p-values				
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				

Empirical Estimate of the model

Following from the model stated in section three; the result obtained from the analysis is presented below in table 4.5. The Table showed the OLS results obtained from the empirical analysis of the impact of import and export of agricultural raw materials on Economic growth

for the periods 1985-2023. The dependent variable is the RGDP while the independent variables are the Agricultural Raw Materials Import (ARMI), Agricultural Raw Materials Export (ARME), Govt. Capital Expenditure on agricultural Sector (GEAS), Interest Rate (INTR), and Exchange Rate (EXTR).

Table 4.5 Long run OLS Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ARMI	1.007069	0.688874	1.461906	0.1535
ARME	0.196006	0.378692	0.517587	0.6083
GEAS	-46.29997	23.06177	-2.007650	0.0532
INTR	0.122088	0.061977	1.969885	0.0576
EXTR	-0.014590	0.007196	-2.027408	0.0510
C	13.44901	5.312338	2.531655	0.0165
R-squared	0.288112	Mean dependent var	4.208496	
Adjusted R-squared	0.176880	S.D. dependent var	3.812218	
S.E. of regression	3.458672	Akaike info criterion	5.463586	
Sum squared resid	382.7972	Schwarz criterion	5.722152	
Log likelihood	-97.80813	Hannan-Quinn criter.	5.555582	
F-statistic	2.590181	Durbin-Watson stat	1.629665	
Prob(F-statistic)	0.044671			

Source: Researcher's computation, EViews 12

The results of the regression show that at 10% level of significance, three of the variables are statistically significant. Also, the overall variations in the dependent variable are not well explained by the

explanatory variables as R-Square shows 0.28 which is 28%; even so, there is also the presence of autocorrelation.

Table 4.6 ARDL Results

Maximum dependent lags: 1 (Automatic selection)
 Model selection method: Akaike info criterion (AIC)
 Dynamic regressors (4 lags, automatic): ARMI ARME GEAS INTR EXTR
 Fixed regressors: C
 Number of models evaluated: 3125
 Selected Model: ARDL(1, 0, 0, 3, 0, 4)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
RGDP(-1)	0.198434	0.179087	1.108027	0.2810
ARMI	2.330514	0.717590	3.247696	0.0040
ARME	0.357789	0.613578	0.583120	0.5663
GEAS	75.91649	110.8440	0.684895	0.5013
GEAS(-1)	-203.6258	163.2465	-1.247352	0.2267
GEAS(-2)	-218.0425	150.4319	-1.449443	0.1627
GEAS(-3)	269.7539	153.3087	1.759547	0.0938
INTR	0.113506	0.060357	1.880580	0.0747
EXTR	-0.090071	0.030727	-2.931322	0.0083
EXTR(-1)	0.157308	0.049043	3.207564	0.0044
EXTR(-2)	-0.132522	0.054279	-2.441489	0.0240
EXTR(-3)	0.121400	0.050439	2.406864	0.0259
EXTR(-4)	-0.065995	0.032501	-2.030562	0.0558
C	14.94143	6.627593	2.254427	0.0355
R-squared	0.675679	Mean dependent var	4.218080	
Adjusted R-squared	0.464870	S.D. dependent var	3.918970	
S.E. of regression	2.866827	Akaike info criterion	5.237190	
Sum squared resid	164.3740	Schwarz criterion	5.865692	
Log likelihood	-75.03223	Hannan-Quinn criter.	5.451527	
F-statistic	3.205175	Durbin-Watson stat	1.789353	
Prob(F-statistic)	0.009547			

*Note: p-values and any subsequent tests do not account for model selection.

The table above presented the result of the ARDL for this study; An Empirical Analysis on the impact of import and export of agricultural raw materials on Economic growth: 1985-2023. From the result presented above, ARMI shows a positive and significant value at 5% level of significant, this indicates that Agricultural raw materials import has a positive and statistically significant effect on economic growth in Nigeria.

The result above also shows that Agricultural Raw Materials Export has a significant and positive relationship with Real Gross Domestic Product with value of (0.35) which is also significant at 10% level of significant. Thus, a 1% increase in Agricultural Raw Materials Export might lead to a 0.35% increase in economic growth. The Interest Rates value shows a positive and insignificant relationship with our dependent (Real GDP) variable at 5% level of significant with a magnitude of 0.5%.

The Govt. Capital Expenditure on agricultural sector GEAS shows a positive and significant value (75.9) at 10% level of significance. Thus,

this implies that 1 percent increase in Government Capital Expenditure will increase Real GDP by 75 %. Moreover, Interest rate shows a significant and positive impact on Real GDP with a coefficient of 0.11 this implies that 1 percent increase in INTR will increase RGDP by 0.11 %. In general, the fit of the regression equations is good (adjusted $R^2 = 0.67$) as can be seen from the table 4.5 above. The adjusted R-squared shows that all the independent variables in our model explain approximately 67% of the systematic variations in Real GDP (dependent variable) in the period under consideration leaving just 35% unexplained. Also, the Durbin-Watson (DW) statistics is corrected. Pertinent to the above, the Durbin-Watson (DW) statistic (measure for the presence of autocorrelation in the model) is 1.79, it is noticed therefore, that our model is free from autocorrelation as the value is approximately close to 2. Based on intuition, this means that the model is reliable in explaining the impact of the impact of import and export of agricultural raw materials on Economic growth in Nigeria.

Table 5 Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.
ARMI does not Granger Cause RGDP	38	3.55585	0.0677
RGDP does not Granger Cause ARMI		7.18889	0.0111

The Null Hypothesis states that ARMI does not Granger causes RGDP i.e. there is no relationship between Agricultural Raw Materials Import (ARMI) and Real GDP. From the result above we reject the Null Hypothesis is thus accepting the Alternative Hypothesis that there is a significant relationship between Agricultural Raw Materials Import (ARMI) and Real GDP. Therefore, Agricultural Raw Materials Import granger causes Real GDP. The implication of this is that an increase in the Agricultural Raw Materials Import will affect the Real GDP of Nigeria.

Finally, from the causality test, it was discovered that a unidirectional causality runs from Agricultural Raw Materials Import to Real GDP.

A Priori Expectation

A priori expectation for the regression parameters; $\alpha_1 > 0$, $\alpha_2 > 0$, $\alpha_3 > 0$, $\alpha_4 < 0$ and $\alpha_5 < 0$

$$\text{LOG(RGDP)} = \alpha_0 + \alpha_1 \text{LOG(GEAS)} + \alpha_2 \text{LOG(ARMI)} + \alpha_3 \text{LOG(ARME)} + \alpha_4 \text{LOG(INTR)} + \alpha_5 \text{LOG(EXTR)} + e_t$$

Where: RGDP = Real Gross Domestic Product,

GEAS = Government expenditure on agricultural sector, (Positive)

ARMI = Agricultural Raw Materials Import, (Negative)

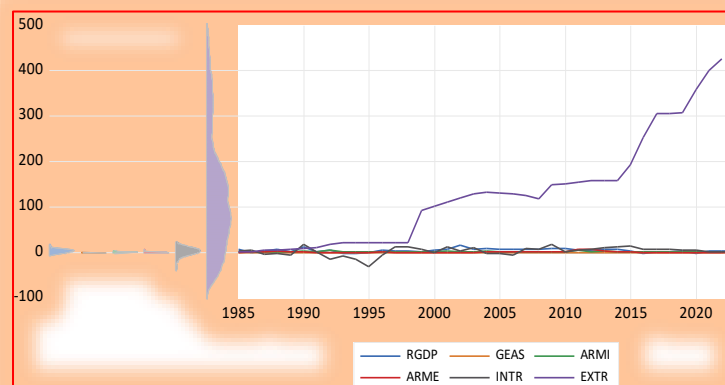
ARME = Agricultural Raw Materials Export, (Positive)

INTR = Interest Rate (Negative)

EXTR = Exchange Rate (Negative)

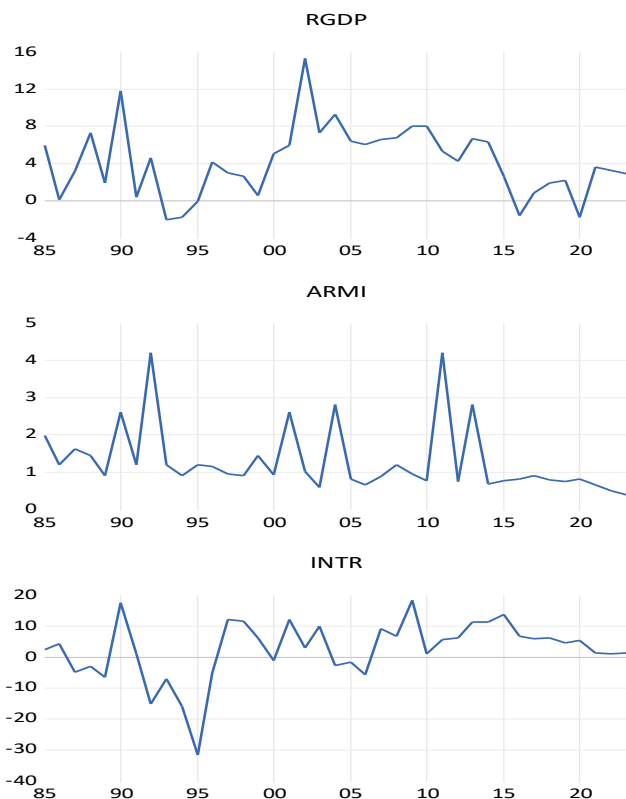
0 = Constant variable, = Coefficients of independent variables,

et = error term

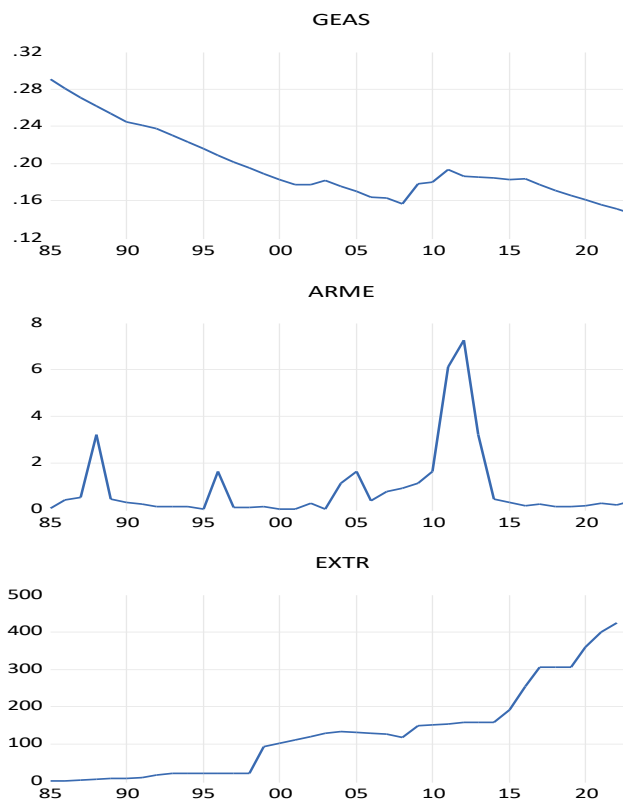


Trend Analysis

Table 7 Trend Analysis



The trend analysis table shows that there has been a similar trend among all variables starting from 2000 till 2023 except for Exchange Rate that has upward and indifference trend from 1998-2023.



Summary of Findings

The study has revealed an important role that Agricultural raw materials export and import can play for Nigeria's sustainable economic growth and development, more especially with the present or current global oil price shock that serves as a major macroeconomic disequilibrium to the country in terms of balance of payment. However, this study can serve as a reference point to policy makers for a paradigm shift in making reverse from oil to agricultural driven economy. Therefore, investing in agricultural sector as a driver for agricultural revolution as pointed out by the new administration should be actualized. This can change people's perception toward government policies as it has become a business as usual in the past for politicians to make promises for the sake of winning their elections, without fulfilling them. This further suggests that central bank of Nigeria as part of its monetary policy reform should encourage financial institutions to support farmers and agro allied industries with enough funds. Finally, adopting new modern farming (technology) in agricultural sector is also recommended, and agro-forestry farming system which is consistent with United Nations 2030 agenda for sustainable development goals (SDGs). This will improve value-chain, increase job creation, and help in achieving food security, hence reduce over reliance on importation (import bill) of agricultural raw materials and products from other countries.

The analysis revealed the following findings:

1. It was discovered that agricultural raw materials import has a positive and statistically significant effect on economic growth in Nigeria. The result above also shows that Agricultural Raw Materials Export has a significant and positive relationship with Real Gross Domestic Product with

value of (0.35) which is also significant at 10% level of significant.

2. Exchange rate shows a negative and significant relationship with RGDP with a coefficient of (-0.09) this implies that 1% increase in exchange rate will reduce economic growth by 0.9 % and this result agree with the works by Ojide, Ojide and Ogbodo (2014) who find an inverse relationship between exchange rate and economic growth in Nigeria.
3. The Govt. Capital Expenditure on agricultural sector GEAS shows a positive and significant value (75.9) at 10% level of significance. In the bid to evaluate the role of government policies and infrastructure played in facilitating agricultural trade in Nigeria, it implies that a 1 percent increase in Government Capital Expenditure will increase Real GDP by 75 %.

Conclusion

This study explored the impact of the import and export of agricultural raw materials on Nigeria's economic growth. Drawing from the empirical literature and trade theories including the theoretical framework, it is evident that Nigeria possesses significant comparative advantage in agricultural production due to its vast arable land, favorable climate and labor availability. However, the country has not fully capitalized on these advantages due to infrastructural deficits, inconsistent government policies and weak integration into the global agricultural value chain.

The analysis thereby revealed that while international trade in agriculture holds the potential to contribute meaningfully to Nigeria's GDP and employment levels, the benefits have been undermined by over-reliance on the export of raw materials and importation of

processed agricultural products. Furthermore, global price fluctuations in the agricultural commodity market have created a volatility in national earnings thereby exposing the economy of Nigeria to external shocks. Inadequate government investment in infrastructure such as port systems, storage facilities, roads, etc. go a long way to hinder competitiveness in agricultural exports.

In conclusion, policy inconsistencies, weak enforcement of trade regulations and lack of support for local farmers have prevented Nigeria from moving up the value chain. While trade in agricultural raw materials affects economic growth, the nature and structure of that trade, plays a critical role in determining whether the effects is positive or negative.

Recommendation

1. The findings from investigating the relationship existing between international trade of agricultural raw materials and economic growth in Nigeria encourages for expansion of export markets in other to encourage more participation in agriculture. It further indicates that an export-led growth in agriculture can reduce poverty and support inclusive growth.
2. To ascertain the extent to which the global fluctuations of agricultural commodities in the agricultural market affect the economic growth of Nigeria, this study recommends Nigeria to develop strategic buffers such as agricultural commodity boards, commodity price insurance to protect farmers, stabilization funds and further diversify the export market to cushion the import of external shocks.
3. In other to evaluate the role of government policies and infrastructural play in facilitating agricultural trade in Nigeria, this study recommends that Nigeria needs a stable, transparent and well-implemented trade policy framework that supports agricultural products exports over import. It further recommends that Nigeria will gain better when they export agricultural finished or semi-finished goods rather than raw materials because it will have more value chain.

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