DISAGGREGATED AGRICULTURAL PRODUCTS EXPORTS AND ECONOMIC GROWTH IN NIGERIA

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Abstract

This study investigated the impact of disaggregated agricultural products exports; specifically palm kernel cake, cashew nuts, and tobacco on economic growth in Nigeria from 1990 to 2023. The analysis employed the Autoregressive Distributed Lag (ARDL) framework using annual time series data obtained from the World Bank. Macroeconomic control variables including trade openness, real interest rate, foreign direct investment, and real effective exchange rate were incorporated to account for broader growth determinants. The ARDL bounds test confirmed the existence of a longrun cointegrating relationship among the variables, while the error correction mechanism showed a rapid speed of adjustment toward equilibrium. The empirical results revealed that palm kernel cake and cashew nut exports did not exert a statistically significant effect on economic growth in either the short or long run. In contrast, tobacco exports exhibited a significant negative impact on GDP, possibly reflecting regulatory pressures, declining international demand, and limited domestic value addition. Among the control variables, trade openness and real interest rate were found to have significant positive effects on economic growth. The study concluded that not all agricultural exports contributed positively to Nigeria's economic performance. Hence, targeted investment in agro-processing and improved export logistics are recommended.

Keywords: Disaggregated, Agriculture, Products Exports, Augmented Dickey-Fuller (ADF), Autoregressive Distributed Lag (ARDL), Nigeria

Introduction

Agriculture historically, served as the cornerstone of Nigeria's economy, providing employment to over 70% of the population and contributing approximately 60–70% of the gross domestic product (GDP) prior to the discovery of oil (World Bank, 2023). During the pre-independence and immediate post-independence era, agricultural exports such as cocoa, palm oil, rubber, and groundnuts were the major foreign exchange earners (FAO, 2022). This placed Nigeria among

the world's leading agricultural producers in the 1960s, demonstrating the sector's capacity to

The advent of crude oil in the 1970s marked a significant turning point. The ensuing oil boom led to the neglect of agriculture, manifesting in a classic case of the "Dutch Disease," where oil revenues distorted the economy and reduced the competitiveness of other sectors (Busari, Ajayi & Oladele, 2023). By 2023, oil constituted 76.5% of Nigeria's export earnings, while agriculture's share plummeted to a mere 1.8% (Central Bank of Nigeria [CBN], 2023). This structural imbalance contributed to the deterioration of rural infrastructure and a decline in agricultural productivity.

drive economic growth and structural transformation.

As a consequence, Nigeria became heavily reliant on food imports, spending over \$10 billion annually by 2023 (FAO, 2022). The neglect of agriculture contributed to a surge in rural poverty—estimated at 45%—and a high unemployment rate of 37% in predominantly agrarian communities. Moreover, the decline in agricultural exports exacerbated the country's trade deficit and exposed the economy to external shocks, particularly fluctuations in global oil prices (National Bureau of Statistics [NBS], 2023).

Notwithstanding these challenges, agriculture remains a key pillar of Nigeria's economy, employing 36% of the labour force and contributing 23.7% to GDP (NBS, 2023). The sector holds considerable potential for economic diversification, especially through the export of non-oil commodities such as sesame, cashew, ginger, and cassava. This according to NBS (2023), agricultural exports could generate over 14 million jobs and significantly reduce dependence on oil revenues if properly harnessed.

However, Nigeria's participation in the global agricultural export market remains weak. The country ranks 132nd in agricultural export competitiveness due to systemic challenges such as low productivity, insufficient value addition, and infrastructural deficits (International Trade Centre [ITC], 2023). For example, cocoa prices fluctuated by over 40% between 2022 and 2023, undermining revenue predictability (World Bank, 2023). Furthermore, poor transportation networks and energy shortages contribute to post-harvest losses of up to \$9 billion annually. Efforts to revitalize the sector have included policy interventions such as the National Agricultural Technology and Innovation Policy (NATIP, 2023–2027), which aims to enhance productivity and export potential. Nonetheless, these initiatives are hampered by structural bottlenecks. For instance, only 5% of Nigerian farmers have access to formal credit, while land tenure disputes hinder about 30% of agribusiness investments (CBN, 2023).

In sum, agricultural exports hold significant potential to drive Nigeria's economic growth and diversification. Empirical studies reveal that a 10% increase in agricultural exports leads to a 1.2% rise in GDP in developing economies (Busari et al., 2023). For Nigeria, cocoa exports alone contributed 0.6% to GDP growth in 2022 despite inflation and currency depreciation (CBN, 2023). Therefore, a strategic focus on agricultural export expansion, underpinned by coherent policies, infrastructure development, climate adaptation, and regional integration, is imperative for achieving inclusive and sustainable economic development.

Despite its vast agricultural potential, Nigeria's global competitiveness remains low. The country ranks 132nd in the International Trade Centre's agricultural export index, largely due to low productivity, weak value chains, and negligible value addition. For example, Nigeria's average cocoa yield stands at 400 kg/hectare far below Côte d'Ivoire's 1,200 kg/hectare benchmark. Moreover, post-harvest losses cost the country an estimated \$9 billion annually, while processed products account for less than 5% of total agricultural exports (FAO, 2022). Without mechanization and targeted investment in agro-processing hubs, the sector remains ill-equipped to compete in high-value global markets.

The disconnect between agriculture's employment capacity and its GDP contribution reflects deep inefficiencies in the sector. Although agriculture employs 36% of Nigeria's workforce, it contributes just 23.7% to GDP (NBS, 2023). Youth unemployment in rural areas exceeds 45%, driving migration and urban congestion. Women, who make up over 75% of the agricultural workforce, earn 60% less than their male counterparts, indicating persistent gender disparities and underutilization of human capital (World Bank, 2023).

Macroeconomic instability, including inflationary pressures and exchange rate volatility, also deters investment in export-oriented agriculture. The inflation rate reached 25.8% in 2023, driven largely by rising food costs and the removal of fuel subsidies (CBN, 2023). The concurrent depreciation of the naira raised input costs—particularly for fertilizers and machinery—by over 50%, thereby reducing the profitability of agricultural exports and discouraging foreign direct investment, which fell to \$1.1 billion in 2023 (CBN, 2023).

In light of these multifaceted challenges, it becomes imperative to investigate the extent to which agricultural exports influence economic growth in Nigeria. A comprehensive understanding of the structural, policy, and technological constraints facing the sector is critical for informing effective economic diversification strategies and enhancing export-driven development.

Literature Review

In view of the foregoing discussion, several studies were reviewed to ascertain the influence of agricultural products export on economic growth. These studies include:Emeka, Orefi, Goodness and Godwin (2025) examined the impact of agricultural export, economic growth and welfare in Nigeria, using a Dynamic Computable General Equilibrium Analysis. The findings from their results showed that increasing agricultural export by 10% and 20% will increase total output in the economy by 2.9% and 4.1% respectively. Total export will rise by 3.2% and 2.7% respectively while total import will rise lower than export by 0.5% and 1.7% leading to improved trade balance. Domestic supply of agricultural sector will rise by 2.5% and 3% in the corresponding scenarios suggesting that an agricultural export increase of up to 20% will not affect domestic food supply. Based on their findings, they therefore maintained that government Policies that will encourage the export of processed food rather than raw agricultural products should be encouraged.

Darim, Pam, and Ishaku (2025) examined the impact of agricultural export on economic growth

in Nigeria with effect from 1985 to 2022. Using autoregressive distributed lag model (ARDL), their results suggested that cocoa export, rubber export, and crop production have significant long-run effects on RGDP, while the variable palm kernel export and the constant term do not appear to have significant long-run impacts.

Momodu, Ewubare, Chukwu, and Gbaranen (2025) examined the effects of agricultural sector performance on economic growth in Nigeria. The study covered a period of forty-three (1981 to 2023). The study proxied agricultural sector performance by crop production, livestock production, forestry production and fishing production while economic growth was measured by Gross Domestic Product. The technique of data analysis adopted include: descriptive statistical technique, Augmented Dickey-Fuller (ADF) of unit root test, correlation matrix of multicollinearity test, and Autoregressive Distributive Lag (ARDL) approach. The findings of the study showed that crop production, livestock production and fishing production have positive and significant effect on Gross Domestic Product in Nigeria. Also, forestry production has a positive and non-significant effect on Gross Domestic Product. The study recommends that the government and private sector should prioritize investments in agricultural infrastructure, including irrigation systems, rural roads, storage facilities, and processing plants, which will boost crop yields.

El-Weriemmi and Bakari (2024) investigated the effect of agricultural exports on economic growth across 12 low-income countries. Employing an advanced gravity model with both fixed and random effects, the analysis in the fixed effects model, showed that capital and labor show significant positive impacts on economic growth, while the random effects model showed that capital remains a significant contributor to economic growth, with a coefficient of 0.360.

Ime, Boniface, Ededet and Aniefiok (2023) evaluated the effect of agriculture value added in the relationship between agricultural export and economic growth in Nigeria from 2000 to 2022 by employing time series data and deploying Augmented Dicky-Fuller unit root, Auto-regressive Distributed lag (ARDL) framework, and Dynamic Ordinary Least Square (DOLS) technique for analysis. The results reported showed that agricultural raw materials exports (LNAGXP) has a positive effect on real gross domestic product while agriculture value added exhibited a negative relationship with real gross domestic product. However, Nigeria needs to improve on its primary agriculture production base in order to generate enough income from exports. In the same vein, the country needs to explore research and incorporate value addition in it exports. Including value additions to exports in the country will contribute to the country's economic development and real GDP, it will generate more income and also provide jobs, thereby reducing unemployment rate, and increasing competitiveness in the global market.

Oluwafemi and Udeorah (2023) assessed agricultural trade and economic growth in Nigeria from 1985 to 2020. Adopting autoregressive distributed lag model (ARDL), these researchers found that an increase in agricultural exports will have insignificant positive impact on economic growth in Nigeria. More so, an increase in agricultural credit had positive and insignificant impact on economic growth.

Utuk, Akpan, Eduno and Udo (2023) evaluated the effect of agriculture value added in the

relationship between agricultural export and economic growth in Nigeria from 2000 to 2022 by employing Auto-regressive Distributed lag (ARDL) framework, and Dynamic Ordinary Least Square (DOLS) technique for analysis. The results reported showed that agricultural raw materials exports (LNAGXP) have a positive effect on real gross domestic product while agriculture value added exhibited a negative relationship with real gross domestic product.

Sylvester and Kayode (2023). assessed agricultural trade and economic growth in Nigeria from 1985 to 2020. Using the technique of auto regressive distributed lag model (ARDL), the researchers found that an increase in agricultural exports had insignificant positive impact on economic growth in Nigeria. Moreso, an increase in agricultural credit had positive and insignificant impact on economic growth. Again, it was observed that consumption expenditure had negative and insignificant effect on economic growth in the long run. Based on the study's findings, it was recommended that, Nigeria government should reignite its strategy of trade opening and economic diversification, especially her exports by encouraging productivity in the agricultural sector.

Theoretical Framework

Comparative Advantage Theory

The comparative advantage theory pioneered by David Ricardo provides a vital framework for examining Nigeria's agricultural export performance and its effect on economic growth (Agbahey, Khalid & Harald, 2021). By leveraging goods produced at lower opportunity costs, countries can boost production efficiency and growth. In Nigeria's case, this theory highlights the potential benefits of specializing in specific agricultural commodities, such as cocoa and cashew nuts, where the country has a comparative advantage. To gain a deeper understanding, disaggregated analysis is crucial, as it allows for a more nuanced assessment of individual commodities' economic value and performance within the agricultural sector ((Agbaheyetal, 2021).

Methodology

The study adopted a quantitative, ex-post facto research design, which is appropriate for analyzing historical time series data. This design is chosen because it allows for empirical investigation of the relationships among macroeconomic variables without manipulating the data, thereby ensuring objectivity and reliability. The data for this work was sourced from World Bank World Development Indicators (WDI) and FAOSTAT (for agricultural export data). The series of the variables were subjected to unit root test; for the stationarity of the data so as to avoid spurious results. In broad terms, the model was equally subjected to autoregressive distributive lag model (ARDL); for effect examination of both short and long run impact so as to ensure efficient and effective policy formulations.

Model Specification

For proper capturing the objective of this study, these variables are used as proxy:

$$GDPG = f(PKCQ, CASHQ, TOBQ, TOP, RIR, REER, FDI)$$

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The generic ARDL model is specified as follows:

$$GDPG_{t} = \alpha_{0} + \sum_{i=1}^{p} \alpha_{1}GDPG_{t-i} + \sum_{i=0}^{q^{1}} \beta_{1}LPKCQ_{t-i} + \sum_{i=0}^{q^{2}} \beta_{2}LCASHQ_{t-i} + \sum_{i=0}^{q^{3}} \beta_{3}LTOBQ_{t-i} + \sum_{i=0}^{q^{4}} \beta_{4}TOP_{t-i} + \sum_{i=0}^{q^{5}} \beta_{5}RIR_{t-i} + \sum_{i=0}^{q^{6}} \beta_{6}REER_{t-i} + \sum_{i=0}^{q^{7}} \beta_{7}FDI_{t-i} + \ell_{t}$$

To estimate both the long-run and short-run dynamics, an Error Correction Model (ECM) is derived from the ARDL as follows:

$$\Delta GDPG_{t} = \phi_{0} + \sum_{i=1}^{p} \phi_{1} \Delta GDPG_{t-1} + \sum_{i=0}^{q} \phi_{2} \Delta X_{t-i} + \lambda ECM_{t-1} + \mu_{t} \$\$$$

Where: Δ denotes the first difference operator; ECM_{t-1} is the error correction term; λ measures the speed of adjustment back to equilibrium; us the white-noise error term

Description and Measurement of Variables

Table 1: Description of Variables

Variable	Symbol	Description	Measurement
Economic Growth	GDPG	Growth rate of real GDP (%)	Annual % change
Palm Kernel Cake	LPKCQ	Log of palm kernel cake export	Log-transformed
Export		quantity	-
Cashew Nut Export	LCASHQ	Log of cashew nut export	Log-transformed
		quantity	
Tobacco Export	LTOBQ	Log of tobacco export value	Log-transformed
Trade Openness	TOP	Ratio of t rade (exports +	Percentage (%)
-		imports) to GDP	- , ,
Real Interest Rate	RIR	Inflation-adjusted lending rate	Percentage (%)
Real Effective Exchange	REER	Weighted index of the	Index (base year =
Rate		exchange rate adjusted for	100)
		inflation	,
Foreign Direct	FDI	Net inflows as % of GDP	Percentage (%)
Investment			

Nature and Sources of Data

The study utilizes secondary time series data covering the period 1990 to 2023. These data were obtained from the following reliable sources: World Bank World Development Indicators (WDI) and FAOSTAT (for agricultural export data). The data include annual observations on gross domestic product growth rate, disaggregated agricultural exports (palm kernel cake, cashew nut, and tobacco), and key macroeconomic control variables such as trade openness, real interest rate, real effective exchange rate, and foreign direct investment.

Estimation Techniques

The estimation proceeds in the following steps:

- 1. Unit Root Test: The Augmented Dickey-Fuller (ADF) test is applied to determine the order of integration for each variable.
- 2. Bounds Cointegration Test: The ARDL bounds testing approach developed by Pesaran et al. (2001) is used to test for the existence of long-run relationships among the variables.
- 3. Long-run and Short-run ARDL Estimation: Once cointegration is established, the long-run coefficients and the corresponding error correction model are estimated.
- 4. Post-Estimation Diagnostics: Model stability and validity are verified through tests for serial correlation, heteroskedasticity, and residual normality.

Diagnostic and Robustness Tests

To ensure the reliability and statistical soundness of the model, the following diagnostic tests are conducted:

Table 2: Post Tests

Test	Purpose
Breusch-Godfrey LM Test	Tests for serial correlation in residuals
Breusch-Pagan-Godfrey Test	Tests for heteroskedasticity
Ramsey RESET Test	Tests for model specification errors
Durbin-Watson Statistic	Assesses the presence of autocorrelation
Stability Tests (CUSUM, CUSUMSQ)	Tests parameter stability over time

Source: Researchers compilation

Justification for Method Selection

The ARDL model is selected due to its several advantages over other cointegration techniques such as Engle-Granger and Johansen approaches because it accommodates both I(0) and I(1) variables. It allows for estimation with small or moderate sample sizes and distinguishes between short-run and long-run dynamics. It enables robust hypothesis testing through bounds F-statistics.

A Priori Expectations

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Table 3 A priori Expectations

Variable	Expected Sign	Justification		
LPKCQ	+	Palm kernel exports are expected to contribute positively to		
		GDP through revenue and employment.		
LCASHQ	+	Cashew exports are high -value and have po tential to drive		
		growth		
LTOBQ	±	Tobacco may have mixed impacts due to global health		
		regulations and declining demand.		
TOP	+	Trade openness enhances access to international markets and		
		foreign investment		
RIR	±	High interest rates may attract savings but discourage		
		investment		
REER	土	A depreciated exchange rate can promote exports but increase		
		import costs		
FDI	+	Foreign direct investment is generally growth-enhancing.		

Source: Researchers compilations

Results

To ensure data stationarity and prevent spurious regression results, the Augmented Dickey-Fuller (ADF) test was employed. The results are summarized below:

Table 4: ADF Unit Root Tes t @ Level

Series	Test Statistic	CV@5%	Remarks
@LEVELS			
GDPG	-3.646811	-3.552973	I(0)
LPKCQ	-1.517086	-3.552973	NS
LCASHQ	-3.903938	-3.552973	I(0)
LTOBQ	-2.899023	-3.552973	NS
RIR	-2.550838	-3.568379	NS
REER	-2.601661	-3.552973	NS
TOP	-2.270626	-3.552973	NS
FDI	-2.139995	-3.557759	NS
@ 1st Difference	e		
LPKC	-7.342743	-3.557759	I(1)
LTOB	-9.710711	-3.557759	I(1)
RIR	-4.369685	-3.568379	I(1)
FDI	-6.907551	-3.557759	I(1)
REER	-5.365505	-3.557759	I(1)
TOP	-5.217072	-3.557759	I(1)

Source: Eviews 13, 2025

These results indicate a mixture of I(0) and I(1) series, making the ARDL bounds testing approach appropriate for cointegration and model estimation.

Table 5: ARDL Bounds Test

F-Statistic	Bands	Lower bound (I(0))	Upper bound (I(1))
4.080634	10%	2.196	3.370
	5%	2.597	3.907

Source: Eviews 13, 2025

There is evidence of a long-run cointegrating relationship among economic growth, palm kernel exports, tobacco exports, cashew nut exports, and the control variables (TOP, RIR, REER, and FDI).

Long-run ARDL Estimates

From the ARDL model, the long-run coefficients show the direction and significance of relationships between disaggregated agricultural exports and economic growth.

Table 6: Cointegrating Coefficients

Dependent Variable: GDPG

Regressors: LPKCQ LCASHQ LTOBQ TOP RIR REER FDI

Method: ARDL

Variable *	Coefficient	Std. Error	t-Statistic	Prob.
LPKCQ(-1)	-0.586673	0.667470	-0.878950	0.3881
LCASHQ	-0.604495	0.559864	-1.079717	0.2910
LTOBQ(-1)	-0.903705	0.265455	-3.404357	0.0023
TOP(-1)	27.48558	10.03834	2.738060	0.0115
RIR(-1)	0.211202	0.057794	3.654363	0.0013
REER	0.022735	0.018244	1.246172	0.2247
FDI(-1)	-0.733827	1.204752	-0.609111	0.5482
C	11.73906	13.41602	0.875003	0.3902

Source: Eviews 13, 2025

Note: * Coefficients derived from the CEC regression.

As contained in table 6 above, Tobacco exports had a statistically significant negative impact on GDP, suggesting volatility or weak value addition. Also, Trade openness and real interest rate had significant positive impacts, affirming their relevance in economic growth. While, Palm kernel and cashew exports had statistically insignificant effects in the long run, possibly due to low global competitiveness or supply chain inefficiencies.

Table 7: ECM Results

Dependent Variable: D(GDPG)

Regressors: LPKCQ LCASHQ LTOBQ TOP RIR REER FDI

Method: ARDL(1,1,0,2,2,1,0,2)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ECM(-1)	-1.270693	0.169331	-7.504182	0.0000
D(LPKCQ)	0.519894	0.494505	1.051342	0.3040
D(LTOBQ)	-1.271154	0.324558	-3.916572	0.0007
D(LTOBQ(-1))	0.804463	0.269124	2.989188	0.0066
D(TOP)	23.12063	5.232153	4.418951	0.0002
D(TOP(-1))	-15.72112	5.259481	-2.989101	0.0066
D(RIR)	0.193976	0.057181	3.392302	0.0025
D(FDI)	-2.988903	0.644419	-4.638137	0.0001
D(FDI(-1))	-1.604860	0.635379	-2.525831	0.0189
R-squared	0.807237	Adjusted R-squa	ared	0.740189
F-statistic	12.03970	Prob(F-statistic)		0.000001
Durbin-Watson stat	2.298823	Akaike info crit	erion	4.215610

^{*} p-values are incompatible with t-Bounds distribution.

The result of the error correction model is contained in table 4 above. Accordingly, the error correction term (ECM) is correctly signed and significant, confirming a valid short-run adjustment mechanism toward long-run equilibrium. About 127% of disequilibrium is corrected within one year suggesting a fast adjustment speed.

Table 8: Model Diagnostic Testing

Post-Estimation Test	Statistic	p-Value	Remark
Serial Correlation (LM)	F-statistic 2.784858	0.0985	No serial correlation
Heteroskedasticity (BP-G) R-squared (Overall Fit)	F-statistic 0.851191 0.8323	0.6246	Homoskedasticity present Good model fit
Durbin-Watson	2.2988		No autocorrelation

Source: Eviews 13, 2025

In table 8 above, the P Value of Serial Correlation (which is used to test for the in-dependency of error term) is 0.0985, is greater than 0.05 at 5% level of significance. This shows that there is absence of auto correlation. Again, the P Value of Heteroskedasticity (used to test for the constance of mean and variance) is 0.6246, showing that there is absence of Heteroskedasticity. This means that mean and variance are constant overtime, thereby leading to the accuracy of the work. In overall, These diagnostic results confirm that the model is robust, well-specified, and satisfies classical assumptions; as their corresponding probability values are greater than 0.05 at 5% level of significance.

Discussion of Findings

In table 4, the results of unit root test showed the existence of mixed order of integration. This is because, growth rate of real GDP (GDPG) and cashew nut export (LCASHQ) were stationary at level I(0), while Palm Kernel Cake Export (LPKCQ), tobacco export (LTOBQ), trade openness (TOP), real interest rate (RIR), real effective exchange rate (REER) and foreign direct investment (FDI) became stationary at first difference. Table 5 showed the evidence of long run relationship agricultural products exports and economic growth; as the value of its F-Statistic (4.080634) is greater than its upper bound (3.907) at 5% level of significance. Hence, table 6 which captured the long-run autoregressive distributed lag model (ARDL) estimates, we observed that palm kernel cake export (LPKCQ) with the coefficient of -0.586673 and probability value of 0.3881, showed that palm kernel cake export has a negative impact on economic growth in Nigeria and statistically not significant as probability value of 0.3881 is greater than 0.05 at 5% level of significance.

However, in table 7, Error Correction Mechanism (ECM) system equation, showed that palm kernel cake export (LPKCO) with the coefficient of 0.519894 and probability value of 0.3040, implies that palm kernel cake export has a positive impact on economic growth in Nigeria and statistically not significant. In the same vein, cashew nut export (LCASHQ) in table 6, has coefficient of -0.604495 and probability value of 0.2910, implying its positive relationship with economic growth, but statistically not significant within the period under review. However, tobacco export (LTOBQ) with the coefficient of -0.903705 and -1.271154 in tables 6 and 7 respectively, and probability value of 0.0023 and 0.0007 respectively, implies that tobacco export has positive and significant impact on economic growth in Nigeria. Similarly, trade openness (TOP) and real interest rate (RIR) in table 7, with the coefficient of 23.12063 and 0.193976 respectively and probability value of 0.0002 and 0.0025 respectively, showed positive and significant impact on economic growth in Nigeria.

Lastly, real exchange rate (REER) with the coefficient of 0.022735 and probability value of 0.2247, implies positive relationship with economic growth, but statistically not significant. The foreign direct investment (FDI) with the coefficient of -0.733827 and probability value of 0.5482, showed that FDI had a negative relationship with economic growth in Nigeria and statistically not significant at the period under review.

Conclusion

The study provides evidence that not all agricultural exports contribute equally or positively to Nigeria's economic growth. While agricultural exports are often championed as vehicles for diversification and development, this research reveals that the type of agricultural export matters. Palm kernel cake and cashew nut exports appear to be underperforming in their contribution to GDP, likely due to constraints such as poor processing infrastructure, inadequate market access, and fluctuating international prices. Tobacco exports, despite their historical role in non-oil revenue generation, may now act as a drag on economic performance, reflecting broader global trends in health regulation and market rejection.

Conversely, trade openness remains a strong driver of growth, underscoring the importance of enhancing Nigeria's integration into global agricultural value chains with better-quality and diversified exports. Thus, the disaggregated analysis challenges the assumption that increasing agricultural exports will automatically lead to economic growth. Export composition and structure play a critical role in determining outcomes.

Recommendations

Based on the empirical findings, the following recommendations are made:

- (1). To enhance the growth impact of palm kernel and cashew nut exports, the Nigerian government should invest in agro-processing zones and support smallholder farmers with modern equipment, credit, and logistics. This will help transform raw exports into high-value commodities with better global competitiveness.
- (2). Given the consistent negative impact of tobacco exports on GDP, Nigeria should consider

- transitioning away from tobacco dependence. Policies could encourage crop substitution, bio-economy diversification, or redirect land and resources toward high-value, healthfriendly crops such as cocoa, sesame, and horticultural products.
- (3). The positive influence of trade openness indicates that Nigeria should pursue bilateral and multilateral trade agreements that promote access to high-demand export markets, especially in Asia and Europe. However, these agreements should also prioritize standards compliance and product certification.

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