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Agricultural Performance in Nigeria: Does Government Policy Matter?

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Abstract: This study examines the impact of government policy on agricultural performance in Nigeria from 1981 to 2024 using a dynamic time-series framework. Agricultural performance, proxied by agricultural value added, is modeled as a function of government agricultural expenditure, agricultural credit, gross fixed capital formation, money supply, and inflation. The study employs the Autoregressive Distributed Lag (ARDL) bounds testing approach to cointegration and Error Correction Model (ECM) to capture both short-run dynamics and long-run effects. Results reveal that agricultural credit and capital formation have significant positive effects on agricultural output, while government expenditure and money supply exhibit lagged and mixed impacts. Inflation shows minor but occasionally negative effects, highlighting the sensitivity of agriculture to macroeconomic conditions. The ECM coefficient confirms a moderate speed of adjustment to long-run equilibrium. Diagnostic and stability tests indicate that the model is well-specified, stable, and free from heteroskedasticity. The findings underscore the importance of targeted credit provision, investment in agricultural infrastructure, and macroeconomic stability in enhancing agricultural productivity. The study recommends consistent and efficient government interventions to strengthen Nigeria's agricultural sector, reduce external dependence, and promote sustainable economic growth.

Keywords: Agricultural Policy, Monetary Policy, Fiscal Policy, ARDL Model

JEL Codes: Q18; Q18; E52; H54

INTRODUCTION

Government policy refers to a set of deliberate actions, regulations, and strategies formulated and implemented by the state to guide the development of a nation's economy or specific sectors within it (Martin, Lee Jr., & Hall, 2021). These policies are aimed at achieving predetermined socio-economic objectives such as economic growth, poverty reduction, employment creation, and food security (Anna Maria College Online, 2023). In Nigeria, government policy has played a central role in shaping the structure, performance, and sustainability of the agricultural sector.

Agriculture has historically been regarded as the backbone of Nigeria's economy, particularly before the dominance of the petroleum sector. In the decades immediately following independence in 1960, agriculture was the leading contributor to national output, employment, and foreign exchange earnings. For instance, during the 1960s, agricultural activities accounted for over 60 per cent of total GDP, contributed approximately 70 per cent of government revenue, and generated nearly 80 per cent of export earnings, underscoring the sector's central role in the economy at the time. Agriculture also employed more than 60 per cent of the population, and Nigeria ranked among the world's leading producers and exporters of commodities such as cocoa, palm oil, cotton, groundnut, and rubber (Udeaja & Udoh, 2014).

By contrast, the contribution of the oil sector was relatively insignificant in the early post-independence period but expanded rapidly following the oil boom of the late 1960s and early 1970s. This development resulted in a structural shift away from agriculture as the primary driver of economic growth (Ideh et al., 2021). Nevertheless, despite its historical and strategic importance, agricultural performance in Nigeria has fluctuated over time, often reflecting the nature, consistency, and effectiveness of government policies. Consequently, successive governments have introduced various agricultural policies and programmes aimed at addressing challenges such as declining productivity, food insecurity, rural poverty, and overdependence on food imports.

Both classical and contemporary development literature emphasize agricultural transformation as a critical driver of economic development, poverty reduction, and long-term growth in developing economies, including Nigeria (Lewis, 1954; Schultz, 1964; Mellor, 1976; Lipton, 1977; Olayide & Heady, 1982). Recent empirical studies further reinforce this view, showing that improvements in agricultural productivity,

policy effectiveness, and financing are associated with economic growth and reduced poverty in Nigeria (Awe, Omoniyi & Adamu, 2025; Adekunle & Aregbeshola, 2025; Ephraim, Magaji & Musa, 2025; Ikuemonisan, 2024). A productive agricultural sector provides a foundation for industrialization, human capital development, and inclusive growth, particularly in agrarian economies such as Nigeria.

In Nigeria, agriculture performs several vital roles. These include providing food for a rapidly growing population; supplying raw materials to agro-based and manufacturing industries; serving as the largest source of employment, particularly in rural areas; generating foreign exchange earnings through agricultural exports; and creating a market for industrial goods (Musa et al., 2025). Given these multifaceted roles, government policies targeting agriculture have significant implications for overall economic performance and national development. Government intervention in agriculture is often justified by the need to correct market failures, stabilize food prices, ensure food security, and improve farmers' welfare. In Nigeria, such interventions have taken various forms, including input subsidies, agricultural credit schemes, price support mechanisms, land use policies, import and export controls, and institutional reforms. Examples include the Agricultural Promotion Policy (APP), also known as the Green Alternative, the Anchor Borrowers' Programme (ABP), the National Agricultural Technology and Innovation Policy (NATIP), and earlier initiatives such as Operation Feed the Nation and the Green Revolution Programme.

Despite numerous interventions, agricultural performance in Nigeria has remained below potential due to policy inconsistency, inadequate funding, limited access to modern technology, climate change, insecurity, and poor infrastructure. While prior studies examine agriculture's role in growth and poverty reduction, few have empirically evaluated the direct impact of government policies using dynamic methods that capture both short- and long-run effects. This study addresses this gap by employing unit root and cointegration tests alongside an Error Correction Model (ECM) or Autoregressive Distributed Lag (ARDL) approach to assess how government policy instruments influence agricultural performance over time. The methodology provides a comprehensive understanding of both immediate adjustments and long-term policy outcomes.

The remainder of the paper is structured as follows: Section 2 provides an overview of agricultural productivity in Nigeria. Section 3 reviews relevant empirical

and theoretical literature. Section 4 outlines the research methodology adopted for the study. Section 5 presents and discusses the empirical findings, while Section 6 concludes the paper with policy recommendations.

AGRICULTURAL PRODUCTIVITY IN NIGERIA

Nigeria's agriculture sector remains the largest component of the economy, contributing nearly 24 percent of gross domestic product (GDP) in 2024, with long-run variation in its relative importance. Historical data show that agriculture's share of GDP ranged from about 12.24 percent in 1981 to a peak of around 36.97 percent in the early 2000s, before stabilising generally between 20 to 26 percent in recent years, reflecting structural shifts and persistent sectoral constraints. The latest available data, covering 1981–2024, indicate that the sector's contribution to GDP stood at about 20.35 percent in 2024 (see Figure 1), underscoring its continued economic significance despite fluctuations over the decades (Central Bank of Nigeria, 2024; TheGlobalEconomy.com, 2025). Although agriculture contributes substantially to GDP, the sector's stable share in recent years suggests that output growth has largely been driven by increased acreage and labor rather than improvements in labor or land productivity.

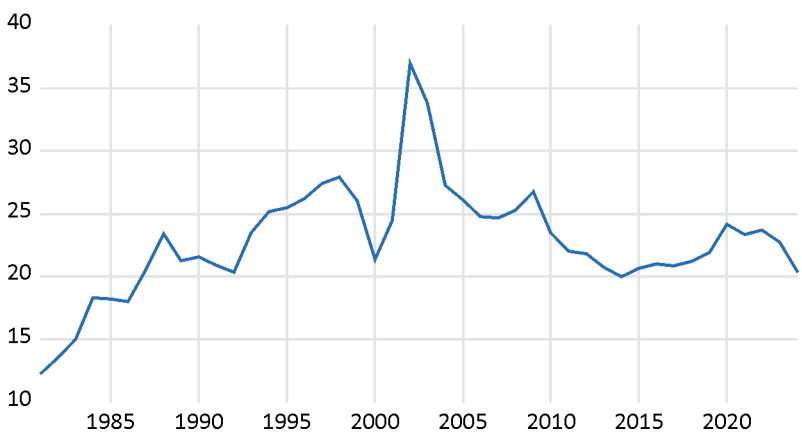


Figure 1: Nigeria Agriculture Contribution to GDP (1981-2024)

Source: CBN, 2024

Smallholder farmers dominate Nigeria's agriculture, representing approximately 80 percent of farmers and producing nearly 90 percent of total agricultural output.

Staple crops, including cassava, maize, millet, rice, sorghum, and yam, occupy about 65 percent of cultivated land, while livestock production, particularly cattle ranching, is concentrated in the northern regions. Agriculture employs almost half of the working population, with an additional 14 percent engaged in off-farm activities across the agri-food value chain (Food and Agriculture Organization of the United Nations, 2021).

Despite this productive potential, agricultural growth continues to be constrained by enduring structural challenges, such as insecurity, rising input costs, climate change impacts, high post-harvest losses, limited mechanization and irrigation, and weak transportation and cold-chain infrastructure. Although government interventions have sought to address these constraints, results have been limited. In 2025, the government proposed allocating 1.75 percent of the national budget to agriculture, well below the 10 percent target Nigeria committed to under the Maputo Declaration on Agriculture and Food Security. Recent macroeconomic reforms, notably the removal of the fuel subsidy and exchange-rate unification, have further elevated production costs, reduced subsidy support, and constrained liquidity for farmers (International Trade Administration, 2025).

In 2023, agricultural and related imports amounted to US$6.6 billion, representing a 15 percent decline from 2022, while exports rose to US$2.3 billion, a 24 percent year-on-year increase. The depreciation of the naira enhanced the competitiveness of Nigerian agricultural exports, particularly in regional markets. U.S. imports of Nigerian agricultural products reached US$118 million, a 37 percent increase from the previous year, driven mainly by specialty crops, cocoa products, soybean cake, and cashews. In contrast, U.S. agricultural exports to Nigeria declined sharply by 61 percent, from US$631 million in 2022 to US$245 million in 2023, due to adverse economic conditions, currency depreciation, and weakened consumer purchasing power. Wheat accounted for the largest share of U.S. exports, followed by food preparations, ethanol, alcoholic beverages, and frozen fish (International Trade Administration, 2025).

Since the early 2000s, Nigeria has maintained extensive agricultural trade restrictions, including import bans on products such as maize, poultry, meat, eggs, vegetable oils, and noodles. These measures are enforced through the Nigeria Customs Service's prohibited import and export lists, alongside high tariffs and

additional levies on commodities such as rice, corn, and wheat. Although the Central Bank of Nigeria lifted foreign exchange restrictions on 43 items, including several agricultural products, in October 2023, importers continue to report difficulties accessing foreign exchange (Bello & Osaretin, 2024).

Food price inflation remains a critical concern, averaging close to 40 percent throughout much of 2024. Rising food prices have been driven by higher import costs, reduced domestic production, and increased fuel and transportation expenses following subsidy removal. To mitigate food inflation, the Nigeria Customs Service announced a temporary waiver of import duties and related levies on key staples, including rice, sorghum, millet, corn, wheat, and beans, through December 31, 2024. However, available reports indicate that the policy had not been effectively implemented as of October 2024.

CONCEPTUAL FRAMEWORK

This study is anchored on the premise that government policy is a key determinant of agricultural performance in Nigeria, operating through macroeconomic, structural, and institutional channels. This view is consistent with development theories that emphasize agriculture as the foundation of economic growth and structural transformation. Lewis (1954) highlights the role of agriculture in supplying food, labor, and capital for industrial development, while Schultz (1964) argues that low agricultural productivity in developing economies stems from limited access to modern inputs, technology, and human capital rather than farmer inefficiency. Consequently, government policies such as subsidies, credit schemes, extension services, and rural infrastructure investment are essential for improving productivity and stimulating agricultural growth. Mellor (1976) further emphasizes agriculture's role in generating employment, expanding domestic demand, and supporting export growth, underscoring the importance of trade and exchange rate policies in shaping sectoral performance.

However, the effectiveness of government policy is conditioned by broader institutional and macroeconomic factors. Lipton's (1977) urban bias theory suggests that policy distortions often favor urban and industrial sectors at the expense of agriculture, weakening rural incentives and limiting output growth. Similarly, Olayide and Heady (1982) stress that policy consistency, institutional capacity, and efficient resource allocation is critical for sustained agricultural development. In

Nigeria, agricultural performance; reflected in output, productivity, exports, and employment, is therefore influenced not only by direct policy instruments such as credit, subsidies, and exchange rate management, but also by macroeconomic conditions including money supply, capital formation, unemployment, and external shocks. Overall, the framework suggests that agricultural performance in Nigeria depends on the interaction between government policy, institutional effectiveness, and the broader economic environment.

THEORETICAL LITERATURE

This study is anchored on three major theories: the Monetarist Theory, the Structuralist Theory, and the Dependency Theory, all of which provide a theoretical foundation for analyzing the impact of government policy on agricultural performance in Nigeria.

MONETARIST THEORY

The Monetarist theory, advanced by Milton Friedman and Anna Schwartz (1963), emphasizes the central role of monetary policy in influencing economic activity. The theory is based on the Quantity Theory of Money, expressed as:

$$MV = PQ$$

Where M represents money supply, V velocity of money, P price level, and Q output, the theory posits that increases in money supply, assuming a stable velocity, lead to higher output, prices, or both. Monetarists argue that effective control of monetary aggregates is crucial for ensuring macroeconomic stability and sustainable economic growth (Friedman, 1968).

In the context of agricultural performance in Nigeria, the Monetarist Theory explains how government monetary policies; such as interest rate adjustments, credit allocation, and money supply management, affect agricultural investment, access to finance, and production capacity. Lower interest rates and increased agricultural credit enhance farmers' ability to invest in inputs, technology, and mechanization, thereby improving productivity. Conversely, contractionary monetary policy and high lending rates may constrain agricultural output by increasing the cost of capital and reducing credit availability (Mishkin, 2019). This theory therefore provides a strong foundation for examining how monetary policy instruments influence agricultural growth in Nigeria.

STRUCTURALIST THEORY

The Structuralist Theory, associated with Raúl Prebisch (1950) and other development economists, focuses on the structural characteristics of developing economies that limit growth and productivity. Structuralists argue that economic performance is shaped by sectoral rigidities, weak institutional frameworks, limited industrial linkages, and imbalances between traditional and modern sectors.

Applied to Nigeria's agricultural sector, the Structuralist Theory highlights how inadequate infrastructure, limited access to modern inputs, weak extension services, and poor market integration constrain agricultural productivity, even in the presence of supportive macroeconomic policies. Government interventions; such as public investment in rural infrastructure, agricultural subsidies, mechanization programs, and extension services, are therefore necessary to correct these structural bottlenecks (Chenery & Syrquin, 1975; Hirschman, 1958).

The theory also emphasizes the importance of coordinated fiscal and monetary policies in promoting agricultural transformation. Without addressing structural constraints, policy measures such as credit expansion or exchange rate adjustments may yield limited benefits. Thus, the Structuralist Theory supports the view that sustained agricultural performance in Nigeria depends on comprehensive government policies that address both macroeconomic and sector-specific challenges (Todaro & Smith, 2020).

DEPENDENCY THEORY

The Dependency Theory, developed by Andre Gunder Frank (1967) and Theotonio Dos Santos (1970), argues that developing countries remain economically dependent on developed economies due to historical, political, and economic structures. This dependence manifests through reliance on foreign capital, technology, and imported inputs, which often constrains domestic production and development. In the Nigerian agricultural context, Dependency Theory explains how excessive reliance on imported agricultural inputs, foreign technology, and external financing exposes the sector to exchange rate volatility and global market shocks. Fluctuations in foreign exchange availability and external prices can increase production costs and reduce competitiveness, thereby undermining agricultural performance. Government policies aimed at import substitution, local input development, and diversification of export earnings are therefore essential

for reducing external dependence and strengthening the agricultural sector (Frank, 1967; Amin, 1976).

The theory further suggests that weak policy autonomy and externally driven reforms may limit the effectiveness of government interventions in agriculture. Consequently, strengthening domestic institutions and promoting self-sustaining agricultural development are critical for achieving long-term growth in Nigeria's agricultural sector (Ake, 1981).

Together, these theories provide a comprehensive framework for analyzing the impact of government policy on agricultural performance in Nigeria. The Monetarist Theory explains the role of monetary policy instruments in influencing agricultural investment and output, the Structuralist Theory highlights the importance of addressing sectoral constraints and institutional weaknesses, while the Dependency Theory underscores the challenges posed by external dependence and foreign exchange constraints. By integrating these perspectives, the study is able to examine both the short-run and long-run effects of government policies on agricultural performance in Nigeria.

EMPIRICAL LITERATURE

A substantial body of empirical literature has examined the relationship between government policy, particularly monetary and fiscal interventions, and agricultural performance in Nigeria. Recent studies emphasize the dynamic and often asymmetric effects of policy instruments on agricultural output and productivity.

Ogunjinmi and Adekunle (2025) analyzed the asymmetric effects of monetary policy on agricultural performance in Nigeria using annual data from 1981 to 2021 and the Nonlinear Autoregressive Distributed Lag (NARDL) model. The findings revealed significant short- and long-run asymmetries between monetary policy instruments and agricultural output. In the short run, positive changes in the monetary policy rate enhanced agricultural performance, while negative changes had weaker effects. However, in the long run, negative policy rate changes significantly reduced agricultural output. Changes in lending interest rates and liquidity ratios exerted varying effects across periods, while bank credit to agriculture had a negative short-run effect but a significant positive long-run impact. The study underscores the importance of accommodative monetary policy and effective credit allocation in stimulating agricultural growth in Nigeria.

Similarly, Okaforocha et al. (2025) investigated the impact of government monetary policy on agricultural sector growth in Nigeria using annual data from 1990 to 2022 and the Ordinary Least Squares (OLS) technique. Agricultural output was proxied by crop production, while policy variables included the Agricultural Credit Guarantee Scheme, interest rate, and money supply, with rainfall as a control variable. The results showed that the Agricultural Credit Guarantee Scheme had a positive and statistically significant effect on agricultural output, whereas interest rate and money supply exerted negative but insignificant effects. The model explained approximately 78 percent of variations in agricultural output, highlighting the critical role of credit guarantee schemes and interest rate management in promoting agricultural growth. Adekunle and Aregbeshola (2025) examined the agricultural policy-productivity gap in Nigeria using a Markov-Switching Vector Autoregressive (MS-VAR) model. The study found that lending and credit policies consistently enhance agricultural productivity across different regimes, while exchange rate and price policies negatively affect productivity, highlighting inefficiencies in macroeconomic management. The authors recommended targeted agricultural credit programs, macroeconomic stabilization, and reforms in exchange rate and inflation policies to create a conducive environment for agricultural growth.

Muhammed (2024) examined the impact of monetary policy on agricultural productivity and food prices in Nigeria from 1995 to 2023 using the ARDL approach. The study found that exchange rate movements positively influenced agricultural output and food prices in both the short and long run, while interest rates negatively affected agricultural productivity in the long run. Money supply was observed to reduce agricultural productivity while increasing food prices. The findings emphasize the need for exchange rate stability, low-interest agricultural financing and targeted monetary interventions to boost productivity and control food price inflation. Ogbanje and Okpe (2022) focused on the short-run causal relationship between monetary policy and agricultural sector performance in Nigeria using data from 1981 to 2020. Employing a Vector Autoregressive (VAR) model and Granger causality tests, the study found that monetary policy instruments, money supply, exchange rate, rediscount rate, and prime lending rate, significantly influenced agricultural performance in the short run, with evidence of bidirectional causality. The findings highlight the sensitivity of agricultural output to monetary policy actions in Nigeria.

Aderinto et al. (2021) examined the role of institutional quality in agricultural sector performance in Nigeria using annual data from 1981 to 2018 and co-integration and error correction techniques. The results revealed a negative relationship between agricultural output and institutional quality indicators, particularly bureaucratic inefficiency and corruption. The study concluded that strengthening institutional frameworks and improving governance are critical for enhancing agricultural performance. Oboh et al. (2019) assessed the impact of monetary policy on agricultural sector performance using annual data from 1981 to 2016 and the ARDL approach. The study established a long-run relationship between agricultural value added and monetary policy variables. Money supply and maximum lending rate significantly influenced agricultural value added, while exchange rate and inflation had no significant long-run effect. The authors recommended expansionary but non-inflationary monetary policies to promote agricultural value addition.

Okoh et al. (2019) investigated the impact of fiscal policy on agricultural productivity in Nigeria from 1990 to 2016 using secondary data. The findings showed that gross fixed capital formation, agricultural credit, and GDP positively affected agricultural productivity, whereas government expenditure on agriculture was statistically insignificant. The study emphasized the importance of infrastructure investment, such as irrigation, storage facilities, and rural roads, in enhancing agricultural productivity. Kenny (2019) examined the role of agricultural sector performance in Nigeria's economic growth using a Vector Error Correction Model. The study found a significant long-run relationship between agricultural output and variables such as agricultural credit, government expenditure, employment, and trade liberalization. The speed of adjustment indicated that government agricultural interventions require time to translate into meaningful productivity gains, highlighting the importance of policy consistency.

Achebe Augustine (2019) provided a qualitative assessment of government agricultural policies in Nigeria, with a focus on agricultural mechanization. The study identified persistent policy gaps, inadequate implementation, and weak institutional support as major constraints limiting agricultural development. The findings suggest the need for more effective and targeted policy frameworks. Earlier evidence by Olarinde and Abdullahi (2014), using a Vector Error Correction Model, confirmed a long-run relationship between agricultural output and macroeconomic policy variables such as government expenditure, agricultural credit, interest rate,

inflation, and exchange rate. Exchange rate and government spending were found to explain a significant portion of variations in agricultural output, emphasizing the need for coordinated fiscal and monetary policies.

Finally, Omojimite (2012) examined the effects of institutional support and macroeconomic policy on agricultural growth in Nigeria from 1970 to 2008 using the Fully Modified Ordinary Least Squares technique. The study found that credit to agriculture, deficit financing, and institutional reforms positively and significantly influenced agricultural output growth, while interest rate spread exerted a negative but insignificant effect.

RESEARCH GAP

Despite extensive studies on government policy and agricultural performance in Nigeria, important gaps remain. Most existing research examines monetary or fiscal policy in isolation, offering limited insight into the combined effects of multiple government policy instruments on agricultural performance. In addition, the heavy reliance on static or single-equation methods has constrained understanding of the dynamic short-run and long-run relationships between policy variables and agricultural outcomes, leading to mixed and inconclusive findings. Many studies also use outdated datasets that do not reflect recent policy reforms and macroeconomic changes, while institutional and macroeconomic conditioning factors are often treated implicitly. This study addresses these gaps by employing a dynamic econometric approach with recent data to comprehensively analyze the effects of government policy on agricultural performance in Nigeria.

METHODOLOGY

This study adopts a time-series econometric approach to investigate the impact of government policy on agricultural performance in Nigeria over the period 1981–2024. Annual secondary data are obtained from the World Development Indicators (WDI) and publications of the Central Bank of Nigeria (CBN). Agricultural performance (AGP), proxied by agricultural value added, is specified as the dependent variable. The explanatory variables include government agricultural expenditure (GAEXP). Due to the unavailability of disaggregated data on agricultural expenditure, capital expenditure to the economic sector is used as a proxy for government expenditure on agriculture. Other explanatory variables are agricultural credit (ACRED), gross

fixed capital formation (GFCF), inflation rate (INF), and money supply (MS). Collectively, these variables represent key fiscal, monetary, and investment policy channels through which government actions influence the agricultural sector (see Table 1).

Table 1: Description of Variables, Measurement, and Data Sources

Variable	*Description*	*Measurement*	*Expected Sign*	*Source*
AGP (LAGP)	Agricultural Performance	Agricultural value added (constant prices), logged	–	World Development Indicators (WDI)
GAEXP (LAGEXP)	Government Agricultural Expenditure	Government financial commitment to agriculture, proxied by capital expenditure to the economic sector due to data limitations, logged	+	CBN Statistical Bulletin (Vol. 35, 2024)
ACRED (LAGCRD)	Agricultural Credit Guarantee Scheme Fund	Credit to the agricultural sector, logged	+	CBN Statistical Bulletin (Vol. 35, 2024)
GFCF (LGFCF)	Gross Fixed Capital Formation	Gross fixed capital formation (proxy for capital investment), logged	+	CBN Statistical Bulletin (Vol. 35, 2024)
INF	Inflation Rate	Annual percentage change in consumer price index	–	World Development Indicators (WDI)
MS (LMS)	Money Supply	Broad money supply (M2), logged	+ / –	World Development Indicators (WDI)

Source: Authors' compilation from World Development Indicators (WDI) and Central Bank of Nigeria (CBN), 2026.

To ensure the reliability of the estimations, the study begins with unit root tests using the Augmented Dickey-Fuller (ADF) test (Dickey & Fuller, 1979) and the Phillips-Perron (PP) test (Phillips & Perron, 1988) procedures to determine the stationarity properties of the variables. This step is necessary because macroeconomic time-series data often exhibit non-stationarity, which can lead to misleading regression results. The Autoregressive Distributed Lag (ARDL) approach is adopted because it is suitable when variables are integrated of different orders, that is, I(0) and I(1), provided none is integrated of order I(2). The ARDL bounds testing

technique is employed to examine the existence of a long-run relationship between agricultural performance and government policy variables. Once cointegration is established, the long-run coefficients and the associated Error Correction Model (ECM) are estimated to capture both the long-run effects and short-run dynamics. The error correction term indicates the speed at which deviations from the long-run equilibrium are corrected following short-run shocks.

The functional relationship of the model is specified as:

$$AGP_t = f(GAEXP_t, ACRED_t, GFCF_t, INF_t MS_t) \quad (1)$$

Where:

AGP = Agricultural performance (proxied by agricultural output or agricultural value added)

GAEXP = Government agricultural expenditure

ACRED = Agricultural credit

GFCF = Gross fixed capital formation

INF = Inflation rate

MS = Money supply

t = Time period

The corresponding linear econometric model is specified as:

$$LAGP_t = \alpha_0 + \alpha_1 LGAEXP_t + \alpha_2 LACRED_t + \alpha_3 LGFCF_t + \alpha_4 INF_t + \alpha_5 LMS_t + \varepsilon_t \quad (2)$$

Where α_0 is the intercept, $\alpha_1 - \alpha_5$ are long-run elasticities, and ε_t is the error term.

ESTIMATION TECHNIQUE

The study employs the Autoregressive Distributed Lag (ARDL) modeling approach developed by Pesaran, Shin, and Smith (2001) to investigate both the short-run and long-run relationships between agricultural performance and government policy variables. The ARDL approach is appropriate given its ability to accommodate regressors integrated of order I(0) and I(1), and its suitability for finite sample sizes. To test for the existence of a long-run equilibrium relationship among the variables, the ARDL bounds testing approach to cointegration is applied. The unrestricted error correction representation of the ARDL model is specified as:

$$\Delta LAP_t = \beta_0 + \sum_{i=1}^{p} \beta_i \Delta LAP_{t-i} + \sum_{j=0}^{q} \gamma_j \Delta Z_{t-j} + \phi_1 LAP_{t-1} + \phi_2 LAGEXP_{t-1} + \phi_3 LACRED_{t-1} + \phi_4 LGFCF_{t-1} + \phi_5 INF_{t-1} + \phi_6 LMS_{t-1} + \varepsilon_t \quad (3)$$

Where Δ denotes first differences, Z represents the vector of explanatory variables, and ε_t is a white-noise disturbance term.

The null hypothesis of no cointegration is tested as: $H_0 : \phi_1 = \phi_2 = \phi_3 = \phi_4 = \phi_5 = \phi_6 = 0$ against the alternative hypothesis of a long-run relationship.

LONG-RUN AND SHORT-RUN DYNAMICS

Where cointegration is confirmed, the long-run coefficients are estimated, and the corresponding Error Correction Model (ECM) is specified as:

$$\Delta LAP_t = \delta_0 + \sum_{i=1}^{p} \delta_i \Delta LAP_{t-i} + \sum_{j=0}^{q} \theta_j \Delta Z_{t-j} + \lambda ECM_{t-1} + \varepsilon_t \quad (4)$$

Where ECM_{t-1} is the error correction term derived from the long-run equation and λ captures the speed of adjustment toward long-run equilibrium. A negative and statistically significant λ confirms convergence following short-run shocks.

DIAGNOSTIC AND STABILITY TESTS

Post-estimation diagnostics are conducted to validate the robustness of the estimated ARDL model. These include tests for serial correlation, heteroskedasticity, and normality of residuals. Model stability is assessed using the CUSUM and CUSUM of Squares (CUSUMSQ) tests.

EMPIRICAL RESULTS AND DISCUSSION

Descriptive Statistics

Table 2 presents the descriptive statistics of the variables used in the study, covering the period 1981–2024. The variables include agricultural performance (LAGP), government agricultural expenditure (LAGEXP), agricultural credit (LAGCRD), gross fixed capital formation (LGFCF), money supply (LMS), and inflation rate (INF).

Table 2: Descriptive Statistics of Variables

	LAGP	*LAGCRD*	*LAGEXP*	*LGFCF*	*LMS*	*INF*
Mean	30.67569	9.717724	4.34812	7.878157	27.92037	19.41591
Median	30.79926	9.241496	5.465969	8.143569	28.13638	13.13
Maximum	31.71384	12.41342	7.581073	11.3645	31.58586	72.84
Minimum	29.54351	5.890124	-0.42114	4.467516	23.44712	5.39
Std. Dev.	0.755929	1.710111	2.436848	2.114812	2.792207	16.24351
Skewness	-0.02811	-0.09867	-0.67179	-0.17428	-0.23259	1.791279
Kurtosis	1.418117	2.167247	1.934826	1.852798	1.612102	5.257128
Jarque-Bera	4.593447	1.342774	5.389657	2.635527	3.928188	32.87048
Probability	0.100588	0.510999	0.067554	0.267733	0.140283	0
Sum	1349.73	427.5799	191.3173	346.6389	1228.496	854.3
Sum Sq. Dev.	24.57141	125.7526	255.3439	192.3144	335.246	11345.61
Observations	44	44	44	44	44	44

Source: Authors' computation using EViews 12, 2026.

Table 2 presents the descriptive statistics of agricultural performance and government policy variables in Nigeria from 1981 to 2024. Agricultural performance (LAGP) has a mean of 30.68 and a low standard deviation (0.76), indicating relative stability over time. The closeness of the mean and median and near-zero skewness suggests an approximately normal distribution. Agricultural credit (LAGCRD) and government agricultural expenditure (LAGEXP) exhibit moderate variability, reflecting fluctuations in policy support to the sector. While agricultural credit is normally distributed, government expenditure shows slight deviation from normality. Gross fixed capital formation (LGFCF) and money supply (LMS) display moderate volatility and approximate normality, indicating varying investment and monetary conditions over the period. Inflation (INF) records the highest variability, with strong positive skewness and excess kurtosis, highlighting periods of severe inflationary pressure in Nigeria. Overall, the observed variability in policy and macroeconomic variables supports the use of a dynamic ARDL framework to examine both short-run and long-run effects of government policy on agricultural performance.

UNIT ROOT TEST RESULTS

Table 3: Unit Root Tests Result

Variable	*ADF Test Statistic*	*p-value (ADF)*	*PP Test Statistic*	*p-value (PP)*	*Order of Integration (I)*	*Stationarity*
LAGP	-6.18	0.0000	-6.18	0.0000	I(1)	Stationary
LAGCRD	-6.88	0.0000	-6.88	0.0000	I(1)	Stationary
LAGEXP	-7.01	0.0000	-7.01	0.0000	I(1)	Stationary
LGFCF	-4.33	0.0013	-4.31	0.0014	I(1)	Stationary
LMS	-3.59	0.0100	-3.51	0.0126	I(1)	Stationary
INF	-3.05	0.0380	-2.91	0.0525	I(1)&I(0)	Stationary

Source: Author's calculations using Eviews 12, 2026

Table 3 presents the results of the Augmented Dickey-Fuller (ADF) and Phillips–Perron (PP) unit root tests conducted to determine the stationarity properties of the variables. The results show that agricultural performance (LAGP), agricultural credit (LAGCRD), government agricultural expenditure (LAGEXP), gross fixed capital formation (LGFCF), and money supply (LMS) are all stationary after first differencing, indicating that they are integrated of order one, I(1). This is evidenced by their statistically significant ADF and PP test statistics at the 5% level.

Inflation (INF), however, appears to be stationary at both level and first difference, as indicated by mixed but statistically significant results across the ADF and PP tests. This suggests that inflation is integrated of order zero, I(0). Importantly, none of the variables is integrated of order two, I(2), which satisfies the precondition for applying the Autoregressive Distributed Lag (ARDL) bounds testing approach. The mixture of I(0) and I(1) variables therefore justifies the use of the ARDL framework to examine the long-run and short-run relationships between government policy variables and agricultural performance in Nigeria.

ARDL BOUNDS TEST FOR COINTEGRATION

Following the confirmation that the variables are integrated of order I(0) and I(1), the Autoregressive Distributed Lag (ARDL) bounds testing approach to cointegration, as proposed by Pesaran, Shin, and Smith (2001), is employed to examine the existence of a long-run relationship between agricultural performance and government policy variables in Nigeria. The bounds test is based on an F-statistic that tests the null hypothesis of no long-run relationship among the variables against the alternative

hypothesis of cointegration. The computed F-statistic is compared with the critical value bounds at conventional significance levels. If the F-statistic exceeds the upper bound critical value, the null hypothesis of no cointegration is rejected. If it falls below the lower bound, the null hypothesis cannot be rejected, while values between the bounds yield inconclusive results.

Table 4: Bounds Test Result

F-Bounds Test		*Null Hypothesis: No levels relationship*		
Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	13.83151	10%	2.08	3
k	5	5%	2.39	3.38
		2.5%	2.7	3.73
		1%	3.06	4.15
Actual Sample Size	40		Finite Sample: n=40	
		10%	2.306	3.353
		5%	2.734	3.92
		1%	3.657	5.256

Source: Author's calculations using Eviews 12, 2026

The ARDL bounds test was employed to examine the existence of a long-run relationship between agricultural performance and government policy variables in Nigeria. The null hypothesis of no levels relationship was tested against the alternative of cointegration. The result presented in Table 4 shows that the computed F-statistic of 13.83151 is substantially higher than both the lower and upper bound critical values at the 1 per cent, 5 per cent, and 10 per cent significance levels, using both asymptotic and finite-sample critical values (n = 40).

Specifically, the calculated F-statistic exceeds the upper bound critical value of 5.256 at the 1 per cent level, leading to the rejection of the null hypothesis of no cointegration. This provides strong empirical evidence of a stable long-run relationship between agricultural performance (LAGP) and government agricultural expenditure (LAGEXP), agricultural credit (LAGCRD), gross fixed capital formation (LGFCF), money supply (LMS), and inflation rate (INF). The

presence of cointegration implies that although short-run deviations may occur, the variables converge toward a long-run equilibrium path over time. Consequently, the estimation of both long-run ARDL coefficients and the associated error correction model (ECM) is appropriate for capturing the short-run dynamics and long-run effects of government policy on agricultural performance in Nigeria.

LONG-RUN ARDL ESTIMATES

Table 5: Short-Run Coefficients for Agricultural Performance in Nigeria

Selected Model: ARDL(1, 4, 4, 2, 3, 4)				
Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.**
LAGP(-1)	0.869537	0.101548	8.562857	0.0000
LAGCRD	0.009326	0.006862	1.359148	0.1930
LAGCRD(-1)	-0.011569	0.006401	-1.807303	0.0896
LAGCRD(-2)	-0.060913	0.005262	-11.57518	0.0000
LAGCRD(-3)	0.045937	0.007105	6.465433	0.0000
LAGCRD(-4)	-0.006120	0.004738	-1.291784	0.2148
LAGEXP	-0.026210	0.014495	-1.808190	0.0894
LAGEXP(-1)	0.026322	0.013707	1.920307	0.0728
LAGEXP(-2)	0.017979	0.010458	1.719214	0.1049
LAGEXP(-3)	-0.007292	0.012728	-0.572947	0.5746
LAGEXP(-4)	-0.013137	0.011192	-1.173817	0.2576
LGFCF	-0.054379	0.046201	-1.177011	0.2564
LGFCF(-1)	-0.052843	0.054450	-0.970484	0.3462
LGFCF(-2)	0.108268	0.043003	2.517674	0.0228
LMS	-0.004136	0.037651	-0.109854	0.9139
LMS(-1)	0.057421	0.062310	0.921527	0.3705
LMS(-2)	-0.116501	0.062485	-1.864466	0.0807
LMS(-3)	0.085692	0.038071	2.250848	0.0388
INF	-0.000218	0.000434	-0.501601	0.6228
INF(-1)	0.000542	0.000624	0.869313	0.3975
INF(-2)	0.000643	0.000546	1.176815	0.2565
INF(-3)	-0.001213	0.000472	-2.571371	0.0205
INF(-4)	0.000607	0.000586	1.036133	0.3155
C	3.689813	2.360014	1.563471	0.1375
R-squared	0.999661	Adjusted R-squared		0.999173

Source: Author's calculations using Eviews 12, 2026

The selected ARDL model assesses the dynamic effects of government policy variables on agricultural performance in Nigeria. The lagged dependent variable (LAGP(-1)) is positive and highly significant (0.8695, $p < 0.001$), indicating strong persistence in agricultural output. This suggests that past performance strongly influences current output, confirming gradual adjustment and inertia within the agricultural sector.

Agricultural credit exhibits mixed short-run effects, with some lags exerting negative influences and others positive, while the contemporaneous effect remains insignificant. This pattern implies that credit impacts agricultural output with delays and may be weakened in the short run by issues such as misallocation or slow utilization. Government agricultural expenditure shows generally weak short-run effects, with only marginal significance at some lags, suggesting that fiscal interventions affect output gradually due to implementation lags and efficiency constraints. Gross fixed capital formation contributes positively at the second lag, indicating that capital investment enhances agricultural performance over time. Money supply and inflation display selective effects, with monetary expansion stimulating output at specific lags and inflation exerting a small negative influence at one lag, reflecting cost pressures. Overall, the model demonstrates a very high explanatory power (adjusted $R^2 = 0.9992$), indicating a strong fit.

SHORT-RUN DYNAMICS (ECM RESULTS)

Table 6: Short-Run Error Correction Model Results

Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*
D(LAGCRD)	0.009326	0.003513	2.654569	0.0173
D(LAGCRD(-1))	0.021097	0.003163	6.668997	0.0000
D(LAGCRD(-2))	-0.039816	0.003209	-12.40623	0.0000
D(LAGCRD(-3))	0.006120	0.003391	1.804737	0.0900
D(LAGEXP)	-0.026210	0.009236	-2.837971	0.0119
D(LAGEXP(-1))	0.002450	0.007699	0.318295	0.7544
D(LAGEXP(-2))	0.020430	0.006785	3.011104	0.0083
D(LAGEXP(-3))	0.013137	0.006729	1.952281	0.0686
D(LGFCF)	-0.054379	0.028668	-1.896878	0.0760
D(LGFCF(-1))	-0.108268	0.028268	-3.830029	0.0015
D(LMS)	-0.004136	0.026529	-0.155907	0.8781
D(LMS(-1))	0.030809	0.031463	0.979190	0.3421
D(LMS(-2))	-0.085692	0.030103	-2.846592	0.0117

Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*
D(INF)	-0.000218	0.000270	-0.805365	0.4324
D(INF(-1))	-3.70E-05	0.000275	-0.134606	0.8946
D(INF(-2))	0.000606	0.000258	2.346498	0.0322
D(INF(-3))	-0.000607	0.000257	-2.357546	0.0315
CointEq(-1)*	-0.130463	0.011307	-11.53812	0.0000

Source: Author's calculations using Eviews 12, 2026

The ECM regression captures the short-run dynamics and the speed at which agricultural performance adjusts to long-run equilibrium following shocks to government policy variables. The error correction term, CointEq(-1), is negative and highly significant (-0.1305, $p < 0.001$), confirming the existence of a stable long-run relationship among the variables. The coefficient implies that about 13% of short-run disequilibrium is corrected each year, indicating a moderate speed of adjustment toward long-run equilibrium after deviations.

In the short run, agricultural credit exerts a significant influence on agricultural performance, with both current and lagged changes showing mixed effects. While contemporaneous and first-lag changes in credit positively affect performance, the second lag has a strong negative effect, suggesting adjustment costs or inefficiencies in credit utilization over time. Government agricultural expenditure shows a significant negative contemporaneous effect but positive effects at longer lags, indicating that public spending may initially disrupt output but contributes positively after implementation delays. Gross fixed capital formation has a negative short-run impact, particularly at the first lag, reflecting gestation lags associated with capital investments. Money supply affects agricultural performance only at the second lag with a negative sign, while inflation shows alternating effects, implying cost-pressure and price-adjustment dynamics. Overall, the results indicate that government policy variables significantly influence agricultural performance in the short run, though their effects vary across time, reinforcing the importance of policy timing and consistency.

DIAGNOSTIC AND STABILITY TESTS

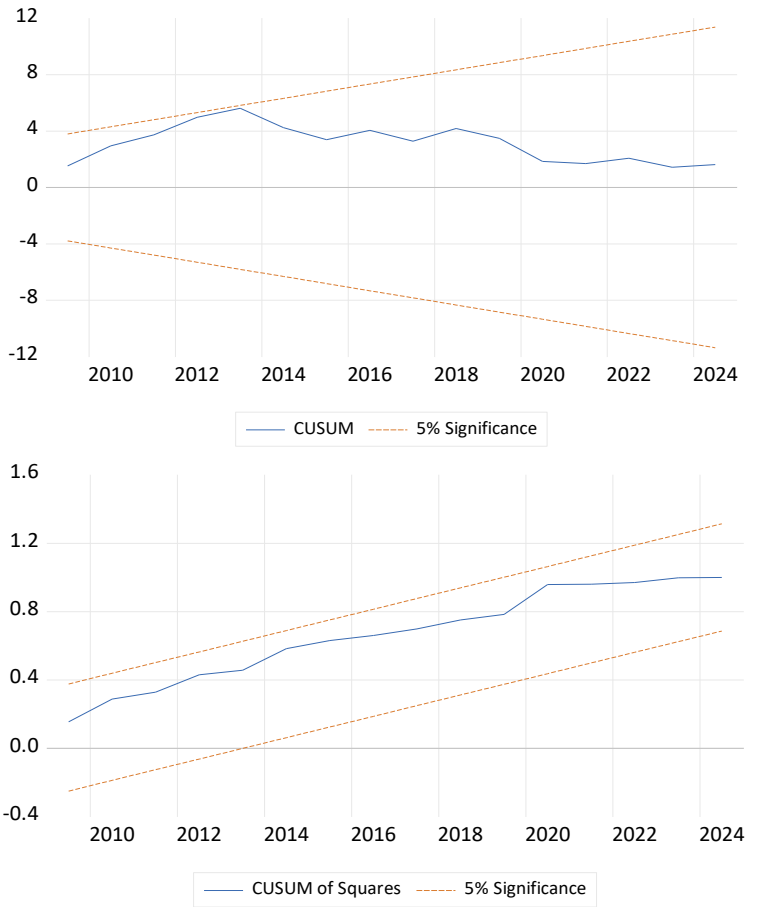
To ensure the reliability and validity of the estimated ARDL–ECM results, a series of diagnostic and stability tests were conducted. These tests examine whether the underlying econometric assumptions are satisfied and whether the model is

structurally stable over the sample period. Below is a summary of the diagnostic test results:

Table 7: Summary of Diagnostic Test Results

Test	*Test Statistic*	*p-value*	*Conclusion*
Breusch-Godfrey Serial Correlation LM Test	0.0420	0.0007	Serial correlation
ARCH Heteroskedasticity Test (ARCH)	0.9245	0.9220	No heteroskedasticity
Jarque-Bera Normality Test	3.2505	0.1969	Residuals are normally distributed
Ramsey RESET Test (Functional Form)	0.2630	0.7962	Model is correctly specified
CUSUM Test	Stable	—	Parameters are stable
CUSUM of Squares Test	Stable	—	Parameters are stable

Source: Author's computation using EViews (2026)



The Breusch–Godfrey Serial Correlation LM test indicates the presence of serial correlation in the residuals (test statistic = 0.0420, p-value = 0.0007), suggesting that the error terms are correlated over time. Although the presence of serial correlation violates the classical OLS assumption of independently distributed errors, it does not invalidate the ARDL estimates. The ARDL framework explicitly incorporates lagged dependent and independent variables, thereby capturing dynamic adjustments and mitigating the effects of serial dependence in time-series data (Pesaran, Shin & Smith, 2001; Nkoro & Uko, 2016)..

The ARCH heteroskedasticity test yields a test statistic of 0.9245 with a p-value of 0.9220, indicating the absence of heteroskedasticity and confirming that the residual variance is constant. The Jarque–Bera test reports a statistic of 3.2505 and a p-value of 0.1969, implying that the residuals are normally distributed. In addition, the Ramsey RESET test produces a test statistic of 0.2630 with a p-value of 0.7962, showing no evidence of functional form misspecification. Finally, the CUSUM and CUSUM of Squares tests confirm parameter stability over the study period, indicating that the estimated model is stable and reliable.

DISCUSSION OF FINDINGS

The findings of this study align closely with the Monetarist, Structuralist, and Dependency theoretical perspectives. Consistent with the Monetarist Theory, monetary policy variables, particularly agricultural credit and money supply, exhibit dynamic effects on agricultural performance. Agricultural credit shows significant positive impacts in certain lags, confirming that timely access to financing enhances investment in inputs and technology, thereby boosting productivity, as suggested by Friedman (1968) and Mishkin (2019). Similarly, the responsiveness of agricultural output to money supply changes supports the view that macroeconomic stability and effective credit allocation are crucial for sector growth, corroborating empirical evidence from Ogunjinmi and Adekunle (2025), Okaforocha et al. (2025), and Muhammed (2024).

From the Structuralist Theory perspective, the results underscore the importance of addressing sectoral and institutional constraints. Government agricultural expenditure and gross fixed capital formation have positive but lagged effects on output, indicating that infrastructure, investment, and fiscal interventions take time to translate into tangible productivity gains. This echoes the findings of Okoh et al. (2019), Kenny (2019), and Olarinde and Abdullahi (2014), which

highlight that investments in rural infrastructure, mechanization, and institutional support are necessary to overcome structural bottlenecks in Nigerian agriculture. Finally, consistent with the Dependency Theory, the mixed impacts of inflation and limited immediate effect of government expenditure suggest that external shocks, exchange rate volatility, and reliance on imported inputs can constrain agricultural performance. Empirical studies by Muhammed (2024) and Aderinto et al. (2021) reinforce that policies promoting domestic input development, institutional strengthening, and macroeconomic stabilization are critical for reducing external dependence and ensuring sustainable agricultural growth in Nigeria.

CONCLUSION

This study examined the impact of government policy on agricultural performance in Nigeria from 1981 to 2024 utilizing an ARDL framework. The findings indicate that agricultural performance exhibits strong persistence, with past output significantly influencing current productivity. Monetary policy instruments, particularly agricultural credit and money supply, positively affect agricultural output over specific periods, highlighting the importance of timely access to finance and macroeconomic stability, consistent with Monetarist Theory. Fiscal interventions, such as government agricultural expenditure and gross fixed capital formation, show lagged but positive effects, indicating that investment and structural support take time to translate into tangible productivity improvement, as predicted by Structuralist Theory.

The findings also highlight the impact of external constraints, such as inflation and exchange rate volatility, which can limit the immediate effectiveness of policy interventions, aligning with Dependency Theory. Overall, the study demonstrates that while government policies can significantly enhance agricultural performance, their effectiveness depends on consistency, adequate funding, and coordination with structural reforms. To achieve sustainable growth, policies must integrate focused credit support, infrastructure investment, institutional strengthening, and measures to reduce dependence on imported inputs, ensuring a resilient and productive agricultural sector in Nigeria.

RECOMMENDATIONS AND POLICY IMPLICATIONS

Enhance Agricultural Credit and Financing: The study shows that agricultural credit positively influences output, though with lagged effects. Policymakers should

expand and streamline credit facilities for farmers, ensuring timely disbursement, low-interest rates, and proper monitoring to maximize productivity gains.

Invest in Infrastructure and Capital Formation: Gross fixed capital formation significantly supports agricultural performance over time. Government should prioritize investment in irrigation, storage facilities, rural roads, and mechanization programs to strengthen the sector's structural capacity.

Strengthen Macroeconomic and Policy Stability: Inflation and exchange rate volatility constrain agricultural output. Coordinated fiscal and monetary policies, including stable money supply management and exchange rate policies, are critical to create a predictable environment for farmers and agribusinesses.

Policy Implications: The findings highlight that government interventions in agriculture must be consistent, targeted, and complemented by structural reforms. Effective policy requires a combination of financial support, infrastructure investment, and macroeconomic stability. Reducing reliance on imported inputs and improving institutional efficiency can further enhance the resilience and productivity of Nigeria's agricultural sector, contributing to food security, employment generation, and economic growth.

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Annex A: Summary of Data Used (1981–2024)

Year	*AGP*	*AGCRD*	*AGEXP*	*MS*	*INF*	*GFCF*
1981	6948839490573.42	35,642.40	0.01	15238900000.00	20.81	124.52
1982	7129844465784.40	31,763.90	0.01	16693500000.00	7.70	128.1
1983	7080237565921.36	36,307.50	0.01	19034200000.00	23.21	120.26
1984	6769950592683.24	24,654.90	0.02	21242700000.00	17.82	97.78
1985	8026531146431.90	44,243.60	0.02	23153000000.00	7.44	87.14
1986	8778241989848.50	68,417.40	0.02	23605200000.00	5.72	108.87
1987	8498559930688.97	102,152.50	0.05	28895400000.00	11.29	122.46
1988	9329982801403.68	118,611.00	0.08	38405800000.00	54.51	138.1
1989	9774883674176.26	129,300.30	0.15	43370900000.00	50.47	217.75
1990	10182723153664.10	98,494.40	0.26	57553630000.00	7.36	262.77
1991	10553390437770.20	82,107.40	0.21	79067300000.00	13.01	285.59
1992	10800133458087.10	88,031.80	0.46	129085000000.00	44.59	396.61
1993	11002549597984.60	80,845.80	1.80	198479000000.00	57.17	559.15
1994	11284719762286.90	103,186.00	1.18	266945000000.00	57.03	744.09
1995	11689436026238.80	164,162.10	1.51	318763000000.00	72.84	1,153.47
1996	12148405199457.40	225,502.50	1.59	370334000000.00	29.27	1,494.75
1997	12654295576705.80	242,038.20	2.06	429731000000.00	8.53	1,697.77
1998	13152633734002.60	215,697.20	2.89	525638000000.00	10.00	1,948.65
1999	13823902958360.90	246,082.50	59.32	699735000000.00	6.62	2,098.54
2000	14227505433600.40	361.45	6.34	1036080000000.00	6.93	2,404.82
2001	14767016211655.20	728.55	7.06	1309360000000.00	18.87	2,473.47
2002	22974235463030.30	1,051.59	9.99	1555800000000.00	12.88	3,078.78
2003	24584053358883.80	1,164.46	7.54	1766010000000.00	14.03	3,846.23
2004	26123317247388.00	2,083.74	11.26	2131170000000.00	15.00	4,723.72
2005	27970224023340.60	3,046.74	16.33	2612890000000.00	17.86	5,772.64
2006	30043623987769.10	4,263.06	17.92	3562700000000.00	8.23	7,948.12
2007	32206694236288.40	4,425.86	32.48	6689370000000.00	5.39	6,997.62

Year	*AGP*	*AGCRD*	*AGEXP*	*MS*	*INF*	*GFCF*
2008	34225483310765.00	6,721.07	65.40	9513850000000.00	11.58	7,535.27
2009	36238549379009.30	8,349.51	22.44	10928000000000.00	12.54	9,177.08
2010	38350402366375.50	7,740.51	28.22	11662900000000.00	13.74	9,183.06
2011	39468642066188.10	10,189.60	41.20	14192100000000.00	10.83	9,897.20
2012	42114682434621.00	9,706.76	33.30	18035900000000.00	12.22	10,281.95
2013	43351455861175.50	9,424.45	39.43	20615500000000.00	8.50	11,478.08
2014	45202618228939.70	12,997.00	36.70	20451700000000.00	8.05	13,593.78
2015	46883216102775.30	11,441.98	41.27	21288200000000.00	9.01	14,112.17
2016	48808590797173.20	8,104.81	36.30	28083900000000.00	15.70	15,104.18
2017	50490150145742.70	5,849.39	50.26	28473700000000.00	16.50	16,908.13
2018	51561855501191.40	4,377.63	53.99	32739600000000.00	12.10	24,550.24
2019	52779873487200.00	4,070.03	70.25	34850900000000.00	11.40	35,863.98
2020	54181405787700.00	4,321.66	76.61	38904900000000.00	13.25	41,253.55
2021	56228306805800.00	5,786.73	72.27	44444000000000.00	16.95	58,293.95
2022	57613193216400.00	8,481.57	81.87	52187300000000.00	18.85	65,227.13
2023	58327224779500.00	8,396.76	87.69	42596775000000.00	24.7	77,834.67
2024	59312569103900.00	10,444.90	79.61	44533243750000.00	33.8	86,206.22

Source: Authors' compilation from World Development Indicators (World Bank) and Central Bank of Nigeria Statistical Bulletin (2024).

Note:
AGP = Agricultural value added
ACRED = Agricultural credit
AGEXP = Capital expenditure to the economic sector (proxy for government agricultural expenditure)
MS = Broad money
INF = Inflation rate
GFCF = Gross fixed capital formation

During the preparation of this manuscript, the authors used ChatGPT (GPT-5.2) to improve language clarity and readability. After using this tool, the authors reviewed and edited the content as necessary and take full responsibility for the integrity and originality of the work.