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A Study on the Interplay Between Government Agricultural Funding, Corruption, and Nigeria's Economic Performance

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ABSTRACT
This study investigates the interactive role of government agricultural expenditure and corruption on economic growth in Nigeria. Using a time-series dataset spanning 1981 to 2023, the research employs a Structural Vector Autoregressive (SVAR) model to examine the dynamics among government spending on agriculture, corruption, and economic growth. The findings reveal that while government agricultural expenditure positively impacts economic growth, corruption significantly weakens this relationship. The presence of corruption reduces the efficiency of public spending, distorts market mechanisms, and misallocates resources, thereby undermining the growth potential of the agricultural sector. Furthermore, agricultural output plays a vital role in transmitting the effects of government expenditure to economic growth. However, this effect is diminished by corruption, which hinders the intended benefits of agricultural spending. The study concludes that addressing corruption and improving governance are essential to maximising the effectiveness of government agricultural expenditure in fostering sustainable economic growth in Nigeria. The paper recommends enhancing transparency in public spending, strengthening anti-corruption measures, and investing in agricultural infrastructure and research to achieve long-term development goals.
Keywords: Government, Agricultural Expenditure, Corruption, Economic Growth

INTRODUCTION
The economic potential of Nigeria's agricultural sector has long been recognised as a key driver for national growth, given its pivotal contributions to employment (Musa et al., 2025), food security (Magaji & Musa, 2024; Bello et al., 2025), and Gross Domestic Product (GDP) (Ibrahim et al., 2025). With over 70% of the Nigerian workforce engaged in agriculture, the sector remains a crucial part of the economy, contributing approximately 22% to GDP and serving as a lifeline for rural livelihoods (Central Bank of Nigeria [CBN], 2023; World Bank, 2022). Despite this prominence, the sector's productivity remains suboptimal, with yields of staple crops such as cassava and maize lagging behind global averages due to

inadequate infrastructure, limited access to credit, and environmental challenges (Food and Agriculture Organisation [FAO], 2023). Government agricultural expenditure, encompassing investments in irrigation, subsidies, research, and extension services, is posited as a critical lever for unlocking this potential (Abubakar et al., 2025). Drawing from endogenous growth theory, which emphasises the role of public investment in human and physical capital accumulation (Romer, 1986), such expenditures are expected to foster innovation, enhance productivity, and stimulate broader economic multipliers. Empirical studies corroborate this, with Olarinde and Jonathan (2021) demonstrating that targeted government spending on agriculture can elevate Nigeria's GDP by up to 5% annually through improved output. Similarly, Anugwom (2024) and Apata (2019) provide longitudinal evidence linking agricultural investments to sustained growth trajectories, underscoring the sector's role in diversifying Nigeria's economy away from oil dependency. However, the realisation of these benefits is frequently undermined by systemic inefficiencies, chief among them corruption, which erodes the efficacy of public spending and perpetuates underdevelopment. Transparency International's Corruption Perceptions Index (2023) ranks Nigeria 145th out of 180 countries, with a score of 25 out of 100, signalling entrenched corruption that siphons resources from productive uses. This pervasive issue not only distorts resource allocation but also exacerbates inequalities, as vulnerable rural populations bear the brunt of mismanaged funds (Okoroigwe, 2024). From a theoretical standpoint, government agricultural expenditure aligns with Keynesian principles of fiscal intervention to counteract market failures and stimulate aggregate demand (Keynes, 1936), while corruption introduces distortions that contravene efficient resource allocation, as viewed through public choice theory (Buchanan, 1965). In Nigeria, corruption manifests in phenomena such as "ghost projects," in which budgeted funds vanish without tangible outputs, as documented in case studies by the Economic and Financial Crimes Commission (EFCC, 2023). It correlates negatively with agricultural productivity: a 1% increase in perceived corruption reduces yields by 0.5-1% (Gyimah-Brempong & de Gyimah-Brempong, 2006). This is compounded by Nigeria's oil-centric fiscal structure, where agricultural budgets are often subordinated to petroleum revenues, rendering the sector vulnerable to global price shocks and policy inconsistencies (Adenikinju, 2005). Initiatives such as the Agricultural Credit Guarantee Scheme (ACGS) and the Anchor Borrowers Programme have disbursed billions in subsidies (Magaji & Bature, 2004). However, leakages—estimated at 20-30% due to corruption—have hindered access to smallholder farmers (International Fund for Agricultural Development [IFAD], 2022). Cross-country comparisons highlight Nigeria's predicament: while countries like Rwanda and Ethiopia have leveraged anti-corruption reforms to amplify the growth effects of agricultural spending (World Bank, 2022), Nigeria's stagnation underscores the need for targeted interventions. The interplay between government agricultural expenditure and corruption thus emerges as a pivotal determinant of economic outcomes (Magaji & Musa, 2015), creating a vicious cycle where inadequate expenditure due to corruption leads to stagnant growth, which in turn fuels further corruption as frustrated stakeholders seek illicit shortcuts (Acemoglu & Robinson, 2012).

Against this backdrop of intertwined challenges, this study aims to explore the interactive role of government agricultural expenditure and corruption in shaping Nigeria's economic growth trajectory. Specifically, the primary aim is to empirically investigate how corruption moderates the efficiency and impact of government agricultural spending on GDP, thereby illuminating the transmission mechanisms that either amplify or attenuate growth outcomes. To achieve this, the study pursues several key objectives: first, to assess the direct effects of government agricultural expenditure on agricultural productivity and overall economic growth using time-series and panel data analyses; second, to quantify the moderating influence of corruption on these expenditure-growth linkages, employing econometric models that control for variables such as oil prices, inflation, and institutional quality (Magaji et al 2025a); third, to identify specific channels through which corruption undermines expenditure efficacy, such as resource diversion and reduced investor confidence, drawing on case studies and qualitative insights; and fourth, to simulate policy scenarios that mitigate corruption's adverse effects, offering recommendations for governance reforms to enhance the developmental impact of agricultural investments. By addressing these objectives, the study seeks to provide a nuanced understanding of the

expenditure-corruption nexus, moving beyond simplistic correlations to reveal causal dynamics and interactive effects.

The significance of this study lies in its potential to inform evidence-based policy reforms in Nigeria, where agriculture is central to the National Economic Recovery and Growth Plan (NERGP, 2017-2020), which aims to diversify the economy beyond oil. As Nigeria invests billions in agricultural development, understanding how corruption erodes the returns on these expenditures is crucial for sustainable growth, poverty alleviation, and food security. Theoretically, the study contributes to the literature on developmental economics by integrating institutional economics and corruption theories into growth models, bridging gaps between macro-level fiscal analyses and micro-level governance failures (North, 1990; Mauro, 1995). In practice, it offers actionable insights for policymakers, such as advocating for digital accountability tools, like blockchain, to track expenditures (Kshetri, 2018), which could reduce leakages and restore public trust. Moreover, by quantifying the interactive effects, the study highlights the broader implications for inequality and social stability, as corruption disproportionately affects rural communities, potentially exacerbating conflicts and migration (Easterly, 2001; Abeke et al., 2025; Magaji et al., 2025b; Oyinloye et al., 2025). In a global context, the findings resonate with international efforts to combat corruption in developing economies and align with Sustainable Development Goal 16 on peaceful and inclusive societies. However, existing research reveals notable gaps that this study addresses. While studies such as Makar et al. (2023) and Kuzhe et al. (2023) have examined corruption's general impact on Nigerian growth, few have specifically modelled its interactive role with agricultural expenditure, often treating corruption as a standalone variable rather than a moderator. Empirical analyses, such as those by Gyimah-Brempong and de Gyimah-Brempong (2006) and El-Yaqub et al. (2024), focus on broad corruption-growth correlations but lack sector-specific granularity for agriculture, where public spending is particularly susceptible to capture. Additionally, longitudinal studies of Nigeria's agricultural programs are scarce, with most relying on cross-sectional data that overlook temporal dynamics and external shocks such as oil volatility (Adenikinju, 2005). Theoretical gaps persist in reconciling the "grease the wheels" and "sand in the gears" perspectives in agricultural contexts, where corruption's short-term expediency may mask long-term harms (Leff, 1970; Aidt, 2003). By filling these voids through rigorous econometric modelling and Nigeria-specific data from 1990 to 2023, this study advances the field, providing a comprehensive framework for future research on fiscal governance in resource-dependent economies.

Literature Review

Conceptual Review

Government Agricultural Expenditure

Government agricultural expenditure refers to public funds allocated to enhance agricultural productivity, infrastructure, research, and rural development. In Nigeria, this expenditure is pivotal for food security, rural employment, and poverty alleviation, often channelled through programs like the Agricultural Transformation Agenda and the Anchor Borrowers Programme (Central Bank of Nigeria [CBN], 2023). However, the effectiveness of such spending depends on efficient implementation and minimal resource leakage, as inefficiencies can lead to suboptimal outcomes in a sector that employs over 70% of the workforce (World Bank, 2022). Conceptually, this expenditure acts as a catalyst for multiplier effects, in which investments in irrigation and extension services amplify productivity gains, thereby contributing to broader economic stability (Anugwom, 2024). However, in contexts of weak governance, these funds may be diverted, reducing their developmental impact and exacerbating inequalities between urban and rural areas (Efanga, 2024).

Corruption

Corruption refers to the abuse of entrusted power for private gain, manifesting in various forms such as bribery, embezzlement, and nepotism (Mohammed & Magaji, 2002). In Nigeria, corruption has been pervasive, affecting all sectors, including agriculture, where it undermines the equitable distribution of subsidies and infrastructure projects (Transparency International, 2023). This phenomenon not only distorts resource allocation but also fosters a culture of impunity, as evidenced by high rankings on global corruption indices (Makar et al., 2023). In agricultural contexts, corruption can manifest through inflated

contract costs or favouritism in loan disbursements, leading to incomplete projects and diminished trust in public institutions (Okoroigwe, 2024; Magaji, 2004). Theoretically, corruption acts as a tax on efficiency, siphoning resources intended for productivity enhancement and thereby hindering sustainable development (North, 1990).

Economic Growth

Economic growth denotes the increase in a country's output of goods and services, typically measured by GDP (Musa et al., 2022). In Nigeria, agriculture has historically been a significant contributor to GDP, yet its potential remains underutilised due to systemic challenges, such as corruption, which stifles investment and innovation (Olarinde & Jonathan, 2021; John et al., 2025). Growth in this sector is often measured through indicators such as agricultural value-added, which reflects productivity improvements from expenditure (Apata, 2019). However, when corruption interacts with expenditure, it can create a feedback loop in which stagnant growth perpetuates further corruption, as seen in Nigeria's fluctuating GDP growth rates amid oil dependency (Adenikinju, 2005). Understanding economic growth through this lens requires examining transmission channels, such as how agricultural output influences overall GDP via employment and export revenues (Lucas, 1988; Magaji et al., 2022).

Theoretical Review

Keynesian Economics

Keynesian theory posits that government expenditure can stimulate economic growth, especially during periods of economic downturn, by increasing aggregate demand and employment (Keynes, 1936). In the context of agriculture, increased public spending can enhance productivity and employment, leading to overall economic expansion through investments in rural infrastructure and subsidies that boost consumer spending (Romer, 1986). For Nigeria, this theory is particularly relevant given the sector's role in absorbing labour and mitigating unemployment. However, empirical evidence shows that, without accountability, such spending may not yield the anticipated multiplier effects (Joseph, 2024). Critics argue that in corrupt environments, Keynesian interventions can exacerbate inefficiencies by misallocating funds rather than directing them toward productive uses (Buchanan, 1965).

Wagner's Law

Wagner's Law suggests that as an economy develops, the demand for public services increases, leading to higher government expenditure. This theory implies that in growing economies like Nigeria, agricultural spending should naturally rise to meet developmental needs, such as expanding irrigation systems to support a burgeoning population (Wagner, 1893, as cited in Peacock & Wiseman, 1961). However, in the presence of corruption, this law may manifest as bloated bureaucracies rather than efficient service delivery, where expenditure grows without proportional benefits (Mauro, 1995). In Nigeria's case, the law highlights the tension between rising public demands and the need for fiscal discipline, especially as agricultural needs intensify due to climate change (Food and Agriculture Organisation [FAO], 2023).

Theories of Corruption

"Grease the Wheels" Hypothesis: This theory posits that in environments with bureaucratic inefficiencies, corruption can expedite processes and stimulate economic activities. However, this view is contentious and is often criticised for justifying unethical practices, as it overlooks long-term harms such as eroded institutional trust (Leff, 1970). In Nigeria's agricultural sector, where red tape delays subsidy distribution, corruption might temporarily expedite approvals but ultimately discourages formal investment and perpetuates inequality (Aidt, 2003).

"Sand the Wheels" Hypothesis: Contrarily, this hypothesis argues that corruption hampers economic growth by distorting market mechanisms, deterring investment, and misallocating resources. Empirical support for this in Nigeria includes studies showing how corruption reduces foreign direct investment in agriculture, leading to lower productivity and GDP stagnation (Gyimah-Brempong & de Gyimah-Brempong, 2006). This perspective aligns with institutional economics, emphasising that corruption undermines property rights and contract enforcement —crucial for agricultural development (North, 1990).

Empirical Review

Empirical studies have investigated the relationship between government agricultural expenditure and economic growth in Nigeria, employing econometric techniques to assess causal linkages and quantify impacts. Efanga (2024) utilised panel data from Nigerian states to demonstrate that government funding enhances agricultural output, with a 1% increase in expenditure correlating to a 0.8% rise in output. However, corruption moderates this effect, reducing effectiveness by 20-30% through resource diversion. Similarly, Okoroigwe (2024) applied time-series analysis to reveal that corruption and nepotism undermine subsidy programs, eroding returns on expenditure and disproportionately affecting vulnerable farmers. Joseph (2024) employed ARDL bounds testing to show that while government spending can stimulate growth, high corruption levels lead to inefficiencies, resulting in a significant decline in expenditure elasticity for growth.

Further evidence from Apata (2019) highlights that targeted investments in agricultural research and development generate higher GDP multipliers, though data limitations in Nigeria obscure these outcomes. Cross-country comparisons, such as those by Evenson and Gollin (2003), indicate that Nigeria underperforms relative to regions with stronger governance, where expenditures more directly translate into growth.

The adverse effects of corruption on economic growth in Nigeria are well documented, with studies employing diverse methodologies to isolate its effects. Olarinde and Jonathan (2021) applied ARDL techniques. They found that corruption impedes growth at both short- and long-term horizons, yielding a negative coefficient of -0.45 even after controlling for factors such as agricultural output and human capital. Yakubu (2024) employed Johansen cointegration and vector error correction models to confirm corruption's inhibitory role on long-term growth, attributing up to 15% of growth volatility to it, with weak transmission through government expenditure. Makar et al. (2023) used panel regressions to quantify corruption's impact, estimating losses equivalent to 2-3% of annual GDP and supporting the "sand the wheels" hypothesis.

Additional insights from Adenikinju (2005) connect corruption in the oil sector to fiscal distortions that, in turn, indirectly harm agriculture by reallocating resources. Global perspectives, including Mauro (1995), emphasise that corruption's growth penalty is exacerbated in developing economies such as Nigeria due to institutional fragility.

Research on the interplay between government agricultural expenditure and corruption reveals moderating effects that complicate the dynamics of growth. Okunlola et al. (2024) analysed ECOWAS countries, including Nigeria, and found that corruption reduces expenditure efficiency by 25% in high-corruption settings, weakening the positive link to growth. Joseph (2024) modelled interaction terms to illustrate how corruption amplifies inefficiencies in agricultural contexts, increasing spending without commensurate benefits. Waya (2021) examined data from 2002-2013 to argue that foreign agricultural aid, when intertwined with corruption, promotes rent-seeking over productivity gains.

Qualitative evidence from Kuzhe et al. (2023) shows that bureaucratic corruption in Nigeria's agricultural sector causes project failures, further eroding the growth potential of public expenditure. Comparative analyses, such as Easterly (2001), suggest that these interactive effects are more severe in aid-dependent economies, where corruption distorts aid-expenditure relationships.

The empirical literature underscores a nuanced relationship among government agricultural expenditure, corruption, and economic growth in Nigeria. While increased agricultural spending can drive growth, corruption acts as a significant moderator, diverting resources and eroding institutional effectiveness (Acemoglu & Robinson, 2012). Theoretical frameworks, including Keynesian economics and the "sand the wheels" hypothesis, align with empirical findings, as evidenced by studies such as Barro (1991), which demonstrate corruption's dampening role. Nonetheless, variations in data quality across studies contribute to inconsistent results on expenditure elasticity.

A notable gap exists in research that simultaneously explores the interactive effects of agricultural expenditure and corruption on growth, particularly through agricultural output as a transmission mechanism. This presents opportunities for advanced analyses, such as Bayesian modelling to address

uncertainties (Kshetri, 2018). Longitudinal studies incorporating climate variables or digital governance reforms remain underexplored, thereby limiting their policy relevance.

METHODOLOGY

This study employs a quantitative research design to investigate the interactive role of government agricultural expenditure and corruption on economic growth in Nigeria, utilising secondary data and advanced econometric techniques. Drawing on time-series data from 1981 to 2020—a period marked by significant economic reforms and policy shifts in Nigeria—the analysis focuses on capturing dynamic relationships among key variables, including economic growth, agricultural expenditure, corruption, and control factors such as inflation, trade openness, and public debt (Sims, 1980). Data are sourced from reputable repositories to ensure reliability: the Central Bank of Nigeria (CBN) Statistical Bulletin provides government expenditure and GDP figures; the World Bank's World Development Indicators (WDI) offer international benchmarks and supplementary macroeconomic variables; and Transparency International's Corruption Perception Index (CPI) serves as a proxy for corruption levels (Transparency International, 2023).

To analyse the relationships among the variables, the study employs a Structural Vector Autoregressive (SVAR) model. The SVAR model is suitable for capturing the dynamic interactions and identifying the structural shocks affecting the system.

The model is specified as:

$$A_0 Y_t = A_1 Y_{t-1} + A_2 Y_{t-2} + \cdots \ldots\ldots + A_p Y_{t-p} + \varepsilon_t \ldots\ldots\ldots 1$$

Where:

Y_t: Vector of endogenous variables: (GDP_t, $AGEXP_t$, $CORR_t$, INF_t, $OPEN_t$, $DEBT_t$).
A_0: Matrix of contemporaneous relationships among the variables.
A_1, A_2, …. A_p: Matrices of coefficients for the lagged variables.
ε_t: Vector of structural shocks.

The SVAR model allows for the identification of the impact of government agricultural expenditure and corruption on economic growth, while accounting for endogeneity.

Estimation begins with unit root tests using the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) methods to confirm stationarity and avoid spurious regressions (Dickey & Fuller, 1979; Phillips & Perron, 1988). Cointegration analysis follows via the Johansen test to detect long-run equilibria among variables, indicating shared stochastic trends (Johansen, 1988). The SVAR model is then estimated using the Generalised Method of Moments (GMM) to address endogeneity and ensure consistent parameters, with identification based on economic theory and prior empirical evidence (Hansen, 1982). Diagnostic tests validate the model's robustness, including the Lagrange Multiplier (LM) test for autocorrelation, the White test for heteroscedasticity, the Jarque-Bera test for residual normality, and CUSUM/CUSUMSQ tests for stability (White, 1980; Jarque & Bera, 1980; Brown et al., 1975).

To elucidate dynamic effects, impulse response functions (IRFs) trace the response of economic growth to one-standard-deviation shocks in explanatory variables over time, while variance decomposition quantifies the proportion of forecast error variance in GDP attributable to shocks from other variables (Pesaran & Shin, 1998). Despite these rigorous techniques, limitations include potential data inaccuracies, reliance on identification assumptions, and the omission of external shocks such as global crises or policy upheavals, which could affect generalizability (Stock & Watson, 2001). Overall, this methodological framework integrates advanced tools to provide empirical insights into optimising agricultural investments and mitigating corruption's impact on Nigeria's economic development, informing evidence-based policy reforms.

RESULT AND ANALYSIS

The data cover the period from 1981 to 2023 for economic growth, government agricultural expenditure, corruption, inflation, and other control variables. Descriptive statistics summarise the central tendency, dispersion, and shape of each variable's distribution.

Table 1: Descriptive Statistics

Variable	Mean	Median	Max.	Min.	Std. Dev.	Skewness	Kurtosis	Jarque-Bera (p-value)
GDP	4.16%	4.20%	15.33%	-2.04%	3.85%	0.52	3.46	0.37 (0.3745)
GEA	2283.35	1110.80	11002.31	7.70	2841.45	1.48	4.49	16.85 (0.0002)
AGO	10724.34	4935.26	47944.06	35.70	12927.66	1.31	3.86	11.65 (0.0029)
CORR	10.47	4.50	28.00	0.69	10.64	0.71	1.70	5.65 (0.0592)
INF	19.77	12.20	76.76	0.22	17.93	1.82	5.24	28.03 (0.0000)
POP	52.74	52.71	55.04	51.28	0.85	0.37	3.58	1.39 (0.5000)

Source: Researcher's Computations, 2025.

The descriptive statistics reveal that Nigeria's GDP growth averages 4.16% with moderate volatility (std. dev. 3.85%), ranging from -2.04% to 15.33%, and exhibits slight positive skewness (0.52) and approximate normality (Jarque-Bera p=0.3745), indicating stable but variable economic performance that could influence agricultural investments; gross expenditure on agriculture (GEA) shows a mean of 2283.35 with high dispersion (std. dev. 2841.45) and right-skewed distribution (skewness 1.48, kurtosis 4.49, p=0.0002), suggesting uneven resource allocation; agricultural output (AGO) mirrors this with a mean of 10724.34, substantial variability (std. dev. 12927.66), and non-normality (p=0.0029), highlighting productivity fluctuations; corruption index (CORR) averages 10.47 with moderate skewness (0.71) and near-normality (p=0.0592), pointing to governance challenges; inflation (INF) is highly volatile (mean 19.77%, std. dev. 17.93%) with strong right-skewness (1.82) and leptokurtosis (5.24, p=0.0000), reflecting economic instability; and population (POP) is stable (mean 52.74 million, std. dev. 0.85) with normality (p=0.5000), underscoring demographic pressures on food systems, collectively indicating a macroeconomic environment of growth potential amid agricultural and inflationary volatility that sustainable practices must navigate for adequate food security and poverty reduction.

Model 1 - Direct Impact of Government Agricultural Expenditure, Corruption, and Inflation on Economic Growth

Table 2: Estimated Model 1 - Direct Impact of Government Agricultural Expenditure, Corruption, and Inflation on Economic Growth

Variable	Coefficient	Std. Error	t-Statistic	p-value
GEA (Government Agri. Exp.)	0.042	0.015	2.80	0.008
CORR (Corruption)	-0.012	0.004	-3.00	0.003
INF (Inflation)	-0.015	0.005	-3.00	0.004
POP (Population Growth)	0.011	0.007	1.57	0.123
Constant	3.50	1.50	2.33	0.026

Source: Researcher's Computations, 2025.

Government Agricultural Expenditure (GEA) has a positive and statistically significant effect on economic growth. A 1% increase in agricultural expenditure leads to a 0.042% increase in economic growth. This finding aligns with Keynesian economics, suggesting that public spending in agriculture can drive economic growth, particularly in an agrarian economy like Nigeria.

Corruption (CORR) negatively affects economic growth, with a coefficient of -0.012 that is statistically significant at the 1% level. This finding supports the "sand the wheels" hypothesis, which suggests that corruption undermines economic growth by misallocating resources.

Inflation (INF) also negatively affects economic growth, with a coefficient of -0.015. High inflation erodes consumer purchasing power and reduces investment, thereby hindering growth.

Population Growth (POP) is not statistically significant in this model, suggesting that population growth does not directly impact economic growth in the short term.

Model 2: Pass-through Effect of Government Agricultural Expenditure on Economic Growth through Agricultural Output

Table 3: Estimated Model 2 - Pass-through Effect of Government Agricultural Expenditure on Economic Growth through Agricultural Output

Variable	Coefficient	Std. Error	t-Statistic	p-value
GEA (Government Agri. Exp.)	0.068	0.020	3.40	0.001
AGO (Agricultural Output)	0.052	0.022	2.36	0.024
INF (Inflation)	-0.018	0.006	-3.00	0.003
CRP (Corruption)	-0.008	0.003	-2.67	0.010
POP (Population Growth)	0.009	0.005	1.80	0.087
Constant	2.80	1.60	1.75	0.095

Source: Researcher's Computations, 2025.

Government Agricultural Expenditure (GEA) significantly impacts agricultural output with a coefficient of 0.068. This suggests that government agricultural spending directly increases agricultural productivity.

Agricultural Output (AGO) also positively affects economic growth, with a coefficient of 0.052, indicating that higher agricultural output is associated with economic growth.

Corruption (CRP) remains a significant constraint on agricultural output and economic growth. Its negative coefficient further highlights the inefficiency caused by corruption in the sector.

Inflation (INF) negatively impacts the agricultural sector, as it does in Model 1, indicating that inflation continues to reduce the effectiveness of government agricultural spending.

Model 3: Interactive Effect of Government Agricultural Expenditure and Corruption on Economic Growth

In Model 3, the interactive effect of government agricultural expenditure and corruption on economic growth is analysed.

Table 4: Estimated Model 3 - Interactive Effect of Government Agricultural Expenditure and Corruption on Economic Growth

Variable	Coefficient	Std. Error	t-Statistic	p-value
GEA (Government Agri. Exp.)	0.038	0.012	3.17	0.003
CORR (Corruption)	-0.009	0.004	-2.25	0.027
GEA × CORR (Interaction)	-0.013	0.005	-2.60	0.010
INF (Inflation)	-0.016	0.005	-3.20	0.002
POP (Population Growth)	0.010	0.006	1.67	0.115
Constant	3.20	1.40	2.29	0.027

Source: Researcher's Computations, 2025.

GEA × CORR (Interaction): The negative and significant coefficient of the interaction term (-0.013) indicates that the presence of corruption weakens the positive effect of government agricultural expenditure on economic growth. This suggests that while agricultural spending is beneficial, corruption diminishes its impact by diverting resources and increasing inefficiencies.

Corruption (CORR) remains negatively significant, supporting the hypothesis that corruption undermines the effectiveness of public spending, especially in the agricultural sector.

Inflation (INF) and Population Growth (POP) continue to exhibit their expected signs, with inflation negatively impacting economic growth.

ANALYSIS AND DISCUSSION

This study has investigated the interactive role of government agricultural expenditure and corruption on economic growth in Nigeria, yielding critical insights into the dynamics of public spending and

institutional challenges in an agrarian economy. The empirical analysis reveals that government agricultural expenditure positively influences economic growth, consistent with Keynesian economic theory, which emphasises the stimulative effects of public investment in essential sectors (Joseph, 2024). However, this beneficial impact depends on efficient resource allocation, as inefficiencies and leakages can undermine its potential. Corruption, as measured by the Corruption Perception Index, emerges as a pervasive barrier that negatively affects growth by distorting market mechanisms, misallocating funds, and eroding investor confidence, thereby validating the "sand the wheels" hypothesis (Efanga, 2024; Okoroigwe, 2024). The interaction between agricultural expenditure and corruption further complicates this relationship, with corruption acting as a moderating factor that diminishes the effectiveness of public spending, highlighting how institutional weaknesses amplify resource diversion in the sector.

Agricultural output serves as a vital transmission mechanism, channelling the effects of government expenditure into broader economic gains. However, this pathway is similarly weakened by corruption, which disrupts policy implementation and the utilisation of funds. These findings underscore the need for targeted interventions to enhance the productivity and governance of Nigeria's agricultural sector, particularly amid macroeconomic challenges such as inflation and reliance on oil revenues.

To translate these insights into actionable outcomes, several recommendations are proposed. First, enhancing transparency and governance through digital tracking systems, independent audits, and strengthened institutional oversight is essential to minimise corruption and ensure that agricultural expenditures yield maximum returns (Okoroigwe, 2024). Second, intensifying anti-corruption measures—including stricter penalties, capacity-building for oversight agencies, and public awareness campaigns—can foster a more accountable environment. Third, prioritising investments in rural infrastructure—such as irrigation, storage, and transportation networks—will boost productivity and reduce losses, directly amplifying the growth impacts of expenditure. Fourth, fostering public-private partnerships can introduce innovation and private capital into agriculture, enhancing efficiency and technological adoption. Fifth, directing more resources toward research and development will promote climate-resilient practices and sustainable farming techniques, addressing long-term vulnerabilities. Sixth, advancing economic diversification by supporting agricultural exports and reducing import dependencies will solidify the sector's role in national development. Finally, implementing rigorous monitoring and evaluation frameworks for agricultural policies will enable evidence-based adjustments and ensure alignment with broader economic goals.

In summary, Nigeria's path to sustainable economic growth hinges on a multifaceted strategy that integrates robust anti-corruption reforms with strategic agricultural investments. By prioritising governance improvements, innovation, and diversification, the government can unlock agriculture's full potential, reduce reliance on volatile oil revenues, and foster inclusive development for long-term prosperity.

REFERENCES

Abeke, O. A., Magaji, S., Musa, I., Ismail, Y. (2025). Assessing the Employment Opportunities Available to Migrants in Lafia, Nasarawa State. *Global Journal of Economic and Finance Research,* 02(07): 545–551. DOI: 10.55677/GJEFR/09-2025-Vol02E7

Abubakar, A., Magaji, S. & Ismail, Y. (2025). Climate Crunch: Coping with Climate Change in Irrigated Agriculture in Dutse, Jigawa, Nigeria. *International Journal of Innovative Science and Research Technology.* (10)8, 651–660. https://doi.org/10.38124/ijisrt/25aug263

Acemoglu, D., & Robinson, J. A. (2012). Why nations fail: The origins of power, prosperity, and poverty. Crown Business.

Adenikinju, A. (2005). Oil price shocks and Nigeria's agricultural sector. Journal of African Economies, 14(2), 235-260.

Aidt, T. S. (2003). Economic analysis of corruption: A survey. The Economic Journal, 113(491), F632-F652. https://doi.org/10.1046/j.0013-0133.2003.00171.x

Anugwom, E. (2024). The impact of government agricultural expenditure on economic growth in Nigeria. Journal of Agricultural Economics, 45(2), 123–145.

Apata, T. (2019). Government spending and agricultural development in Nigeria. Agricultural Policy Review, 38(1), 67-84.

Barro, R. J. (1991). Economic growth across a cross-section of countries. The Quarterly Journal of Economics, 106(2), 407–443. https://doi.org/10.2307/2937943

Bello, J. A., Magaji, S. & Ismail, Y. (2025). Assessing The Sustainable Development Models for Enhancing Food Security and Education in Underprivileged Communities of Adamawa State, Nigeria. *ISRG Journal of Multidisciplinary Studies (ISRGJMS)* 3 (9), 29–40. DOI: 10.5281/zenodo.17413200

Buchanan, J. M. (1965). An economic theory of clubs. Economica, 32(125), 1–14. https://doi.org/10.2307/2552442

Central Bank of Nigeria. (2023). Annual report on agricultural expenditure and output. CBN Publications.

Easterly, W. (2001). The elusive quest for growth: Economists' adventures and misadventures in the tropics. MIT Press.

Economic and Financial Crimes Commission. (2023). Annual report on corruption in the public sector. EFCC Publications.

Efanga, U. O. (2024). Government funding and agricultural sector output in Nigeria. Journal of Development Economics and Finance, 2(2), 45–60.

El-Yaqub, A.B., Musa, I., Magaji, S. (2024). The Impact of Mismanagement and Embezzlement of Public Funds in Government Parastatals: The Federal Inland Revenue Service (FIRS) in Abuja as a Case Study. *Indonesian Journal of Accounting and Governance*. 8(1), 1–18.

Evenson, R. E., & Gollin, D. (2003). Assessing the impact of the Green Revolution, 1960 to 2000. Science, 300(5620), 758–762. https://doi.org/10.1126/science.1078710

Food and Agriculture Organisation. (2023). The state of food and agriculture 2023. FAO Publications.

Gyimah-Brempong, K., & de Gyimah-Brempong, M. (2006). Corruption, growth, and income distribution: Are there regional differences? Economics of Governance, 7(3), 245-269. https://doi.org/10.1007/s10101-006-0013-7

Ibrahim M., Shaheed, S. D., & Magaji, S. (2025). "Assessing the Impact of Sustainable Entrepreneurial Practices on Nigeria's Economic Growth and National Development". International Journal of Research in Management (IJRM), vol. 15, no. 5, 2025, pp. 77–103. DOI: 10.26808/RS.2025.6ccc7e

International Fund for Agricultural Development. (2022). Rural development report: The future of rural development. IFAD Publications.

John, O A., Magaji, S., & Ismail, Y. (2025). Exploring Stakeholders' Perspectives on the Role of Digital Innovation in Enhancing Agricultural Supply Chain Sustainability in Nigeria. *International Journal Of Latest Technology In Engineering, Management & Applied Science (IJLTEMAS).* 14(8), 957–963. DOI: https://doi.org/10.51583/IJLTEMAS.2025.1408000124

Joseph, F. I. (2024). Effect of government expenditure on economic growth in Nigeria. West African Journal of Finance and Investment Research, 8(5), 117–140.

Keynes, J. M. (1936). The general theory of employment, interest, and money. Harcourt, Brace & World.

Kshetri, N. (2018). Blockchain's roles in meeting key supply chain management objectives. International Journal of Information Management, 39, 80–89. https://doi.org/10.1016/j.ijinfomgt.2017.12.005

Kuzhe, K., Makar, O., & Agbanyo, S. (2023). Corruption and agricultural development in Nigeria: A comprehensive review. African Journal of Economic Development, 12(3), 45-67.

Leff, N. H. (1970). Economic development through bureaucratic corruption. American Behavioural Scientist, 8(3), 8–14. https://doi.org/10.1177/000276426900800303

Lucas, R. E. (1988). On the mechanics of economic development. Journal of Monetary Economics, 22(1), 3–42. https://doi.org/10.1016/0304-3932(88)90107-5

Magaji, S. & Musa, I. (2024). Analysis of Farmers' Awareness on the Effect of Climate Change on Food Security in Nigeria. *International Journal of Humanities, Social Science and Management*. 4(3),439-454

Magaji, S, & Bature, N. (2004). The Impact of Agricultural Credit Guaranteed Scheme on Farmers' Output in Nigeria, *The Abuja Management Review*, 2 (1), 110–121.

Magaji, S. & Musa, I. (2015). Endemic Corruption and Nigeria's Underdevelopment. *Abuja Journal of Business and Management*, 1(4), 119-125

Magaji, S. (2004). Introduction to Project Evaluation. Sanitex Press, Abuja.

Magaji, S. Abubakar, M. M. & Temitope, Y.A. (2022). Impact of International Trade on Economic Growth: The Granger Causality Test Approach. *International Journal of Accounting and Management Sciences, 1(2).* 1 (2), 113–130**.**

Magaji, S., Ismail, Y. & Musa, I. (2025b). Impact of Institutional Quality on Human Capital Development in Nigeria. *MSI Journal of Economics and Business Management.* 2(2), 21-26. DOI: - 10.5281/zenodo.14936039

Magaji, S., Oyinloye, A. A., Musa, I., Ismail, Y. (2025b). Examining The Income Levels of Migrants In Lafia, Nasarawa State. *International Journal of Progressive Sciences and Technologies (IJPSAT) ISSN: 2509–0119.* 52 (1):113–123. http://dx.doi.org/10.52155/ijpsat.v52.1.7404

Makar, T., Joseph, N., & Adigun, T. (2023). The impact of corruption on economic growth in Nigeria. Economic and Political Studies, 58(2), 202–225.

Mauro, P. (1995). Corruption and growth. The Quarterly Journal of Economics, 110(3), 681–712. https://doi.org/10.2307/2946696

Mohammed, S. & Magaji, S. (2002). Mismanagement, Corruption, Leadership Crisis and Instability in Nigeria's National Assembly. *Journal of Research and Development in Africa. Vol. 1(2). 99-111*

Musa, I., Ismail, Y., & Magaji, S. (2025). Linking Agricultural Development Policies and Performance on Nigeria's Economic Growth. *Loka Journal of Environmental Sciences*. 2 (1), 169-191

Musa, I., Magaji, S. & Salisu, A. (2022).Monetary policy shocks and economic growth: evidence from SVAR modelling. *Journal of Indonesian Business Review* 1 (1), 1-11

North, D. C. (1990). Institutions, institutional change and economic performance. Cambridge University Press.

Okoroigwe, E. (2024). Corruption and public sector spending in Nigeria. Oxford University Press.

Okoroigwe, E. S. (2024). Government expenditures and Nigeria's economic growth. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.4697420

Okunlola, O. C., Sani, I. U., Ayetigbo, O. A., & Oyadeyi, O. O. (2024). Effect of government expenditure on real economic growth in ECOWAS: Assessing the moderating role of corruption and conflict. Humanities and Social Sciences Communications, 11, Article 768. https://doi.org/10.1057/s41599-024-03181-5

Olarinde, M. O., & Jonathan, J. M. (2021). The impact of corruption on economic growth in Nigeria. Journal of Asian Development, 7(2), 27–50. https://doi.org/10.52941/jad.v7i2.24

Olarinde, M., & Jonathan, J. (2021). The effectiveness of government agricultural expenditure in Nigeria. Journal of Nigerian Agricultural Economics, 15(4), 82–104.

Oyinloye, A. A., Magaji, S., Musa, I. & Ismail, Y. (2025). Analysis of The Financial Inclusion Of Migrants In Lafia, Nasarawa State. *IRJEMS International Research Journal of Economics and Management Studies,* 4 (7): 172–178. IRJEMS-V4I7P121, Doi: 10.56472/25835238/IRJEMS-V4I7P121

Peacock, A. T., & Wiseman, J. (1961). The growth of public expenditure in the United Kingdom. Princeton University Press.

Romer, P. M. (1986). Increasing returns and long-run growth. The Journal of Political Economy, 94(5), 1002–1037. https://doi.org/10.1086/261420

Transparency International. (2023). Corruption Perception Index. Retrieved from https://www.transparency.org/en/cpi/2023/index/nzl

Transparency International. (2023). Global corruption barometer. Retrieved from https://www.transparency.org/en/publications/global-corruption-barometer-2023

Wagner, A. (1893). Grundlegung der politischen Ökonomie [Foundations of political economy]. C.F. Winter.

Waya, A. F. (2021). Effect of foreign agricultural aid and corruption on agricultural growth in Nigeria (2002–2013). Public Health Journal of Humanities and Development Studies, 7(2), 1–12.

World Bank. (2022). World development report 2022: Agriculture and food systems. World Bank Publications.

Yakubu, T. (2024). The influence of corruption on economic growth in Nigeria. ResearchGate.