UKR Journal of Economics, Business and Management (UKRJEBM)
Homepage: https://ukrpublisher.com/ukrjebm/
Email: submit.ukrpublisher@gmail.com
Volume 1, **Issue** 3, 2025 **ISSN:** 3049-429X (Online)

Interest Rate Dynamics and Agricultural Sector Output in Nigeria: Evidence from 1993 to 2023

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DOI: *10.5281/zenodo.16730642*

Article History
Original Research Article
Received: 27-07-2025
Accepted: 30-07-2025
Published: 03 -08-2025
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Citation: Onuoha Onyinyechi Joy, 2025, Interest Rate Dynamics and Agricultural Sector Output in Nigeria: Evidence from 1993 to 2023, UKR Journal of Economics, Business and Management (UKRJEBM), 1(3),105-114

Abstract

This study examines the dynamic relationship between interest rate fluctuations and agricultural sector output in Nigeria over the period 1993 to 2023. Given the significance of agriculture to Nigeria's GDP, employment, and food security, understanding how monetary policy instruments like interest rate impact agricultural productivity is essential. The study employs time series econometric techniques, including Augmented Dickey-Fuller (ADF) tests for stationarity, Johansen cointegration tests for long-run relationships, and Error Correction Models (ECM) to assess short-run dynamics. The findings indicate that interest rates exert a statistically significant negative influence on agricultural output in both the short and long run. High lending rates appear to deter investment in agriculture, limiting access to capital for inputs, technology, and expansion. The study recommends targeted interest rate subsidies and enhanced credit access for smallholder farmers to foster inclusive growth in the agricultural sector.

Keywords: *Interest Rate Dynamics, Agricultural Sector Output, Nigeria, Monetary Policy, Time Series Analysis, Economic Growth*

Introduction

The agricultural sector remains a cornerstone of Nigeria's economy, employing a significant proportion of the population and contributing substantially to GDP and rural livelihoods. However, the sector's growth has been hindered by limited access to credit, poor infrastructure, and unfavorable monetary conditions. Among these, the interest rate—a key monetary policy tool—has been identified as a crucial determinant of agricultural investment and productivity.

Interest rates influence borrowing costs and therefore determine the extent to which farmers and agribusinesses can access capital for expansion, mechanization, and innovation. High and volatile interest rates may increase the cost of borrowing, discouraging investment in agriculture. Despite numerous interventions by the Central Bank of Nigeria (CBN) to promote agricultural financing through schemes such as the Anchor Borrowers' Programme and Agricultural Credit Guarantee Scheme Fund, the sector's output growth remains inconsistent.

This study explores how interest rate fluctuations have influenced agricultural sector output in Nigeria over the past three decades. By employing robust econometric tools and analyzing data from 1993 to 2023, the study seeks to provide empirical insights into how monetary policy interacts with agricultural development.

Statement of the Problem

The Nigerian agricultural sector faces numerous challenges, including inadequate access to affordable credit, which is partly driven by high interest rates. While agriculture is recognized as a priority sector, lending institutions often regard it as high-risk, leading to elevated borrowing costs and limited access to formal credit facilities for smallholder farmers.

Over the years, the interest rate in Nigeria has exhibited considerable volatility, reflecting both domestic policy adjustments and external shocks. Despite various credit intervention programs, agricultural output growth has remained sluggish and erratic. This raises concerns about the effectiveness of current interest rate regimes in stimulating agricultural productivity.

The core problem addressed in this study is whether and to what extent interest rate dynamics have influenced the performance of Nigeria's agricultural sector between 1993

and 2023. This period captures significant monetary policy reforms, agricultural financing interventions, and macroeconomic shifts that could inform current policy direction.

Objectives of the Study

The broad objective of this study is to assess the impact of interest rate dynamics on the output of the agricultural sector in Nigeria between 1993 and 2023.The specific objectives are to:

1.Analyze the short-run effects of interest rate fluctuations on agricultural productivity.

2.Examine the long-run relationship between interest rate and agricultural sector output in Nigeria.

Research Questions

This study is guided by the following research questions:

1.How does interest rate affect agricultural sector output in the short run?

2.What is the long-run relationship between interest rate and agricultural sector output in Nigeria?

Hypothesis

H_{01}: interest rate does not have a significant impact on the agriculture sector output in Nigeria.

Literature Review

Interest rate

The interest rate, commonly defined as the cost of borrowing credit for investment purposes, plays a pivotal role in shaping economic activity. As a core macroeconomic variable, it has attracted considerable attention from economists, policymakers, lenders, and borrowers due to its profound influence on investment decisions and capital allocation. Fundamentally, interest rates exhibit an inverse relationship with investment—higher rates tend to discourage borrowing and, consequently, reduce investment, while lower rates stimulate investment by reducing the cost of financing (Ajudua et al., 2017).

In addition to influencing investment behavior, interest rates affect firms' future cash flows and the discount rate applied to investment appraisals. They are sensitive to various macroeconomic factors such as inflationary pressures, capital productivity, and monetary policy actions—particularly those implemented by central banks like the Federal Reserve. Ajudua et al. (2017) describe interest rate as the price of money and credit, highlighting its role as compensation to lenders and depositors for deferring present consumption and parting with liquidity.

Moreover, interest rates serve essential allocative functions by rationing limited credit among competing borrowers. This price mechanism underscores their importance in investment planning and consumption decisions, especially in sectors that are heavily reliant on credit. In the Nigerian context, Babajide et al. (2016) emphasize that rising interest rates tend to depress stock market activities, further illustrating the broad economic ramifications of interest rate fluctuations.

The agricultural sector, in particular, is highly sensitive to interest rate movements, given its reliance on borrowed funds for production and expansion. Investors in agriculture, often supported by institutions like the Bank of Agriculture (BOA), face heightened production costs when interest rates increase. This correlation has been evident in Nigeria's recent economic trajectory. Raymond et al. (2023) note that rising nominal interest rates, driven by expanding fiscal deficits and increased debt servicing obligations, further strain the agricultural sector—a domain already characterized by high indebtedness. For instance, with an average nominal interest rate of 10%, interest charges in farm cost accounts reach approximately $14 billion, out of a total sectoral debt of $140 billion. A one-percentage-point reduction in interest rates, achieved through deficit minimization, could translate into a $1.4 billion cost reduction in agricultural production.

In sum, the interest rate not only determines the accessibility of credit and the viability of investment but also directly influences the performance of key sectors such as agriculture. Its multidimensional impact—spanning monetary policy, fiscal dynamics, and sectoral productivity—underscores its critical role in economic development.

Agricultura Sector Output

Agriculture has historically been a cornerstone of Nigeria's economy, providing livelihoods for a large share of the population and contributing significantly to national output. However, between 1993 and 2023, the sector's performance remained below potential, despite its strategic role in ensuring food security and economic diversification. In the early 1990s, agriculture accounted for about 38% of GDP, but by 2023, this had declined to approximately 23%, reflecting structural inefficiencies and the expanding dominance of the oil sector (NBS, 2022; CBN, 2022).

Crop production has remained the dominant component, contributing over 80% of total agricultural output. Staples such as cassava, yam, maize, and rice have been central to rural economies. Notably, Nigeria emerged as the world's largest producer of cassava, with output rising from 19

million metric tonnes in 1993 to over 59 million by 2020 (FAO, 2021). Livestock and fisheries have experienced modest growth, hindered by disease outbreaks, insecurity, and limited investment in modern technologies (Olomola, 2020).

Macroeconomic instability—characterized by volatile exchange rates, inflation, and high interest rates—has significantly constrained farmers' access to credit and essential inputs. Empirical evidence suggests a negative relationship between such volatility and agricultural output (Adeniran & Oyinlola, 2021; Adebayo & Onu, 2020). Though various government initiatives—such as the ACGSF, Fadama projects, and the Anchor Borrowers' Programme—sought to enhance access to inputs and financing, their effectiveness was often undermined by poor implementation, weak monitoring, and political interference (Eyo, 2008; Okon & Udoh, 2011).

Technological adoption has been limited. With mechanization at 0.27 horsepower per hectare—well below the FAO-recommended 1.5 hp/ha—productivity has remained low (FAO, 2021). While digital innovations have recently begun improving farmers' access to information, widespread adoption is yet to be achieved (Akinyele & Yusuf, 2022).

Persistent constraints—including insecurity, climate change, and infrastructure deficits—have further impeded growth. Farmer-herder conflicts, insurgency, and displacement have reduced access to farmlands (Okoli & Atelhe, 2014), while climate-related disasters—such as the 2022 floods affecting 500,000 hectares—have disrupted food production (NEMA, 2022). Poor rural infrastructure and limited irrigation also expose farmers to climate risks and post-harvest losses (World Bank, 2020; IFPRI, 2021).

Empirical studies underline the need for structural reforms. Aye and Moyo (2011) established a long-run positive effect of public agricultural expenditure on output, while Akinbobola and Ige (2021) found agricultural credit effective only when governance and monitoring structures are robust.Also,Recent events such as the COVID-19 pandemic and recurring floods have further strained the sector. Between 2019 and 2021, growth declined from 3.2% to 2.1% (NBS, 2022). In response, the National Agricultural Technology and Innovation Policy (2022–2027) was introduced to promote climate-resilient, private-sector-led agricultural development (FMARD, 2022).

Furthermore, Nigeria's agricultural sector has made modest gains over the past three decades but continues to grapple with systemic challenges. Nonetheless, emerging policies, digital tools, and external partnerships present new opportunities for sectoral revitalization. Continued research is essential to evaluate the long-term impact of these interventions on productivity, resilience, and rural livelihoods.

Empirical Review

The relationship between interest rates and agricultural output has received considerable attention in economic literature. Interest rates, as a major component of monetary policy, influence credit availability, investment behavior, and overall economic productivity. In the context of agriculture, where long gestation periods and high risks are prevalent, access to affordable credit is crucial for sustained growth.

Empirical studies in Nigeria have reported mixed findings. Ujah and Ogebe (2018) found that high interest rates negatively affect agricultural lending, thereby reducing sectoral output. Similarly, Omonona, Lawal, and Oni (2010) argue that fluctuations in lending rates limit access to credit among rural farmers. On the other hand, some studies, such as Nwosa and Ogunjimi (2017), suggest that the impact of interest rates on agricultural output is conditional on institutional support mechanisms, such as credit guarantees and subsidy programs.

Globally, the World Bank (2020) emphasized that for agriculture to thrive in developing economies, macroeconomic stability—especially predictable and affordable credit—is a prerequisite. The International Food Policy Research Institute (IFPRI) has also shown that interest rate ceilings and directed credit schemes can promote agricultural productivity if properly implemented (IFPRI, 2019).

This study contributes to the debate by employing a robust time-series analysis to re-evaluate the nature of the interest rate-agriculture nexus in Nigeria, incorporating both short- and long-run dimensions over a 30-year period.

Theoretical Framework

This study is anchored on two key theoretical foundations: the Loanable Funds Theory and the Classical Growth Theory. The Loanable Funds Theory, developed by Knut Wicksell (1898), postulates that interest rates are determined by the demand and supply of loanable funds. In the agricultural context, when interest rates are high, the cost of borrowing rises, discouraging capital investment in farms, especially among smallholder farmers who rely heavily on external financing. Classical Growth Theory, as postulated by Adam Smith and later refined by David Ricardo, emphasizes the role of capital accumulation and investment in enhancing productive capacity. Agricultural

productivity, therefore, depends significantly on the availability and affordability of capital. Interest rate dynamics directly influence this process by affecting borrowing behavior, savings, and capital allocation. Together, these theories suggest that interest rate policies have the potential to either stimulate or stifle agricultural output, depending on how they affect access to investment capital.

Methodology

Research Design

This study employed the ex post facto research design to examine the relationship between interest rate and agricultural sector output in Nigeria. According to Kerlinger (1964), this design is suitable when the researcher cannot manipulate the independent variable, as it has already occurred. Since the study utilizes historical time-series data from 1993 to 2023, ex post facto design was considered most appropriate.

a log-linear single-equation model, derived from a modified version of the unbalanced growth theory and similar to the model used by Hafeez and Sajid (2021).

The functional relationship is specified as:

> AGDP = f(INTR)

This leads to the econometric model:

> $AGDP_t = \beta_0 + \beta_1 INTR_t + \varepsilon_t$

Where:

$AGDP_t$ = Agricultural Output at time t

$INTR_t$ = Interest Rate at time t

β_0 = Intercept

β_1 = Coefficient measuring the impact of interest rate

ε_t = Error term

Techniques of Data Analysis

Descriptive Statistics

Descriptive statistics (mean, median, minimum, maximum, and standard deviation) were computed to summarize the distributional characteristics of the variables. The Jarque-Bera test was used to assess normality. A p-value above 0.05 indicates normally distributed data.

Correlation Analysis

Pearson correlation was employed to examine the strength and direction of the linear relationship between interest rate and agricultural output. This served as a preliminary analysis prior to regression modeling.

Unit Root Test

To avoid spurious regression results, the Augmented Dickey-Fuller (ADF) test was conducted to determine the stationarity of the series. The null hypothesis of a unit root is rejected if the ADF statistic is less than the critical values at conventional significance levels (1%, 5%, or 10%).

ARDL Bounds Testing Approach

Given that the variables may have different integration orders (I(0) or I(1)), the Autoregressive Distributed Lag (ARDL) bounds test developed by Pesaran et al. (2001) was employed to test for cointegration between interest rate and agricultural output.

If the F-statistic exceeds the upper critical bound, cointegration is confirmed.

If it falls below the lower bound, cointegration is not confirmed.

If it lies between the bounds, the result is inconclusive.

ARDL Model Estimation

After establishing the existence of a long-run relationship, the ARDL model was estimated to explore both the short-run dynamics and long-run effects of interest rate on agricultural output. The Akaike Information Criterion (AIC) was used to select the optimal lag length.

Error Correction Model (ECM)

The Error Correction Model (ECM) derived from the ARDL model was used to estimate short-run adjustments toward long-run equilibrium. A negative and significant error correction term (ECT) indicates a stable long-run relationship.

Post-Estimation Diagnostics

Normality of Residuals

The Jarque-Bera test was applied to ensure that residuals from the ARDL model are normally distributed. This validates the reliability of the regression results.

Heteroskedasticity

The Breusch-Pagan test was employed to assess whether the residuals exhibit constant variance (homoscedasticity). A non-significant result confirms homoscedasticity and efficient estimates.

Autocorrelation

The Breusch-Godfrey Serial Correlation LM test was used to test for serial correlation in the residuals. Absence of serial correlation ensures the model is well specified.

Model Specification Test

The Ramsey RESET test was used to assess whether the model is correctly specified. A non-significant F-statistic supports the correct functional form.

Parameter Stability Test

The CUSUM and CUSUMSQ tests were applied to assess the stability of the model parameters over the study period.

If the plots remain within the 5% significance bounds, the parameters are considered stable.

Data Analysis

Trend analysis

The first step of the research was to examine the historical patterns of the time series data. Specifically, trend analysis was employed to investigate the long-term behaviour of interest rate and agricultural sector output in Nigeria over the period 1993 to 2023. Trend analysis is a statistical technique used to identify and interpret patterns in time series data, with the dual purpose of (1) revealing the general relationship between the variables under consideration and (2) forecasting their potential future trajectories. Accordingly, graphical representations and trend analyses were conducted for both interest rate and agricultural sector output, and the results are presented and discussed in this section. The following graph illustrates the historical trends and fluctuations in these two variables over the 31-year period.

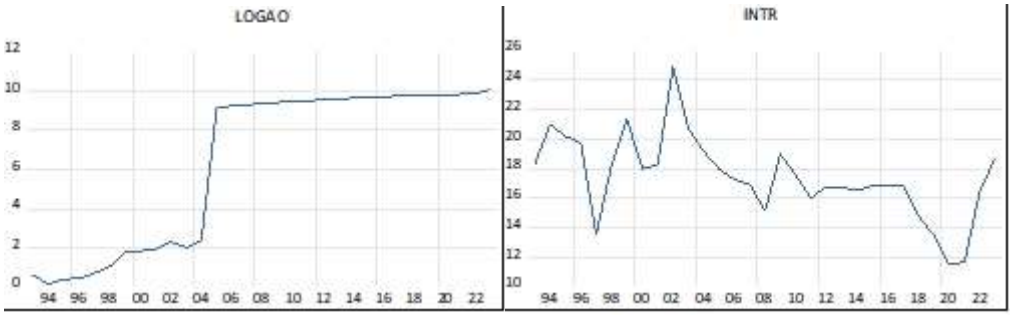

Figure 1: Trend Analysis between Interest rate and Agriculture Sector Output

Source: Researcher's Computation (2024) Employing E-Views 12

Figure 1 illustrates the trend of agricultural sector output (LOGAO), which recorded a low of 0.2% in 1994, peaked at 9.2% in 2005, and reached its highest point of 10.1% in 2023 after a period of stagnation. In contrast, the interest rate (INTR) was high at 18.3% in 1993 when AO was at its lowest, suggesting an inverse relationship. In 2002, INTR rose to 24.9%, with AO still low at 2%, highlighting the negative impact of high borrowing costs on agricultural productivity. From 2012 to 2020, INTR declined to around 12%, coinciding with a gradual rise in AO, further indicating that lower interest rates may foster growth in the agricultural sector.

Descriptive statistics

Table 1: Summary of Descriptive Statistics

	AO	INTR
Mean	9404.617	17.44258
Median	11645.00	17.26000
Maximum	23654.00	24.85000
Minimum	1.180000	11.50000
Std. Dev.	8102.969	2.787894
Skewness	-0.093017	0.053577
Kurtosis	1.455415	3.709505
Jarque-Bera	3.126289	0.665053
Probability	0.209476	0.717110

Source: Researcher's Computation (2024) Employing E-Views 12

Table 1 shows that the Agricultural Sector Output (AO), representing agriculture's contribution to GDP, has a mean of 9,404.6 with a standard deviation of 8,102.97, indicating moderate variability and a relatively stable agricultural performance over the period studied. The slight negative skewness (-0.09) and low kurtosis (1.455) suggest a near-normal distribution, further supported by the Jarque-Bera statistic (3.13, p = 0.209), confirming normality. This implies that Nigeria has maintained a moderately stable agricultural output, with potential for growth through increased investment.

Interest Rate (INTR), indicating the cost of credit, has a mean of 17.44% and a standard deviation of 2.79%, reflecting moderate variation. It's near-zero skewness (0.05) implies a symmetrical distribution, while a kurtosis of 3.71 suggests heavier tails, indicating frequent extreme values. Although the Jarque-Bera test (0.67, p = 0.72) implies no significant deviation from normality, the higher kurtosis suggests occasional sharp fluctuations. These findings support the notion that elevated interest rates may limit credit access and hinder agricultural investment over time.

Correlation analysis

Table 2: Summary of Correlation

Probability	LOGAO	INTR
LOGAO	1.000000	

INTR	-0.565180	
	0.0009	

Source: Researcher's Computation (2024) Employing E-Views 12

In Table 2, a substantial and negative connection was discovered to exist between LOGAO and INTR, as shown by the value of the correlation coefficient, which was -0.565180. This correlation was also confirmed to be significant. Furthermore, this relationship implies that higher interest rates, which typically reflect tighter monetary policy, are associated with a weak potential to invest in agriculture. This could be because higher MPRs may lead to higher lending rates, thereby improving banks' interest margins and enabling them to maintain or increase their capital buffers.

Unit root test result

Table 3: Summary of Unit Root Test

Variable	ADF Test Statistics	5% critical value	P-Value	Order of integration
AO	-4.933684	-3.574244	0.0023	I(1)
INTR	-4.366785	-3.595026	0.0098	I(0)

Source: Researcher's Computation (2024) Employing E-Views 12

The estimated result in Table 3 found AO to be stationary at first difference (i.e. integrated of order one), while INTR was found to be stationary at levels (i.e. integrated of order zero).

Model Estimation Result

The ARDL-ECM result examines how the ARDL model changes to a long-run equilibrium. The results are presented in Table 4 below:

Table 4 : Summary of Short Run ECM Results:

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	26.70084	2.335477	11.43271	0.0003
@TREND	2.548706	0.236588	10.77276	0.0004
D(LOGAO(-1))	-0.627958	0.078908	-7.958105	0.0014
D(INTR)	-1.232631	0.103640	-11.89342	0.0003

D(INTR(-1))	0.844243	0.140890	5.992201	0.0039
D(INTR(-2))	-0.252601	0.052863	-4.778430	0.0088
				0.0004
CointEq(-1)*	-0.662367	0.059474	-11.13715	
R-squared	0.966943	Mean dependent var		0.344971
Adjusted R-squared	0.900829	S.D. dependent var		1.265300
F-statistic	14.62545	Durbin-Watson stat		3.297563
Prob(F-statistic)	0.000141			

Source: Researcher's Computation (2024) Employing E-Views 12

The results of the Error Correction Model (ECM) in Table 4 provides valuable insights into the short-run and long-run dynamics between interest rate and agricultural sector output in Nigeria over the period under review. The coefficient of the error correction term (CointEq(-1)) is -0.662367 and statistically significant at the 1% level (p = 0.0004). This negative and significant coefficient confirms the existence of a long-run equilibrium relationship between the variables. The magnitude implies that approximately 66.2% of any short-run disequilibrium in agricultural output is corrected in the subsequent period, indicating a relatively fast speed of adjustment to long-run equilibrium.

In the short run, the immediate change in interest rate (D(INTR)) has a negative and statistically significant effect on agricultural output, with a coefficient of -1.232631 and a p-value of 0.0003. This suggests that a 1 percentage point increase in interest rate leads to a 1.23% decrease in agricultural output growth. The first lag of interest rate (D(INTR(-1))) exhibits a positive and significant effect (coefficient = 0.844243, p = 0.0039), indicating a partial reversal of the initial negative impact in the subsequent period. However, the second lag of interest rate (D(INTR(-2))) returns a negative and significant coefficient of -0.252601 (p = 0.0088), reinforcing the idea that interest rate movements exert a persistent lagged influence on agricultural output.

The lag of the dependent variable, D(LOGAO(-1)), has a coefficient of -0.627958 (p = 0.0014), suggesting that past changes in agricultural output negatively affect current changes, possibly due to inertia or mean-reverting tendencies in the sector. Additionally, the time trend variable (@TREND) is positive and statistically significant (coefficient = 2.548706, p = 0.0004), indicating a systematic upward trend in agricultural output over time, independent of the interest rate dynamics.

The diagnostic statistics further validate the robustness of the model. The R-squared value of 0.966943 indicates that approximately 96.7% of the variation in agricultural output is explained by the independent variables, while the adjusted R-squared value of 0.900829 confirms the model's high explanatory power even after adjusting for degrees of freedom. The F-statistic of 14.62545 with a probability value of 0.000141 demonstrates the overall statistical significance of the model. However, the Durbin-Watson statistic of 3.297563 suggests the possible presence of negative autocorrelation in the residuals, which may warrant further diagnostic investigation.

In summary, the ECM results affirm that interest rate changes have significant short-run and long-run implications for agricultural sector performance in Nigeria. The short-run negative effects and the strong error correction dynamics underscore the critical importance of stable and favorable monetary policies for sustained growth in the agricultural sector.

Table 5: Summary of the Long-Run Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INTR	-5.802549	3.315146	-1.750315	0.0007

Source: Researcher's Computation (2023) Employing E-Views 12

In Table 5, the interest rate has a significant negative coefficient (-5.802549; p = 0.0007), indicating that higher interest rates hinder agricultural output. This aligns with theoretical expectations and underscores the need for interest rate policies that support agricultural investment and agro-processing.

Test of Hypothesis

H_{01}: interest rate does not have a significant impact on the agriculture sector output in Nigeria.

Table 6: Summary of Statistical Test of Hypotheses Result

Variable	t -Statistic	Probability
INTR	-1.750315	0.0007

Source: Researcher's Computation (2024)

According to the analysis in Table 6, the value of the t-statistics coefficient is 1.750315, and the probability value that is connected with it is 0.0007. It is concluded that the null hypothesis is not true since the probability value is lower than 0.05. The fact that this is the case demonstrates that the interest rate has a major influence on the productivity of the agricultural sector in Nigeria.

Discussion of Findings

The empirical findings from this study indicate that interest rates significantly influence agricultural sector output in Nigeria both in the short and long run. In the short run, fluctuations in interest rates contributed to temporary variations in agricultural productivity, with the significant error correction term confirming the system's capacity to revert to equilibrium following disturbances.

In the long run, interest rates exerted a negative and statistically significant effect on agricultural output. The negative coefficient supports the theoretical proposition that higher interest rates increase borrowing costs, thereby discouraging investment in agriculture—a capital-intensive sector heavily dependent on credit for inputs, mechanization, and infrastructure. These findings are consistent with the finance theory of investment, which posits that rising capital costs diminish the marginal efficiency of investment and dampen output growth. This result is corroborated by Alzoub and Kasabeh (2019) and Ghulam and Hajra (2021), who similarly found that elevated interest rates restrict investment in productive sectors.

However, the findings contrast with those of Ademola (2019), who reported a positive relationship between real interest rates and agricultural output in Nigeria. The discrepancy may stem from differences in model specification, the inclusion of policy interventions, or the influence of other macroeconomic variables such as inflation and credit availability.

Despite various government-backed credit schemes aimed at mitigating the impact of high interest rates, structural inefficiencies and limited outreach to smallholder farmers have constrained their effectiveness. Thus, while prudent monetary policy remains essential, complementary sector-specific financial strategies are necessary to enhance access to affordable credit and stimulate agricultural growth.

Conclusion

This study examined the relationship between interest rate dynamics and agricultural sector output in Nigeria from 1993 to 2023. The findings reveal a statistically significant negative impact of interest rates on agricultural output in both the short and long run, indicating that high interest rates constrain agricultural investment and productivity. The persistent inverse relationship underscores the need for coordinated monetary policies aimed at reducing borrowing costs to enhance agricultural performance and its contribution to national economic growth.

Policy Recommendations

1. Interest Rate Stabilization and Subsidy Initiatives

The Central Bank of Nigeria (CBN) should implement targeted interest rate subsidy programs to support smallholder farmers, while ensuring that monetary policy decisions, such as adjustments to the Monetary Policy Rate (MPR), are aligned with the credit sensitivities of the agricultural sector. This would facilitate access to affordable financing and encourage sustained investment in agricultural production and processing.

2. Strengthening Agricultural Credit and Lending Mechanisms

Existing agricultural credit schemes, notably the Agricultural Credit Guarantee Scheme, should be expanded, adequately funded, and rigorously monitored to ensure wider reach and effectiveness. Additionally, the Bank of Agriculture should lead efforts to stabilize interest rates on agricultural loans and enhance credit flow for production, processing, and marketing.

3. Enhancing Rural Financial Infrastructure and Inclusion

Government policies should incentivize commercial banks to establish rural branches and offer concessional lending rates. Expanding rural banking infrastructure would improve financial inclusion and support the integration of underserved farming communities into the formal financial system.

4. Improving Agricultural Risk Mitigation Instruments

To address the high-risk perception associated with agricultural lending, there is a need to strengthen credit guarantee mechanisms and expand crop insurance coverage. These instruments would reduce lenders' exposure to agricultural risks, thereby fostering more robust and sustained credit supply to the sector.

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