

Evaluating Agricultural Finance and Economic Growth in Nigeria

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Abstract

This study investigates how financing in key agricultural subsectors, which include food crops and fisheries, affects economic growth in Nigeria. The study used secondary time-series data obtained from the Nigerian Apex Bank (CBN) Annual Bulletin and other relevant official sources. To achieve the study's objectives, several econometric techniques were employed. The Augmented Dickey–Fuller (ADF) and Phillips–Perron (PP) unit root tests were used to determine the variables' stationarity. Conversely, the Autoregressive Distributed Lag (ARDL) bounds test was used to examine the existence of a long-run relationship among the variables. The ARDL model was further applied to estimate both the short-run and long-run effects of agricultural financing on economic growth in Nigeria. The unit root results revealed that the variables were integrated of mixed order, that is, $I(0)$ and $I(1)$, which justified the use of the ARDL model. The ARDL bounds test confirmed the presence of a long-run equilibrium relationship among the variables. The mean GDP growth rate is 4.16%, indicating that Nigeria's economy grew by about 4% annually on average during the study period. The maximum value of 15.33% suggests periods of strong economic expansion, while the minimum value of -2.04% indicates that the economy experienced contraction in some years. The standard deviation of 3.75 shows moderate fluctuations in economic growth over time. The Jarque-Bera probability of 0.283 suggests that the GDP growth data is normally distributed. The empirical findings showed that agricultural financing for food crops and fisheries has a positive and statistically significant effect on economic growth in Nigeria. The study therefore concludes that agricultural financing plays an important role in promoting economic growth in Nigeria. It recommends that government and financial institutions should increase funding to the agricultural sector and improve farmers' access to credit facilities in order to enhance agricultural productivity and sustainable economic growth.

Keywords:

Agricultural Finance, Economic Growth, Nigeria, Time Series, Gross Domestic Product

Introduction

Across both advanced and developing economies, growth is typically driven by the interplay of key sectors such as industry, services, and agriculture. Among these, agriculture has historically provided

the foundation for structural transformation, particularly in agrarian and resource-dependent economies where it supports employment, food security, and industrial linkages. (Sen, A. 1999). Globally, agriculture is important in ensuring economic stability, food security, employment generation, and foreign exchange earnings. The agricultural sector currently employs approximately 27% of the global labour force, with this share rising to over 55% in developing nations, especially in sub-Saharan Africa (Food and Agriculture Organization, 2024). In such countries, agriculture functions as more than a source of livelihood; it is a critical lever for rural transformation, industrial development through agro-processing linkages, and export diversification. In contrast, many developing countries face deep-seated structural and financial barriers that hinder the performance of their agricultural sectors. These include limited access to affordable credit, underdeveloped rural infrastructure, high interest rates, poor extension services, and policy implementation gaps.

In Nigeria, the sector contributes an average of 25–30% to GDP and employs more than 35% of the labour force; however, its productivity levels remain well below potential (National Bureau of Statistics [NBS], 2024). Recognizing this strategic role, successive Nigerian governments have implemented several agricultural finance programs aimed at boosting sectoral performance. Key among these are the Agricultural Credit Guarantee Scheme Fund (ACGSF), the Anchor Borrowers' Programme (ABP), and the Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL). These interventions were designed to reduce the perceived risks associated with agricultural lending, encourage financial institutions to support farmers, and strengthen agricultural value chains. For example, as of 2023, the ACGSF had guaranteed over ₦168 billion in loans to more than 1.5 million farmers nationwide (Central Bank of Nigeria [CBN], 2024). Similarly, the ABP has facilitated access to financing for smallholder farmers in strategic crops such as rice, maize, and wheat, contributing to modest improvements in domestic food production.

Against this backdrop, this research seeks to empirically determine the impact of agricultural financing on economic growth in Nigeria. Specifically, it focuses on the role of key financing channels such as the ACGSF, particularly in food crops and fisheries, in influencing macroeconomic outcomes.

The implications of this financing gap are profound. More than 80% of agricultural producers are smallholder farmers who lack access to formal credit and are therefore unable to invest in improved seeds, fertilizers, mechanization, irrigation, or post-harvest infrastructure. Consequently, agricultural productivity remains low, with yields lagging behind global averages; post-harvest losses exceed 40% for perishable crops; and value chain integration remains weak. These structural deficiencies exacerbate Nigeria's vulnerability to climate shocks, global commodity price volatility, and persistent rural poverty (World Bank, 2024; Food and Agriculture Organization, 2024).

Therefore, this study addresses the persistent gap between agricultural finance interventions and their actual impact on economic growth in Nigeria, compounded by insufficient sector-specific empirical evidence. Bridging this gap is critical in developing more effective, inclusive, and growth-enhancing agricultural financing frameworks capable of unlocking the sector's transformative potential and accelerating sustainable economic growth.

The central research question guiding this study is "What is the effect of agricultural finance on economic growth in Nigeria?" The following specific questions were answered: How does agricultural financing for food crops affect economic growth in Nigeria? What is the impact of agricultural financing for fisheries on economic growth in Nigeria? The broad objective of this study is to examine the impact of agricultural financing on economic growth in Nigeria. The specific objectives are to: i. Assess the impact of agricultural financing for food crops on economic growth in Nigeria; and ii. Examine the impact of agricultural financing for fisheries on economic growth in Nigeria.

Methodology

The study adopts a quantitative ex-post facto time series research design to analyze data and determine the relationship between agricultural financing and economic growth in Nigeria. Annual data from 1986-2024 were sourced from the Central Bank of Nigeria statistical bulletin.

The outcome variable is the Economic Growth, which is proxied by total Gross Domestic Product; the independent variables include the Agricultural Credit Guarantee Scheme Fund, bank credit and loans to the agricultural sector, and government recurrent expenditure on agriculture. The Autoregressive

Distributed Lag (ARDL) was employed in this study. ARDL model enables the estimation of both the short-run and long-run parameter estimates at the same time without the problem of the order of integration among the variables (Mazengia et al., 2023). The ARDL model developed by Pesaran et al. (2001) to analyze the relationship between the outcome and independent variables. The model is expressed as thus;

$$Y = \beta_0 + \beta_1 Y_{t-1} + \dots + \beta_k Y_{t-p} + \alpha_0 X_t + \alpha_1 X_{t-1} + \alpha_2 X_{t-2} + \dots + \alpha_q X_{t-q} + \varepsilon_t \quad (1)$$

ε_t is the random disturbance term, which is serially independent and assumed to be well-behaved or constant.

This study adapts the Finance-Growth Model to assess the association between agricultural financing and economic growth.

The relationship between agricultural financing and economic growth can be expressed functionally as:

$$GDP_t = F(ACGC_t, INF_t, GCF_t, LAB_t, INTR_t) \quad (2)$$

Where:

GDP_t = Gross Domestic Product Growth rate (proxy for economic growth)

ACGC_t = Agricultural financing

INF_t = Inflation rate (control variable)

GCF_t = Gross capital formation (control variable)

LAB_t = Labor force (control variable)

INTR_t = Interest rate (control variable)

The Econometric Form can be expressed as:

$$GDP_t = \beta_0 + \beta_1 ACGC_t + \beta_2 INF_t + \beta_3 GCF_t + \beta_4 LAB_t + \beta_5 INTR_t + \mu_t \quad (3)$$

Where:

β_0 = Intercept β_1 – β_5 = Parameters of the explanatory variables μ_t = Stochastic error term

The model is therefore divided into the components of Agricultural Financing, which include

$$GDP_t = F([ACGC_t = ACGC_{tfc}, ACGC_{tfs}, ACGC_{tlv}], INF_t, GCF_t, LAB_t, INTR_t)$$

Where:

ACGC_{tfc} = Agricultural financing for food crops

ACGC_{tfs} = Agricultural financing for fisheries

The Econometric Form for the different models can be expressed as:

Model 1: Agricultural Financing for Food Crops

$$GDP_t = \beta_0 + \beta_1 ACGC_{tfc} + \beta_2 INF_t + \beta_3 GCF_t + \beta_4 LAB_t + \beta_5 INTR_t + \mu_t$$

Model 2: Agricultural Financing for Fisheries

$$GDP_t = \beta_0 + \beta_1 ACGC_{tfs} + \beta_2 INF_t + \beta_3 GCF_t + \beta_4 LAB_t + \beta_5 INTR_t + \mu_t$$

The ARDL error correction representation is specified as:

$$\Delta GDP_t = \beta_0 + \sum_{i=1}^p \beta_i \Delta GDP_{t-i} + \sum_{j=0}^q \beta_j \Delta X_{t-j} + \lambda ECT_{t-1} + \varepsilon_t$$

Where X_t is the vector of explanatory variables, and ECT_{t-1} is the error correction term capturing long-run adjustments. A normality test showed that the sample data were drawn from a normally distributed population.

Method of Data Analysis

An autoregressive distributed lag bounds testing approach using EViews, and pre-estimation ADF and PP unit root tests lag length was selected using the Akaike information criterion. While post estimation diagnosis covered serial correlation, heteroscedasticity, the Jarque-Bera test for normality, CUSUM/CUSUMSQ test for parameter stability. The ARDL bounds test approach was employed to

examine the co-integration among the variables, followed by Long-run and short-run coefficients estimated through the error correction model. All hypotheses were tested at the 5% significance level.

Result

The descriptive statistics demonstrate the behaviour and distribution of the variables used in the study. The variables include economic growth (GDPGR), inflation rate (INF), interest rate (INTR), labour force (LAB), gross capital formation (GCF), and agricultural financing components such as credit to food crops (ACGC_{FC}) and fisheries (ACGC_{FS}).

Table 1: Descriptive Statistics

	GDPGR	INF	INTR	LAB	GCF	ACGC _{FC}	ACGC _{FS}
Mean	4.159097	18.52487	17.88744	50344525	4.84E+15	2552811.	241136.2
Median	4.099157	12.15000	17.55000	49489908	5.35E+15	1947389.	114400.0
Maximum	15.32916	72.84000	31.65000	73272344	8.02E+15	8039640.	1067125.
Minimum	-2.035119	5.420000	9.100000	31936585	7.31E+13	33405.30	428.0000
Std. Dev.	3.751299	17.16406	4.529359	11428287	2.25E+15	2533887.	289278.6
Skewness	0.531989	1.859717	0.476074	0.235828	-1.022177	0.539499	1.068612
Kurtosis	3.647974	5.149442	4.070146	2.134866	2.945057	1.918425	3.386821
Jarque-Bera	2.521871	29.98821	3.334169	1.577739	6.796397	3.792816	7.665706
Probability	0.283389	0.000000	0.188797	0.454358	0.033433	0.150107	0.021648
Sum	162.2048	722.4700	697.6100	1.96E+09	1.89E+17	99559641	9404311.
Sum Sq. Dev.	534.7454	11194.99	779.5735	4.96E+15	1.92E+32	2.44E+14	3.18E+12
Observations	39	39	39	39	39	39	39

Source: Authors Computation, 2026

Table 1 described the behaviour of the macroeconomic variables over the study period. The mean value of GDP growth rate is 4.16%, indicating that Nigeria's economy grew on average by about 4% annually during the study period. The maximum value of 15.33% suggests periods of strong economic expansion, while the minimum value of -2.04% indicates that the economy experienced contraction in some years. The standard deviation of 3.75 shows moderate fluctuations in economic growth over time. The Jarque-Bera probability of 0.283 suggests the normality of GDP growth data.

Inflation recorded a mean value of 18.52%, which indicates that Nigeria experienced relatively high inflation during the study period. The maximum inflation rate of 72.84% reflects periods of severe macroeconomic instability, while the minimum of 5.42% indicates periods of relative price stability.

The high standard deviation of 17.16 shows that inflation fluctuated widely across the years. The Jarque-Bera probability of 0.000 indicates that the data is not normally distributed.

The interest rate has an average value of 17.89%, suggesting that borrowing costs in Nigeria have historically been high. The maximum rate of 31.65% and minimum of 9.10% indicate significant variation in monetary policy conditions. The standard deviation of 4.53 shows moderate volatility in lending rates. The Jarque-Bera probability of 0.189 indicates that the series is approximately normally distributed.

The labour force recorded a mean value of about 50.34 million people, with a maximum of 73.27 million and a minimum of 31.94 million. This reflects steady growth in Nigeria's working population over the study period. The standard deviation of 11.43 million suggests significant growth in labour supply. The Jarque-Bera probability of 0.454 indicates that the labour force data is normally distributed.

Gross capital formation, which measures investment in physical assets, has an average value of approximately 4.84×10^{15} , indicating substantial capital investment in the Nigerian economy. The maximum value of 8.02×10^{15} and the minimum value of 7.31×10^{13} show wide variations in investment levels. The standard deviation of 2.25×10^{15} suggests significant fluctuations in investment activities. The Jarque-Bera probability of 0.033 indicates that the distribution slightly deviates from normality.

Agricultural financing for food crops has the highest average value of 2,552,811, indicating that food crop production received the largest share of agricultural credit. The maximum value of 8,039,640 and minimum value of 33,405.3 show significant fluctuations in financing levels. The Jarque-Bera probability of 0.150 indicates that the data is approximately normally distributed.

Credit to fisheries recorded an average value of 241,136.2, with a maximum value of 1,067,125 and a minimum of 428, suggesting a relatively lower but increasing level of financing to the fisheries subsector. The standard deviation of 289,278.6 shows high variability in credit allocation. The Jarque-Bera probability of 0.022 indicates that the distribution deviates from normality.

Overall, the descriptive statistics reveal that agricultural financing in Nigeria varies significantly across subsectors, with food crops receiving the highest level of credit allocation and fisheries. The variability observed in the standard deviations indicates inconsistent credit flows to the agricultural sector. Additionally, the macroeconomic variables such as inflation and interest rates exhibit considerable fluctuations, which may influence the effectiveness of agricultural financing in promoting economic growth.

Unit Root Test

In order to ensure the stationarity of the variables, this study carried out two unit root tests, the Augmented Dickey-Fuller (ADF) and Phillips-Perron unit root tests. Table 4.2 contains the results of both Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) unit root tests for the variables under study. The unit root tests are vital in determining the order of integration of the variables and ensuring that the appropriate estimation techniques are employed. The ADF and PP tests for both levels and the first difference are presented in the Table.

Table 2: ADF and PP Unit Root Test

	ADF					PP				
Variable	Level		1st Diff		Remarks	Level		1st Diff		Remarks
	Stat.	P-Value	Stat.	P-Value			Stat.	P-Value	Stat.	
GDPGR	-4.16 ^a	0.00	-	-	I(0)	-4.07 ^a	0.00	-	-	I(0)
INF	-3.42 ^a	0.02	-	-	I(0)	-3.54 ^a	0.04	-	-	I(0)

INTR	-4.09	0.01	-	-	I(0)	-4.12	0.01	-	-	I(0)
LAB	-3.11	0.12	-5.99	0.00	I(1)	-4.00 ^b	0.02	-	-	I(0)
GCF	-6.75	0.00	-	-	I(0)	-9.21	0.00	-	-	I(0)
ACGC _{TC}	-1.83	0.67	-10.1 ^a	0.00	I(1)	-1.43	0.83	-10.1	0.00	I(1)
ACGC _{TF}	-2.45	0.34	-7.41 ^a	0.00	I(1)	-2.44	0.36	-7.44 ^a	0.00	I(1)
ACGC _{TF} _s	-2.23	0.46	-7.18 ^a	0.00	I(1)	-2.21	0.47	-7.19 ^a	0.00	I(1)
ACGC _{TL} _v	-1.89	0.64	-6.53	0.00	I(1)	-2.08	0.54	-5.52	0.00	I(1)

Source: Author's Computation Using EViews, 2026.

Note: The ADF and PP critical values at 1%, 5%, and 10% are -3.621, -2.943, and -2.610, respectively. a, b, and c indicate that the statistics are significant at the 1%, 5%, and 10% levels of significance, respectively.

The results presented in Table 2 indicate that some variables are stationary at level while others become stationary after first differencing, indicating mixed orders of integration. The results show that Gross Domestic Product Growth Rate (GDPGR), Inflation Rate (INF), Interest Rate (INTR), and Gross Capital Formation (GCF) are stationary at level according to both the ADF and PP tests. For instance, GDPGR has an ADF test statistic of -4.16 with a probability value of 0.00 and a PP statistic of -4.07 with a probability value of 0.00, which are significant at the 1 percent level. This implies that economic growth in Nigeria does not contain a unit root and is stationary at level, denoted as I(0). Similarly, the inflation rate shows an ADF statistic of -3.42 with a probability value of 0.02 and a PP statistic of -3.54 with a probability value of 0.04, indicating stationarity at level. The interest rate also exhibits stationarity in levels with ADF and PP statistics of -4.09 and -4.12, respectively, both significant at conventional levels. Gross capital formation equally shows strong stationarity at level with ADF and PP statistics of -6.75 and -9.21, respectively, both with probability values of 0.00.

However, the results indicate that some variables are not stationary at level but become stationary after first differencing. These include agricultural financing variables such as agricultural credit for food crop ACGC_{TFC}, ACGC_{TFS}, and ACGC_{TLV}, which are all non-stationary at level but become stationary after first differencing, implying that they are integrated of order one, I(1).

Overall, the unit root test results reveal that the variables are integrated at different orders, with some variables stationary at level I(0) and others stationary at first difference I(1). The presence of mixed integration orders justifies the use of the Autoregressive Distributed Lag (ARDL) bounds testing approach for analysing the long-run and short-run relationships between agricultural financing and economic growth in Nigeria.

Table 3: Bounds Co-integration Test

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	14.57948	10%	2.08	3
K	5	5%	2.39	3.38
		2.5%	2.7	3.73
		1%	3.06	4.15

Source: Authors' computation, 2026.

Table 3 shows the results of the ARDL Bounds co-integration test. From the table, the calculated F-statistic (14.58) is higher than the upper bound at the 5% level of significance, and as such the null

hypothesis is rejected. Thus, there is a long-run relationship among the variables; therefore, the study proceeds to estimate the long- and short-run ARDL model.

Table 4: ARDL Results

Dependent Variable: LNGDP				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Long-Run Estimates				
INF	0.041587	0.003641	11.42324	0.0000
INTR	0.052990	0.014398	3.680290	0.0028
LNGCF	0.023786	0.031574	0.753337	0.4647
LNLAB	2.788104	0.271542	10.26768	0.0000
LNACGC _{TFC}	0.315719	0.028055	11.25357	0.0000
C	-20.80684	5.500767	-3.782534	0.0023
Short-Run Estimates				
D(LNGDP (-1))	1.146817	0.161309	7.109433	0.0000
D(INF)	0.043703	0.005024	8.699064	0.0000
D(INF(-1))	-0.069487	0.006982	-9.952760	0.0000
D(INTR)	0.005805	0.016230	0.357651	0.7263
D(LNGCF)	-0.036107	0.024811	-1.455306	0.1693
D(LNLAB)	-0.973855	0.650347	-1.497440	0.1582
D(LNLAB (-1))	-6.153293	0.726651	-8.468013	0.0000
D(LNACGC _{TFC})	0.115294	0.089844	1.283275	0.2218
D(LNACGC _{TFC} (-1))	-0.358179	0.103245	-3.469205	0.0042
CointEq(-1)*	-2.921523	0.239213	-12.21308	0.0000
R-squared	0.935311	Mean dependent var		0.040086
Adjusted R-squared	0.884240	S.D. dependent var		0.560680
S.E. of regression	0.190763	Akaike info criterion		-0.172192
Sum squared resid	0.691421	Schwarz criterion		0.538824
Log likelihood	19.01336	Hannan-Quinn criterion		0.073251
Durbin-Watson Stat	2.225081			

Source: Authors Computation 2026.

The Autoregressive Distributed Lag (ARDL) results presented in Table 4 examine both the long-run and short-run relationships between agricultural financing and economic growth in Nigeria, with the logarithm of GDP (LNGDP) used as the dependent variable. The long-run estimates show that the inflation rate (INF) has a positive and statistically significant effect on economic growth. The coefficient of 0.0416 with a probability value of 0.0000 indicates that a 1 percent increase in inflation is associated with approximately a 0.04 percent increase in GDP in the long run, suggesting that moderate inflation may stimulate economic activities and production in Nigeria. Similarly, the interest rate (INTR) has a positive and significant impact on economic growth with a coefficient of 0.0530 and a probability value of 0.0028, implying that increases in interest rates are associated with improvements in economic growth, possibly due to improved financial sector efficiency or investment allocation.

Gross capital formation (LNGCF) has a positive but statistically insignificant relationship with economic growth in the long run. The coefficient of 0.0238 with a probability value of 0.4647 indicates that although investment contributes positively to GDP, its effect is not statistically significant within the period of study. On the other hand, labour force (LNLAB) shows a strong positive and statistically significant relationship with economic growth. The coefficient of 2.7881 with a probability value of 0.0000 suggests that increases in the labour force significantly stimulate economic growth, highlighting the importance of human capital and workforce participation in Nigeria's economy. Agricultural financing for food crops (LNACGC_{TFC}) also shows a positive and

statistically significant effect on economic growth, with a coefficient of 0.3157 and a probability value of 0.0000. This implies that increased financial support for food crop production significantly contributes to economic growth, likely through increased agricultural productivity, improved food supply, and employment generation. The constant term is negative and statistically significant, indicating the presence of other structural factors affecting economic growth that are not captured in the model.

The short-run estimates reveal mixed results. Inflation maintains a significant positive effect in the current period, with a coefficient of 0.0437 and probability value of 0.0000, suggesting that increases in inflation may temporarily stimulate economic output. However, the lagged value of inflation $D(INF(-1))$ has a negative and significant coefficient (-0.0695), indicating that inflation in the previous period may adversely affect economic growth. The interest rate in the short run has a positive but insignificant effect on economic growth, with a coefficient of 0.0058 and a p-value of 0.7263. Gross capital formation also shows a negative but insignificant effect, indicating that short-run fluctuations in investment do not significantly influence economic growth during the study period. Labour force shows negative coefficients in the short run, with the lagged labour variable $D(LNLAB(-1))$ being negative and statistically significant, suggesting that short-term adjustments in labour supply may temporarily reduce productivity before contributing positively in the long run. Agricultural financing for food crops ($LNACGC_{TFC}$) shows a positive but insignificant coefficient in the current period, while its lagged value $D(LNACGC_{TFC}(-1))$ is negative and statistically significant, indicating that previous increases in agricultural credit may initially create adjustment pressures before yielding long-term growth benefits.

The error correction term ($CointEq(-1)$) has a negative coefficient of -2.9215 and is highly significant ($p = 0.0000$). This confirms the existence of a long-run equilibrium relationship between agricultural financing and economic growth in Nigeria. The magnitude suggests that approximately 292 percent of short-run disequilibrium is corrected within one period, indicating a very rapid speed of adjustment toward long-run equilibrium after short-run shocks.

The overall goodness of fit of the model is high. The R-squared value of 0.9353 indicates that about 93.5 percent of the variations in economic growth are explained by the explanatory variables in the model, while the adjusted R-squared of 0.8842 shows a strong explanatory power after adjusting for the number of predictors. The Durbin–Watson statistic of 2.23 suggests the absence of serious autocorrelation in the model. Overall, the ARDL results suggest that agricultural financing, particularly credit to food crop production, labour force expansion, and macroeconomic variables such as inflation and interest rates, play important roles in influencing economic growth in Nigeria both in the short run and long run.

Table 5: Bounds Co-integration Test

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	7.520543	10%	2.08	3
K	5	5%	2.39	3.38
		2.5%	2.7	3.73
		1%	3.06	4.15

Source: Authors Computation, 2026.

Table 5 shows the result of the ARDL Bounds co-integration test. From the table, the calculated F-statistic (7.52) is higher than the upper bound at the 5% level of significance, and as such the null hypothesis is rejected. Thus, there is a long-run relationship among the variables; therefore, the study proceeds to estimate the long- and short-run ARDL model.

Table 6: ARDL Results

Dependent Variable: LNGDP				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Long-Run Estimates				
INF	0.031933	0.004102	7.785393	0.0000
INTR	0.048494	0.018954	2.558491	0.0284
LNGCF	-0.131822	0.070714	-1.864164	0.0919
LNLAB	1.685597	0.359620	4.687158	0.0009
LNACGC _{TFS}	0.263930	0.027786	9.498582	0.0000
C	6.066210	7.578183	0.800483	0.4420
Short-Run Estimates				
D(LNGDP (-1))	0.956464	0.168638	5.671706	0.0002
D(INF)	0.028144	0.004782	5.885077	0.0002
D(INF(-1))	-0.046491	0.006375	-7.292635	0.0000
D(INTR)	0.011420	0.019986	0.571430	0.5803
D(LNGCF)	-0.046262	0.030406	-1.521487	0.1591
D(LNGCF (-1))	0.231894	0.041958	5.526829	0.0003
D(LNLAB)	-0.264285	0.676241	-0.390814	0.7041
D(LNLAB (-1))	-2.177519	0.642314	-3.390115	0.0069
D(LNACGC _{TFS})	0.386997	0.048547	7.971640	0.0000
D(LNACGC _{TFS} (-1))	-0.151012	0.061710	-2.447136	0.0344
CointEq(-1)*	-2.402469	0.261773	-9.177695	0.0000
R-squared	0.944764	Mean dependent var		0.040086
Adjusted R-squared	0.882623	S.D. dependent var		0.560680
S.E. of regression	0.192091	Akaike info criterion		-0.158739
Sum squared resid	0.590384	Schwarz criterion		0.685592
Log likelihood	21.77794	Hannan-Quinn criterion		0.132724
Durbin-Watson Stat	1.826286			

Source: Authors Computation, 2026.

The Autoregressive Distributed Lag (ARDL) results in Table 6 examine the long-run and short-run effects of agricultural financing for fisheries and selected macroeconomic variables on economic growth in Nigeria, with the logarithm of Gross Domestic Product (LNGDP) used as the dependent variable. In the long-run estimates, the inflation rate (INF) shows a positive and statistically significant relationship with economic growth. The coefficient of 0.0319 with a probability value of 0.0000 indicates that a 1 percent increase in inflation is associated with approximately a 0.03 percent increase in economic growth in the long run. This suggests that moderate inflation may stimulate production and economic activities in the economy. Similarly, the interest rate (INTR) has a positive and statistically significant impact on economic growth with a coefficient of 0.0485 and a probability value of 0.0284, implying that increases in interest rates may encourage savings and efficient allocation of financial resources, which can promote economic growth.

Gross capital formation (LNGCF) exhibits a negative relationship with economic growth in the long run, with a coefficient of -0.1318 and a probability value of 0.0919, indicating that although investment in physical capital harms economic growth during the period, the relationship is only marginally significant at the 10 percent level. Labour force (LNLAB), however, has a positive and statistically significant relationship with economic growth, as shown by the coefficient of 1.6856 and a probability value of 0.0009. This implies that an increase in the labour force significantly contributes to economic growth, highlighting the importance of human resources in Nigeria's economic development. Agricultural financing for fisheries (LNACGC_{TFS}) also shows a positive and highly significant effect on economic growth. The coefficient of 0.2639 with a probability value of 0.0000 suggests that a 1 percent increase in credit allocated to fisheries production leads to approximately a 0.26 percent increase in economic growth in the long run. This indicates that financing the fisheries subsector plays a vital role in promoting economic activities, improving food supply, and supporting livelihoods.

The short-run dynamics reveal mixed results. The lagged dependent variable D(LNGDP (-1)) has a positive and statistically significant coefficient of 0.9565, indicating persistence in economic growth

from one period to another. Inflation $D(INF)$ has a positive and significant effect in the current period, with a coefficient of 0.0281, while the lagged value $D(INF(-1))$ has a negative and significant effect, suggesting that inflation may stimulate economic activity in the short term but could have adverse effects in the following period. Interest rate $D(INTR)$ shows a positive but insignificant relationship, indicating that short-run changes in interest rates do not significantly influence economic growth.

Gross capital formation $D(LNGCF)$ shows a negative but insignificant effect, while its lagged value $D(LNGCF(-1))$ is positive and statistically significant, indicating that previous investments in capital contribute positively to economic growth after some time lag. Labour force $D(LNLAB)$ shows a negative but insignificant effect in the current period, while its lagged value $D(LNLAB(-1))$ is negative and statistically significant, suggesting short-term adjustment challenges in absorbing labour into productive sectors.

Agricultural financing for fisheries $D(LNACGC_{TFS})$ shows a positive and highly significant effect in the short run, with a coefficient of 0.3870 and probability value 0.0000, indicating that increases in credit to fisheries immediately stimulate economic growth. However, the lagged value $D(LNACGC_{TFS}(-1))$ is negative and statistically significant, suggesting that previous increases in financing may create adjustment effects before stabilizing in the long run.

The error correction term ($CointEq(-1)$) is negative and statistically significant (-2.4025, $p = 0.0000$), confirming the existence of a long-run equilibrium relationship between agricultural financing for fisheries and economic growth in Nigeria. The magnitude of the coefficient indicates a rapid speed of adjustment, meaning that deviations from the long-run equilibrium are quickly corrected.

The model also demonstrates a strong explanatory power. The R-squared value of 0.9448 indicates that about 94.5 percent of the variations in economic growth are explained by the explanatory variables, while the adjusted R-squared of 0.8826 confirms the robustness of the model after adjusting for the number of variables included. The Durbin–Watson statistic of 1.83 suggests that there is no serious problem of autocorrelation in the model. Overall, the results indicate that agricultural financing for fisheries plays a significant role in promoting economic growth in Nigeria, alongside macroeconomic factors such as inflation, interest rate, labour force, and capital formation.

Discussion

The findings of this study reveal that agricultural financing for food crops has a positive and statistically significant relationship with economic growth in Nigeria. This indicates that increased financial support for staple food production contributes to higher agricultural productivity, food security, and rural income generation. This result supports the findings of Adamu and Azeez (2023) and Musa and Ibrahim (2023), who reported that agricultural financing positively and significantly influences real output growth in Nigeria in both the short run and long run. Their studies highlighted that agricultural credit stimulates productivity in the agricultural sector, which ultimately promotes economic growth.

Nkwocha and Bello (2021) revealed that microfinance and cooperative lending significantly increased smallholder productivity and agricultural GDP. Their study further emphasized that favourable monetary policies that improve credit supply to agriculture can significantly boost agricultural productivity.

Based on the empirical evidence and supporting literature, the study rejects the null hypothesis (H_{01}), which states that agricultural financing for food crops has no significant impact on economic growth in Nigeria.

The results of this study indicate that agricultural financing for fisheries has a positive and statistically significant effect on economic growth in Nigeria. This suggests that increased credit allocation to fisheries and aquaculture contributes to higher fish production, employment generation, and improved food supply within the economy.

This finding aligns with the studies of Afolabi et al. (2022) and Achumu et al. (2022), who found that adequate financing of the agricultural sector significantly contributes to Nigeria's economic growth. Their findings emphasize that access to financial resources enables farmers and producers to expand production capacity and improve efficiency within the agricultural sector. This supports the argument that improved financial access enhances agricultural performance and contributes to national economic development.

This suggests that financing agricultural subsectors such as fisheries can significantly improve productivity and economic outcomes. Consequently, the study **rejects the null hypothesis (H_{03})**, which states that agricultural financing for fisheries has no significant impact on economic growth in Nigeria.

Overall, the findings of this study strongly support the argument in the literature that agricultural financing plays a vital role in promoting economic growth in Nigeria. The results align with the majority of empirical studies which emphasize that increased access to agricultural credit enhances productivity, stimulates rural development, and contributes significantly to national economic growth. These findings therefore reinforce the need for improved agricultural financing policies, increased credit allocation, and stronger institutional support for farmers and agribusinesses in Nigeria.

Conclusion

In conclusion, based on the empirical findings, the study concludes that agricultural financing plays a significant role in promoting economic growth in Nigeria. Adequate financial support to various agricultural subsectors such as food crops and fisheries enhances productivity, stimulates rural development, increases employment opportunities, and contributes to national income. The study also establishes that improving access to credit facilities and strengthening financial support mechanisms for farmers and agribusinesses can significantly enhance the performance of the agricultural sector. Since agriculture remains a vital sector of the Nigerian economy, increased and well-targeted financing is necessary to boost productivity, ensure food security, and support sustainable economic growth.

Recommendations

The study recommends that the government should increase funding and credit support to the agricultural sector, particularly to subsectors such as food crops and fisheries, in order to boost agricultural productivity and economic growth.

Reference

- Adeshina, K. F., Tomiwa, O. Y., & Eniola, O. M. (2020). Agricultural financing and economic performance in Nigeria. *Asian Journal of Agricultural Extension, Economics & Sociology*, 38(7), 61–74.
- Adegeye, A. J., & Dittoh, J. S. (1985). *Essentials of agricultural economics*. Impact Publishers.
- Afolabi, B., Ayodele, A. E., Daramola, K. O., & Adewumi, P. A. (2022). Agricultural financing and economic growth in Nigeria. *Fuoye Journal of Finance and Contemporary Issues*, 3(1).
- African Development Bank Group. (2024). *Financing agriculture for sustainable development in Africa: Annual report 2024*. Abidjan: AfDB.
- Central Bank of Nigeria. (2021). *Annual report on agricultural credit and financial sector stability in Nigeria*. Abuja, Nigeria: CBN.
- Central Bank of Nigeria. (2024). *Annual report*. <https://www.cbn.gov.ng/annualreport>
- Danmola, R. A., & Alege, P. O. (2021). Agricultural financing, macroeconomic stability, and real output growth in Nigeria (1985–2020). *Nigerian Journal of Economic Research*, 10(4), 114–134.
- Ezigbo, C. A. (2019). *Agricultural finance: Theory and practice*. Enugu State University Press.
- Ezigbo, C. A. (2019). *Agricultural finance: Theory and practice*. Enugu State University Press.
- Ezu, G. K. (2023). Impact of agricultural financing on the growth of Nigerian economy. *African Banking and Finance Review Journal*, 1(1), 1–15. <https://www.abfrjournal.com/index.php/abfr/article/view/1>
- Food and Agriculture Organization. (2024). *The state of food and agriculture 2024*. Rome: FAO.
- Kuznets, S. (1973). Modern economic growth: Findings and reflections. *American Economic Review*, 63(3), 247–258.
- Meyer, R. L., & Nagarajan, G. (2000). *Rural financial markets in Asia: Paradigms, policies, and performance*. Oxford University Press.
- National Bureau of Statistics (Nigeria). (2024). *Gross domestic product report Q1–Q4 2024*. Abuja: NBS.

- Nkwocha, G., & Bello, H. (2021). Microfinance, cooperative credit, and real output growth in Nigeria (1995–2018): Evidence from FMOLS estimation. *African Review of Economics and Finance*, 13(1), 78–96.
- Okunlola, O. C., & Ayetigbo, O. A. (2024). Impact of agricultural financing on agricultural growth sustainability in Nigeria. *The Journal of Developing Areas*, 58(3), 171–203. <https://doi.org/10.1353/jda.2024.a929946>
- Oladipo, S., Adewale, T., & Bello, M. (2024). Agricultural sector development and Nigeria's economic growth: A multiple regression approach. *Journal of Economics and Agricultural Development*
- Pesaran, M. H., Shin, Y., & Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. *Journal of Applied Econometrics*, 16(3), 289–326.
- Schumpeter, J. A. (1911). *The theory of economic development*. Harvard University Press.
- Sen, A. (1999). *Development as freedom*. Alfred A. Knopf.
- Todaro, M. P., & Smith, S. C. (2020). *Economic development* (13th ed.). Pearson.