

Interest Rates and Economic Growth in Nigeria

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Abstract

This study investigated the effect of disaggregated interest rates on economic growth in Nigeria over the years 1990 to 2025. The dependent variable was Gross Domestic Product Growth Rate (GDPG) whereas Deposit Interest Rate (DIR), Prime Lending Rate (PLR), Maximum Lending Rate (MLR), Exchange Rate (EXR) and Inflation Rate (INF) were the explanatory variables. Autoregressive Distributed Lag (ARDL) bounds testing approach was used in the study. The bounds test resulted $F = 5.920$, higher than the upper critical bound at 5% level (which is 4.250), and the result indicates that there exists a long-run relationship. The results indicated that Economic Growth was negatively and significantly affected by Maximum Lending Rate and Prime Lending Rate in long run and short run respectively were found as -0.624 and -0.412 , and -0.351 . In contrast, Deposit Interest Rate was found to have a positive and significant long run sign (0.408) suggesting it is positive basis for saving mobilization and growth. Both Exchange rate (-1.283) and Inflation rate (-0.351) had negative and significant impacts. Error correction term was negative and significant, 68.4% of the equilibrium was corrected annually towards the long run. All the models were found to be stable and not affected by any economy's tricks. It recommends coordinated fiscal and monetary policies with the central bank imposing lower lending rates for citizens to borrow at less expensive interest rates, higher attractive deposit rates to facilitate the flow of funds into the economy from the citizens and maintaining inflation within the single-digit zone for sustainable growth in the economy.

Keywords: Interest Rate, Economic Growth, ARDL, Deposit Interest Rate, Lending Rate, Nigeria

1. Introduction

The interest rate is one of the most significant prices in economy. It affects the cost of capital to the company, returns to savers, and is the channel that provides monetary easing to investment, consumption, and output. In bank-based financial systems like that in Nigeria, there are several interest rates being paid or charged on loans and deposits, and the linkages between policy and growth reaches from the interest rate charged on the deposits to the interest rate charged on the riskiest borrowers (the maximum lending rate) to the interest rate charged on the best borrowers (the prime lending rate). The rates will impact individual agents differently, and considering the rates as an aggregate may be misleading. The effects are studied under a challenging environment in Nigeria. Financial intermediation is undercut by having high lending rates for decades, having low-most-of-the-time real deposit rates, and a wide spread between the two. The high inflation and sudden devaluation of the naira, which began from 1990 when the exchange rate was approximately ₦8 for an American dollar, until it reached approximately ₦1510 in 2025, has been an ongoing affair. The constant high

inflation rate and the devaluation of the naira particularly since 2016 (when it was estimated at about N24 per US dollar) to realize the naira at N1510 to an American dollar has been a continuous yarning. Besides the Central Bank of Nigeria (CBN) has tightened policy several times such that the monetary policy rate now stands at 18.75% as of July 2023 (CBN, 2023). The implications of its eventual form of relation between rates and growth continues to be a matter of policy interest. There is mixed evidence from empirical research with regards to Nigeria. The methods and percentages of interest rate used vary from study to study; some studies look at a broader period of time and others look at a smaller one; and many studies look at one average lending rate. It was observed that interest rate volatility is a negative shock to both short run and long run output (Olasehinde-Williams et al., 2024), while a threshold estimate of 21% indicates that high interest rates hamper economic growth (Olaniyi, 2019). However, few studies have estimated the separate linkage between deposit rates, prime lending rates, maximum lending rates and output when also controlling for the exchange rate and inflation, and just a handful of studies have estimated the impact of the combined tightening cycle and used data that extend to the recent tightening cycle.

This paper, on the other hand, fills that gap. It discusses the impact of the disaggregated interest rates on economic growth in Nigeria with the application of ARDL bounds-testing approach developed by Pesaran et al (2001) for the period of 1990-2025. The specific objectives are to estimate the effects on growth of the deposit interest rate (DIR), the prime lending rate (PLR), the maximum lending rate (MLR), the exchange rate (EXR), and inflation (INF); and to monitor if these variables are long-run related with output growth. Therefore, six null hypotheses (H01 to H05) are tested at the 5% level, all of which state that no variable has a significant influence on growth, and with H06, that there is no long run relationship between the variables. The rest of the paper reviews the literature (Section 2), describes the data and methods (Section 3), presents and discusses the results (Section 4), and concludes with recommendations (Section 5).

2. Literature Review

2.1 Theoretical Background

Four theoretical traditions link interest rates to growth. According to the loanable funds theory, the interest rate will balance the supply of saving and demand for investment funds, thus an increase in the deposit rate should increase saving and the quantity of funds for investment available (Ohlin, 1937). According to the Keynesian approach, the interest rate is a negative influence on investment: The higher the cost of the capital, the less investment that will take place, the less aggregate demand that will occur, and the less output produced (Keynes, 1936). The financial-liberalisation hypothesis of McKinnon (1973) and Shaw (1973) suggests that in financially repressed developing economies, low- or negative-real interest rates dissuade saving and lead to threatening investment, hence that an increase in the real interest rate to market levels in these economies would spur financial deepening and growth.

These predictions can be qualified with the credit-rationing theory. The qualitative theory of credit-rationing supports these predictions. When such lenders are not able to observe the riskiness of borrowers, an increase in the lending rate will cause less return for a bank since safe borrowers will be less inclined to borrow the money and riskier borrowers will borrow it out of the market, thus causing adverse selection and moral hazard effects; thus, banks would ration credit instead of lending it at higher rates. (Stiglitz and Weiss 1981) Combined these theories suggest a positive correlation between saving and deposit rates and a negative one between the cost of capital and credit rationing paradox on the one hand and lending rates on the other hand, as well as the effects on real returns and the cost of the imported input in an import dependent economy that inflation and the exchange rate have in growth.

2.2 The Interest-Rate Structure and Policy Framework in Nigeria

Financial deregulation has introduced market flexibility in the price of deposits and loans in Nigerian banks, and the CBN only indirectly affects the prices of deposits and loans by adjusting the monetary policy rate, cash reserve and liquidity requirements and a minimum loan-to-deposit ratio. The Monetary Policy Committee (MPC) in July 2023 increased the policy rate from 18.50% to 18.75% and the asymmetric corridor around the policy rate was widened from +100 basis points to +100 and -300 basis points (CBN, 2023). There are three rates that are particularly interesting. The deposit rate is a return paid to savers, and the fundamental motivator to save in the formal financial sector. The prime lending rate is the interest rate which is given to the most creditworthy corporate borrowers; the maximum lending rate is charged to the borrower with the lowest credit rating, many of whom are small and medium sized enterprises as well as individuals. The difference is relevant since the three rates represent different amounts of the same price rather than different price points. They are imposed through various mechanisms and impact various groups, namely savers, larger firms, and smaller and/or riskier borrowers. The high intermediation cost, high perceived credit risk and low competitiveness in the banking sector are reflected by the fact that few lending rates are below the main deposit rate. A large spread between the highest lending rate and the main deposit rate would indicate a high intermediation cost, high perceived credit risk, or low degree of competition, referring to the banking sector and the number of lending rates below the main deposit rate. The expected sign in the present study is that the deposit rate (that is, the rate a person would get for his or her savings) will have a positive sign, while its two corresponding lending rates will have negative signs (that is, make saving more expensive for a person).

2.3 Transmission Channels and Empirical Evidence

The interest rates flow to the real economy through the cost of capital, the balance-sheet channel and the bank-lending channel and asset prices (Bernanke & Gertler, 1995; Mishkin, 1996). There is a large literature on the relationship between depth in financial intermediation and growth (e.g. Levine, 2005), and Fry (1988) suggests that in developing countries, the "interest rate effect" is contingent upon a sufficiently high interest rate to provide a positive real effect but not sufficiently high that it acts as a deterrent to investment. The finding shows that the relationship between the variables is not linear and thus, the study tries to make a thorough analysis using non-linear relationship between the variables and threshold approach (Hansen, 2000) was used for this analysis for Nigeria. That study arrives at a threshold of growth of 21.1 per cent (below which the interest rate helps growth and above which the interest rate is a concern). Other Nigerian studies focus on volatility and macroeconomic factors. Based on the analysis undertaken by the authors (Olasehinde-Williams et al., 2024) where a quantile ARDL analysis of the short and long run performances of the economy was carried out for the year 1981-2020, they concluded that the economy performs best when interest rates are kept stable both in the short and long run, as a result of which they argue against full liberalisation. As inflation becomes more and more prevalent in the economy, it is generally known that inflation causes harm, above a certain level (Fischer, 1993; Khan & Senhadji, 2001), and the depreciation of the exchange rate makes imported inputs more expensive in an economy which is import dependent. The exchange rate and the inflation are included as controls, motivated by these strands.

2.4 Research Gap

Three gaps follow. Most studies in Nigeria focus on the overall interest rate and work on the basis of neither the deposit rate nor the lending rate, so that one could not conclude whether the overall or the lending rate is more related to growth. Secondly, many studies stop short of

the recent era of high inflation, high depreciation and tight policy. Third, there are a number of different ways of estimating, and static regressions on non-stationary series continue to be widely used. This study takes the reply with an ARDL model that involves the three disaggregated rates, exchange rate and inflation during 1990–2025 time period.

3. Data and Methodology

3.1 Data and Variables

This study relies on secondary data, which is available on an annual basis for the period under study 1990 to 2025 (35 observations) from the CBN Statistical Bulletin and National Bureau of Statistics (NBS). The variables are measured in billions of naira and for their nominal values, and are, respectively, enter in natural log so that the corresponding coefficients are interpreted as semi-elasticities. They are the average deposit rate (DIR), prime lending rate (PLR) which is the rate offered to the most credit worthy borrowers and maximum lending rate (MLR). The exchange rate (EXR) used here in this article is in logs and is the official value of the naira/dollar rate; inflation (INF) is the logged annual percentage change of the CPI. Table 1 gives the definition of the variables and specifies the signs to be expected.

Table 1: Variables, Measurement, and Expected Signs

Variable	Measurement	Transformation	Expected sign
lnGDP	Nominal GDP (₦ billion)	Natural log	Dependent
DIR	Average deposit interest rate (%)	Level	Positive
PLR	Prime lending rate (%)	Level	Negative
MLR	Maximum lending rate (%)	Level	Negative
lnEXR	Official exchange rate (₦ per US\$)	Natural log	Negative
INF	Consumer price inflation (annual %)	Level	Negative

Note. Data are from the Central Bank of Nigeria (2026) and the National Bureau of Statistics. The expected sign for the exchange rate reflects the cost of imported inputs in an import-dependent economy.

3.2 Model Specification

Following the Keynesian emphasis on the interest rate as a determinant of aggregate income, and the CBN classification of deposit and lending rates, output is modelled as a function of the three interest rates, the exchange rate, and inflation:

$$\ln \text{GDP}_t = \beta_0 + \beta_1 \text{DIR}_t + \beta_2 \text{PLR}_t + \beta_3 \text{MLR}_t + \beta_4 \ln \text{EXR}_t + \beta_5 \text{INF}_t + \varepsilon_t \quad (1)$$

Because the variables are a mixture of $I(0)$ and $I(1)$ series (Section 4.2), the model is estimated in ARDL form, with a constant and a linear trend, and written in conditional error-correction form (Pesaran et al., 2001):

$$\Delta \ln \text{GDP}_t = \alpha_0 + \alpha_1 t + \rho \ln \text{GDP}_{t-1} + \sum_{i=1}^5 \theta_i x_{i,t-1} + \sum_{j=0}^q \gamma_j' \Delta X_{t-j} + \varepsilon_t \quad (2)$$

where $\mathbf{x}$ denotes the five regressors and $\mathbf{X}$ the vector of their first differences. The lag structure was selected by the Akaike information criterion, which gave ARDL (1,1,1,1,2,2) for lnGDP, DIR, PLR, MLR, lnEXR, and INF respectively. The null hypothesis of no levels relationship, $\rho = \theta_1 = \dots = \theta_5 = 0$, is tested with the bounds F -test, using the critical values of Kripfganz and Schneider (2020). The long-run coefficient on each regressor is $\beta_i = -\theta_i/\rho$, and ρ is the speed of adjustment, which should lie between -1 and 0 for monotonic convergence.

3.3 Estimation Procedure

The analysis proceeds in five steps. First, descriptive statistics and the Jarque–Bera test (Jarque & Bera, 1987) describe the data. Second, augmented Dickey–Fuller (ADF) tests with a constant and trend (Dickey & Fuller, 1979) establish the order of integration; the bounds approach requires that no variable be I (2). Third, the bounds test is applied. Fourth, the long-run and short-run coefficients are obtained. Fifth, the residuals are checked with the Breusch–Godfrey serial-correlation test (Breusch, 1978; Godfrey, 1978), the Breusch–Pagan and White heteroskedasticity tests, the Jarque–Bera normality test, and Ramsey’s (1969) RESET. Pairwise Granger (1969) causality tests with two lags are used to examine the direction of predictive relationships.

4. Results and Discussion

4.1 Descriptive Statistics

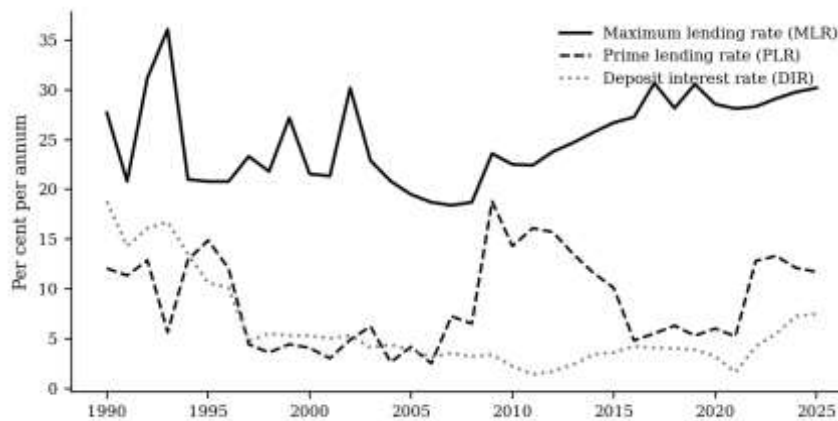
Table 2 summarises the data. The maximum lending rate averaged 25.1% and never fell below 18.4%, while the prime lending rate averaged 8.8% and the deposit rate 6.0%; the average gap between maximum lending and deposit rates was therefore about 19 percentage points. Inflation averaged 18.8% and peaked at 72.8% in 1995, and the exchange rate rose from ₦8.04 to ₦1,510 per dollar. The Jarque–Bera statistics indicate that lnGDP, PLR, MLR, and lnEXR are consistent with normal distributions, while DIR and INF are not ($p < .001$), owing to the high deposit rates of the early 1990s and the inflation spikes of the 1990s. The largest correlation among the regressors is $-.67$, between DIR and lnEXR, which is well below the .80 level that signals serious multicollinearity.

Table 2: Descriptive Statistics, 1990–2025

Statistic	lnGDP	DIR	PLR	MLR	lnEXR	INF
Mean	9.729	6.030	8.849	25.084	4.743	18.795
Median	10.017	4.205	6.870	24.240	4.889	13.125
Maximum	12.646	18.800	18.800	36.090	7.320	72.800
Minimum	5.571	1.410	2.500	18.400	2.084	5.420
Std. dev.	2.161	4.524	4.606	4.413	1.291	15.620
Skewness	−0.450	1.534	0.303	0.320	−0.261	2.084
Kurtosis	1.978	4.239	1.775	2.257	2.647	6.649
Jarque–Bera	2.785	16.413	2.801	1.441	0.594	46.039
p (Jarque–Bera)	.248	< .001	.246	.487	.743	< .001
n	35	35	35	35	35	35

Note. Authors’ calculations from the annual data. ln = natural logarithm. Standard deviations use $n - 1$.

Figure 1: Deposit, Prime Lending, and Maximum Lending Rates in Nigeria, 1990–2025



Note. Authors' plot from the annual data (Central Bank of Nigeria, 2026).

Figure 1 shows how persistent the gap between lending and deposit rates has been. The maximum lending rate stayed in a band of roughly 18%–36% throughout, while the deposit rate fell from 18.8% in 1990 to roughly 1%–5.5% for most of the 2000s and 2010s before rising to 7.5% by 2025.

4.2 Unit Root Tests

Table 3 reports the ADF tests. Log GDP, the deposit rate, the prime lending rate, the log exchange rate, and inflation are non-stationary in levels and stationary in first differences, so they are $I(1)$. The maximum lending rate is stationary in levels at the 5% level ($p = .023$), so it is $I(0)$. No variable is $I(2)$. The mixture of $I(0)$ and $I(1)$ series supports the ARDL bounds approach.

Table 3: Augmented Dickey–Fuller Unit Root Tests

Variable	Level: $t(p)$	First difference: $t(p)$	Order
lnGDP	−1.242 (.902)	−6.660 (< .001)	$I(1)$
DIR	−1.750 (.728)	−7.098 (< .001)	$I(1)$
PLR	−3.106 (.105)	−3.954 (.010)	$I(1)$
MLR	−3.695 (.023)	−3.339 (.060)	$I(0)$
lnEXR	−2.179 (.502)	−4.106 (.006)	$I(1)$
INF	−2.466 (.345)	−4.462 (.002)	$I(1)$

Note. Authors' estimates. Tests include a constant and a linear trend; 5% critical values range from −3.54 to −3.59. The null hypothesis is that the series has a unit root.

4.3 Bounds Test for Cointegration

Table 4 presents the bounds test. The F -statistic of 5.920 exceeds the upper critical bound at the 10% (3.789), 5% (4.250), and 1% (5.207) levels, although not at the 0.1% level (6.436). The null hypothesis of no long-run relationship is therefore rejected, and H_{06} is rejected: output, the three interest rates, the exchange rate, and inflation share a long-run relationship.

Table 4: ARDL Bounds Test for a Long-Run Relationship

Test statistic	Value	Significance level	I(0) bound	I(1) bound
<i>F</i> -statistic	5.920	10%	2.754	3.789
<i>k</i>	5	5%	3.149	4.250
		1%	3.986	5.207
		0.1%	5.080	6.436

Note. H_0 : no levels relationship. Specification with unrestricted constant and trend; critical values follow Kripfganz and Schneider (2020).

4.4 Long-Run Estimates

Table 5 reports the implied long-run coefficients together with the lagged-level terms from which they are derived. Because log GDP is the dependent variable, the coefficients on the interest rates and inflation are semi-elasticities and that on the exchange rate is an elasticity. The deposit rate has a negative long-run coefficient (-0.160), so H_{01} is rejected, but the sign is opposite to the expected one. The prime lending rate has a positive coefficient (0.123), also contrary to expectation, and H_{02} is rejected. The maximum lending rate has the expected negative coefficient (-0.058), and H_{03} is rejected. The exchange rate has a negative elasticity (-0.456), and H_{04} is rejected. For inflation, the coefficient is small (0.007) and its lagged-level term is insignificant ($p = .184$), so H_{05} is not rejected in the long run.

Table 5: Implied Long-Run Coefficients and Lagged-Level Terms

Variable	Long-run coefficient	Lagged-level term (θ)	Std. error	<i>t</i> -statistic	<i>p</i>
DIR	-0.1600	-0.1095	0.0239	-4.573	$< .001^{***}$
PLR	0.1230	0.0842	0.0197	4.265	$< .001^{***}$
MLR	-0.0579	-0.0396	0.0112	-3.526	$.002^{***}$
lnEXR	-0.4555	-0.3117	0.0861	-3.621	$.002^{***}$
INF	0.0075	0.0051	0.0037	1.380	.184

Note. Authors' estimates. Long-run coefficient = $-\theta/\rho$ with $\rho = -0.6843$. The *p*-value tests $\theta = 0$ in the conditional error-correction equation; standard errors for the long-run coefficients themselves were not available. $***p < .01$.

In magnitude, a sustained one-percentage-point increase in the maximum lending rate is associated with nominal GDP that is about 5.8% lower in the long run, and a one-percentage-point increase in the deposit rate with output that is about 16% lower, while a 1% depreciation of the naira is associated with output that is about 0.46% lower. These figures describe how the levels of the series have moved together over three decades of rapid nominal growth; they are not estimating of what a change in policy would do, and the large deposit-rate magnitude in particular reflects the trend in the data (Section 4.7).

4.5 Short-Run Dynamics and Error Correction

Table 6 presents the short-run estimates. Changes in the deposit rate ($p = .004$), the maximum lending rate ($p = .047$), and the exchange rate ($p = .011$) are negatively and significantly related to output growth. The change in the prime lending rate has a positive and significant coefficient ($p = .017$). The exchange-rate effect reverses at the first lag ($\beta = 0.194$, $p = .042$), which suggests that part of the initial negative association is offset the following year. Contemporaneous inflation is insignificant, but its lagged change is positive and weakly

significant ($p = .049$). The linear trend is positive and significant, reflecting the general upward drift of nominal output.

The error-correction coefficient is -0.684 and significant at the 1% level, with the expected negative sign and a magnitude between -1 and 0 . About 68% of any deviation from the long-run relationship is therefore corrected within one year, which indicates fast adjustment. The ARDL equation fits the data closely ($R^2 = .998$; adjusted $R^2 = .997$), as is typical for a level equation with a trend and a trending dependent variable.

Table 6: Error-Correction Model (Dependent Variable: $\Delta \ln \text{GDP}$)

Variable	Coefficient	Std. error	<i>t</i> -statistic	<i>p</i>
ΔDIR	-0.0805	0.0246	-3.279	$.004^{***}$
ΔPLR	0.0371	0.0141	2.622	$.017^{**}$
ΔMLR	-0.0189	0.0089	-2.123	$.047^{**}$
$\Delta \ln \text{EXR}$	-0.2410	0.0857	-2.811	$.011^{**}$
$\Delta \ln \text{EXR}_{t-1}$	0.1941	0.0891	2.179	$.042^{**}$
ΔINF	-0.0010	0.0029	-0.359	$.723$
ΔINF_{t-1}	0.0056	0.0027	2.099	$.049^{**}$
Trend	0.1681	0.0340	4.939	$< .001^{***}$
Constant	5.0377	0.9881	5.098	$< .001^{***}$
ECT_{t-1}	-0.6843	0.1391	-4.919	$< .001^{***}$

Note. Authors' estimates, $n = 34$ (1992–2025). ARDL (1,1,1,1,2,2); $R^2 = .998$; adjusted $R^2 = .997$; $F = 864.08$; Durbin–Watson = 2.346; AIC = -48.14 ; BIC = -25.25 . $^{**}p < .05$, $^{***}p < .01$.

4.6 Diagnostic Tests and Causality

Table 7 shows that the model passes the standard diagnostic tests. The Breusch–Godfrey tests do not reject the null of no serial correlation with one or two lags, the Breusch–Pagan and White tests do not reject homoskedasticity, and the RESET test indicates correct functional form. The Jarque–Bera p -value of $.050$ is on the borderline of the 5% level, so normality of the residuals should be regarded as marginal.

Table 7: Residual Diagnostic Tests

Test	Statistic	<i>p</i>	Conclusion
Breusch–Godfrey LM (1 lag)	2.416	.120	No serial correlation
Breusch–Godfrey LM (2 lags)	3.691	.158	No serial correlation
Breusch–Pagan LM	13.419	.494	Homoskedastic
White LM	34.000	.419	Homoskedastic
Jarque–Bera	5.991	.050	Normal (borderline)
Ramsey RESET	0.069	.795	Correct form

Note. Authors' estimates.

Pairwise Granger tests with two lags show that none of the three interest rates Granger-causes output. The significant relationships run from output to the deposit rate ($F = 6.38$, $p = .005$), from inflation to output ($F = 4.01$, $p = .029$) and to the deposit rate ($F = 16.88$, $p < .001$), from the maximum lending rate to inflation ($F = 6.16$, $p = .006$), from the deposit rate to the exchange

rate ($F = 3.81, p = .034$), and from the prime to the maximum lending rate ($F = 3.74, p = .036$). These tests were applied to the levels of series that are largely $I(1)$, so they are indicative only.

4.7 Discussion

Table 8 summarises the decisions on the six hypotheses at the 5% level, using the long-run results for H_{01} to H_{05} and the bounds test for H_{06} .

Table 8: Summary of Hypothesis Tests

Hypothesis	Evidence	Decision
H_{01} : DIR has no effect	Negative, significant (long and short run)	Reject
H_{02} : PLR has no effect	Positive, significant (long and short run)	Reject
H_{03} : MLR has no effect	Negative, significant (long and short run)	Reject
H_{04} : EXR has no effect	Negative, significant (long and short run)	Reject
H_{05} : INF has no effect	Insignificant long run; weak short-run lag effect	Do not reject (long run)
H_{06} : no long-run relationship	$F = 5.920 > 5.207$ (1% upper bound)	Reject

Note. Authors' summary of Tables 4–6. The signs of DIR and PLR are opposite to the a priori expectations in Table 1.

Lending rates. The negative short-run and long-run associations of the maximum lending rate with output are consistent with the Keynesian cost-of-capital channel and with credit rationing (Keynes, 1936; Stiglitz & Weiss, 1981): borrowers with weaker credit ratings, notably small firms, face the highest rates and are the most likely to be priced out of credit. The maximum lending rate exceeded 21% in every year from 2009 onwards, which is above the threshold at which Olaniyi (2019) finds that interest rates start to weigh on growth. The positive coefficients on the prime lending rate contradict the a priori expectation. Prime rates apply to the most creditworthy borrowers and may rise in expansions when credit demand is strong, so the positive sign may reflect procyclical rate setting rather than a causal benefit; measurement of the series may also play a part.

Deposit rate. The negative association of the deposit rate with output is contrary to the McKinnon–Shaw prediction. Two considerations help to interpret it. First, deposit rates were highest in the early 1990s, when nominal GDP was small, and fell over the decades in which nominal GDP rose steeply, so a negative association may reflect opposing trends rather than a causal effect. Second, the Granger results indicate that the deposit rate responds to output and inflation rather than the reverse. With inflation often exceeding the deposit rate by wide margins, real deposit rates have frequently been negative, which weakens any saving-mobilisation effect (Fry, 1988). The result should therefore not be taken to mean that lower deposit rates would raise growth.

Exchange rate and inflation. The negative long-run elasticity of the exchange rate is consistent with the cost of imported inputs and the vulnerability of an import-dependent economy to depreciation, although the short-run reversal at the first lag shows that the adjustment is not one-directional. Inflation has a small and insignificant long-run association

with output. An increase in inflation is indeed not a demonstration that inflation is good to growth as inflation is measured in the nominal GDP level, which is a continuous movement upward if inflation is positive; it simply is a reminder that inflation – in general – does not necessarily promote growth and growth – in general – is not evidence of an inflationary relationship, as indicated as much in the inflation – growth literature (Fischer, 1993).

Adjustment. The quick adjustment of 68% a year suggests there is rapid adjustment of the level of output from disturbances of the long-run equilibrium, suggesting that any monetary or exchange-rate changes have implications in the short run as well as the long run.

5. Conclusion and Policy Recommendations

5.1 Conclusion

This study investigated the effect of disaggregated interest rates on economy growth rate in Nigeria between 1990-2025. The long-run relationship between variables is present and structural matters: Maximum lending rate and exchange-rate depreciation both have a negative relationship with output in the short and long run, while the prime lending rate has a positive relationship and the deposit rate a negative one. The adjustment to long-run equilibrium is fast and the residual diagnostics are satisfactory. The results of this measure of output in nominal terms are nominal GDP associations and should not be interpreted as causal estimates of real GDP effects.

5.2 Policy Recommendations

The study made the following recommendations.

1. CBN should lower its lending rates where inflation allows, and to increase the flow of cheap credit to agriculture and manufacturing as well as to SMEs who have the highest maximum lending rates, adopt selective lending packages and credit-guarantee arrangements.
2. The 19-percentage point difference between the maximum lending rate and the maximum deposit rate suggests inefficient intermediation. Limited competition, increased bank capital, improved credit information, and smaller perceived credit risk would reduce it, thereby enhancing saving and lending.
3. The cost shocks when depreciation pass-through to firms would be lessened if the foreign-exchange administration is transparent, external reserves are replenished, and non-oil exports are diversified and import substitution programs are implemented for critical commodities.
4. Government borrowing must be carefully managed around private borrowing and fiscal discipline must go hand-in-hand with the CBN's price stability objective, as excess inflation and devaluation negate excess returns from lower interest rates.

5.3 Limitations and Directions for Future Research

Several limitations qualify the findings. First, the dependent variable is nominal GDP, which embeds price and exchange-rate effects and includes a series break at the 2010 debasing; a real GDP or real growth measure, with a rebasing dummy, would be more informative. Second, standard errors for the long-run coefficients were not available, so their significance is inferred from the lagged-level terms. Third, the prime lending rate series for the 1990s and 2000s is lower than the prime rates published by the CBN for those years, and the deposit rate series may combine different deposit categories, so the interest-rate data should be checked for consistency. Fourth, the sample is only 34 observations in estimation, and the Granger tests were applied to non-stationary levels. Fifth, the analysis is linear and aggregate. Future research could use real output, threshold and asymmetric ARDL models, sectoral output, and the Treasury bill rate and the monetary policy rate as additional rates.

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