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Bank Credit, Lending Costs, and the Growth Dynamics of SMEs in Emerging Economies

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Abstract:

SMEs are important contributors to innovation, job-creation, and diversification of a country economy especially in developing economies where the majority of productive activities comprised of SMEs. This paper examines the relationship between bank credit, the lending interest rates, and SMEs performance in Nigeria between the years 1992 and 2023. The data for the study were secondary time series data retrieved from the Central Bank of Nigeria (CBN) Statistical Bulletin for the period of 1992-2023 which ensured comprehensiveness and reliability. The analysis was conducted with the autoregressive distributed lag (ARDL) and fully modified least squares (FMOLS) methods. The study indicated that the long-run relationship between bank credit and the performance of SMEs is positive and significant, with lending interest rates having a negative and significant impact. The findings are robust as confirmed by descriptive statistics, unit root and cointegration tests, and Granger causality results demonstrate that there is a two-way causality between bank lending and SME performance. The study concluded that the long-term availability of low-cost credit is essential to boosting SMEs contribution to economic growth. Implication of the policy reflect the significance of specific credit facilities, interest relief policies, and complementary institutional reforms in encouraging financial literacy and SME formalisation. In general, the findings highlight the importance of having a consistent balance between credit growth and the cost of borrowing to finance SME activities which are facilitated by the enabling macroeconomic policies.

Keywords:

Bank Credit, Lending Rates, SME Performance, Economic Growth, Nigeria, Financial Intermediation

JEL Codes:

G21, L25, O16, E44

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Introduction

The role of small and medium-sized enterprises (SMEs) in fostering innovation, creation of employment, and diversification is especially significant in the economies of the developing world, where they represent the majority of productive endeavors. SMEs in Nigeria represent a large share of output and employment but their development pattern has been low relative to their potential. Scholars have argued that among the fundamental factors or determinants of SME performance is access to finance, as it directly correlates with the ability of firms to innovate, increase production, and cope with macroeconomic shocks (Adelekan & Omisakin, 2021; Song, 2024). However, despite several government initiatives, SMEs still suffer from significant financing gaps because of structural weaknesses in the credit market and ongoing macroeconomic volatility (Ernest et al., 2025).

Bank credit is a major form of external funding of companies, but the availability of this funding is limited due to strict collateral conditions and excessive risks of default (Brixiová et al., 2020). There is empirical evidence that credit to SMEs should be better allocated, as it helps improve their productivity, survival rates, and overall contribution to GDP (Fowowe, 2017).

Lending rates are a very important factor of the availability of credit because through high costs of borrowing, small businesses are often discouraged to borrow, to expand. High interest rates, with inflationary pressures, make SMEs less profitable and less capable of investment, which limits their capacity for long-term growth (Odebunmi et al., 2017). Recent research in Sub-Saharan Africa has highlighted how interest rate volatility is a major constraint in the growth of SMEs and hence the need for an efficient monetary environment to promote entrepreneurship (Qosimov, 2025). This research paper thus explores the extent to which interest rates influence the performance of SMEs in the Nigerian macro-economic environment.

Macroeconomic stability, especially inflation and growth in GDP, often influences the development of SMEs. Inflationary episodes erode purchasing power, tie up investment decisions and add to the cost of inputs by SMEs, while growth in GDP creates an enabling environment for expansion of firms and financial markets (Adedirin & Akinwale, 2023). Including these variables in the analysis, the study not only makes SME performance dependent on the dynamics of the banking sector but also results from other macroeconomic fundamentals.

Knowledge on whether credit growth leads to SME growth or whether successful SMEs receive increased bank credit is vital to policy formulation. The use of Granger causality tests allows this study to determine the directionality of the finance–growth nexus at SME level.

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Literature Review

The availability of bank credit and SME performance have been a major theme in empirical literature over the last decade. Cross-country and country-level studies consistently show formal credit from banks raise SME investment, output and employment when firms are able to overcome information frictions and collateral constraints (Brixiova 2020; World Bank, 2020). A number of papers in Sub-Saharan Africa, based on enterprise surveys and macro-micro linkages, conclude that the limited bank credit accounts for a significant portion of forgone SME growth and job creation (Brixiová, 2020; AFI, 2020). Country studies focused on Nigeria corroborate this pattern: availability of formal credit is positively associated with firm productivity and firm survival, but the effect is heterogeneous across size, and sector and formality status (Odebunmi et al., 2017; Onyeiwu, 2021).

An empirical literature is accumulating that studies the elasticity of SME outcomes to bank credit flows. Time-series analyses and panel estimates using sophisticated methods (ARDL, FMOLS, VECM, system-GMM) generally find that higher bank lending to SMEs has a significant positive long-run effect on SME output or SME contribution to GDP, but no effect in the short term due to macroeconomic fluctuations and credit quality (Paul & Idris, 2023., 2021; Fowowe, 2017; Ayuba, 2015). Studies on Nigeria reveal that bank loan to SMEs has positive long-run coefficients in cointegration and FMOLS specifications, which is consistent with the finance-led growth view (Ayuba, 2015; Onyele, 2018; Paul & Idris, 2023).

A number of studies probe interest rate influences and credit pricing. Empirical evidence from Nigeria and other similar economies shows that higher lending rates have a material impact on reducing the loan take-up and investment of SMEs and increases the real burden of debt during inflationary episodes (Odebunmi et al., 2017; Ernest et al., 2025, 2023). Panel and micro-level investigations confirm the fact that default risk increases while the expected returns to borrowing decrease for small firms as interest rate volatility increases (Qosimov, 2025). These findings provide a rationale for policy interest in targeted relief from interest rates and well-structured subsidies rather than broad relief from monetary policy (Odebunmi et al., 2017).

Granger causality tests and panel causality have been used to test causality and directionality. Many studies establish a two-way cause-effect relationship between bank credit and SME performance - improved SME performance solicits additional bank lending and additional lending stimulates further SME growth (Owolabi and Brixiová et al., 2020; Granger-based studies on African samples). Unidirectional causality of finance to growth is reported in other country-specific studies, especially when policy reforms were carried out before the gains in SME financing were realized Ben Jelili (2012 various country studies; Fowowe, 2017). The inconclusive evidence draws focus on the mediating roles played by institutional quality, banking industry competition, and financial depth.

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It has been empirically tested that credit guarantee schemes (CGSs) and refinance facilities play a role. Assessment of panels and programmes indicate that effective CGSs may boost further bank lending to SMEs, particularly supplied by capacity building and co-finance but the micro-level effects differ and unsustainable lending increase with unsuitable target guarantees (Brixiová et al., 2020; a summary of evaluation studies according to AFI and IFC reports). Empirical impact evaluations recommend strict eligibility and risk-sharing limits and ex-post evaluation for containing fiscal contingent liabilities. FinTech and digital finance have also become disruptive sources of SME financing in the 2015-2025 decade. Empirical analyses based on cross-country panels and case studies from 11 countries show mobile money, digital credit, and alternative data scoring boost the formal and semi-formal access of SMEs to short-term credit and working capital (Sanga, 2024; Sharma et al., 2023; Cornelli et al., 2023). From available evidence from African samples, heterogeneous effects are evident: digital finance has a greater effect on access to credit in countries that have a better digital infrastructure and regulatory frameworks (Sanga & Aziakpono, 2024; AFI, 2020). Importantly, studies also flag up risks of consumer protection and over-indebtedness when digital credit growth is not monitored (CGAP/FSD evidence summarized in AFI).

The heterogeneity at the firm-level is a common empirical observable phenomenon. Based on the results of microeconometric analysis based on enterprise survey data, the response to credit availability is heavily conditional on the age of the firm, availability of collateral, accounting practice, and formality status (Odebunmi et al., 2017; Song, 2024). Smaller and informal firms have less access to traditional bank lending in Nigeria; when credit is accessible, it is more expensive and has shorter terms, reducing the impact of investments (Song, 2024; Adebayo, 2025).

There is a considerable role of institutional and regulatory factors in mediating credit as well as SME relationships. Regressions across countries indicate that laws favoring creditors, credit bureaus, movable collateral registries and simplified contract enforcement raise the propensity of banks to lend to SMEs and enhance loan repayment (World Bank, 2017; Ben Jelili, 2012.). Empirical research in African settings attributes enhancements in the infrastructure for obtaining credit to increased loan portfolios for small and medium enterprises and to reductions in interest rate spreads (World Bank/IFC reports; Hansen-Addy and others).

The evidence on SME finance instruments other than bank loans (including leasing, trade credit, factoring, crowdfunding, documents) is mixed but promises to be beneficial. A few empirical pilot studies and case research indicate that supply chain finance and invoice factoring can help alleviate working capital constraints for expanding SMEs while crowdfunding works for certain industries and diaspora networks, though at a limited scale in many African markets (Marughu, 2023; IDOS report, 2020). There is evidence to support the diversified financing ecosystem instead of the bank lending in isolation.

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It is possible to anchor the relationship between bank credit and lending rates on proven theories of financial intermediation and firm growth. The Financial Intermediation Theory proposed by Gurley and Shaw and later formalised in the endogenous growth literature is that banks play a crucial role as intermediaries allocating resources productively between savers and borrowers. Here, SMEs depend on the deposit money banks to provide working capital and investment capital. Availability of credit may be modeled as under the standard investment function: investment It = bank loans BLt x the cost of borrowing Yt approximated by the interest rate. r_t:

$$I_t = \alpha_0 + \alpha_1 BL_t - \alpha_2 r_t + \epsilon_t \quad (1)$$

Equation (1) implies that an increase in bank loans stimulates investment, while higher lending rates discourage borrowing, thus negatively affecting SME growth. This aligns with empirical findings that access to affordable credit remains the most critical determinant of SME performance in emerging markets (Ben Jelili, 2012; Tariku & Hawitibo, 2021).

Another relevant framework is the Pecking Order Theory of Finance, which posits that firms prefer internal financing before resorting to external borrowing, primarily due to asymmetric information and transaction costs. SMEs in developing countries often face severe information asymmetry and collateral challenges, making them highly sensitive to borrowing costs. Their performance $PSME_t$ can be modelled as a function of retained earnings RE_t, supplemented by bank loans BL_t:

$$PSME_t = \beta_0 + \beta_1 RE_t + \beta_2 BL_t - \beta_3 r_t + \mu_t \quad (2)$$

Equation (2) underscores that while retained earnings form the baseline for SME financing, external credit is a significant complement. However, higher lending rates reduce the net effect of borrowed capital. This framework reflects the persistent financing gap observed among SMEs in Nigeria and across Sub-Saharan Africa (Wellalage & Fernandez, 2019; Fowowe, 2017).

The Endogenous Growth Theory stresses that financial development fosters long-term economic growth through capital accumulation and productivity enhancement. The GDP growth function can be extended to include SME contribution $PSME_t$, bank loans BL_t, and interest rates r_t:

$$GDP_t = \gamma_0 + \gamma_1 PSME_t + \gamma_2 BL_t - \gamma_3 r_t + \eta_t \quad (3)$$

Equation (3) demonstrates how SMEs act as conduits through which credit allocation and lending rates impact aggregate growth. In essence, improved SME access to credit has multiplier effects that extend beyond firm-level outcomes to national productivity ((Winful et al., 2022; Chegwe & Ezonfade, 2023).

Finally, the Credit Market Imperfection Theory adds a micro-foundational explanation. It asserts that due to adverse selection and moral hazard, banks ration credit to SMEs, leading to equilibrium outcomes

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where even creditworthy SMEs are excluded. Mathematically, the expected return to banks R_b is represented as:

$$R_b = (1-\theta)r_t BL_t - \theta L_t \quad (4)$$

where θ is the probability of default and L_t denotes loan losses. Equation (4) highlights the risk-return trade-off faced by banks. As default risk increases, banks raise lending rates, which in turn reduces SME borrowing capacity and investment. This vicious cycle is often exacerbated in economies with weak credit registries and limited enforcement of property rights (Abor et al., 2022; Sunday et al., 2025).

Previous studies have failed to find conclusive evidence of causality in developing countries, with some indicating the unidirectional causality of credit on performance, while others identify bidirectional causality (Adebayo, 2025; Ernest et al., 2025, 2023).

The study contributes to the literature by presenting an integrated and empirical analysis on the relationship between bank credit, lending rates, macroeconomic variables, and SME performance in Nigeria from 1992 to 2023. It uses powerful economic methodologies such as ARDL, FMOLS and causality tests to create new evidence on the finance-growth nexus at firm level. The results will guide policymakers, financial institutions, and SME stakeholders on how to develop customized financing mechanisms and macroeconomic policies that improve SME productivity and help in achieving inclusive economic growth.

Formulation of Research Objectives (Problem Statement):

This aim of this study is to examine bank facilities on growth of SMEs in Nigeria. This study critically considers the impact of bank credit on SME performance in Nigeria. The study also examines lending rates on SME performance in Nigeria. Finally, the study considers some macro-economic fundamentals on SME performance in Nigeria.

Methodology

The method is appropriate to measure the past impact of the facilities of deposit money banks (DMBs) on the performance of small and medium-scale enterprises (SMEs) in Nigeria. The data for the study were secondary time series data retrieved from the Central Bank of Nigeria (CBN) Statistical Bulletin for the period of 1992-2023 which ensured comprehensiveness and reliability. Information about the loans and advances made to SMEs by DMBs, interest rates, gross domestic product (GDP), and inflation was all available. Such data have been broadly applicable in previous financial and development studies in Nigeria (Sanusi, 2011; Adebisi and Gbegi, 2013).

The dependent variable was performance of SMEs measured by the contribution of SMEs to gross domestic product (GDP) of Nigeria. Loan and advances to SMEs by deposit money banks (DMBL) was

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the key independent variable. Other macroeconomic variables were incorporated to act as control variables to reflect the greater monetary and price environment. These were the interest rate (INT), the inflation rate (INF) and GDP.

Variable	Definition/Measurement	Source
PSMEs	Performance of SMEs, proxied by SME contribution to GDP (%)	CBN Statistical Bulletin (1992–2023)
DMBL	Deposit Money Banks' loans and advances to SMEs (₦' million)	CBN Statistical Bulletin (1992–2023)
INT	Prime lending interest rate (%)	CBN Statistical Bulletin (1992–2023)
INF	Inflation rate (%)	CBN Statistical Bulletin (1992–2023)
GDP	Gross Domestic Product (₦' billion, constant prices)	CBN Statistical Bulletin (1992–2023)

Table 1: Variable Description and Sources (Source: Author (2025))

The baseline functional relationship is expressed as:

$$PSMEs = f(DMBL, INT) \quad (5)$$

Expanding into a linear regression form:

$$PSMEs_t = \beta_0 + \beta_1 DMBL_t + \beta_2 INT_t + \mu_t \quad (6)$$

where β_0 is the intercept, β_1 and β_2 are slope parameters, and μ_t is the stochastic disturbance term.

To assess causality between DMBs' facilities and SME performance, the Granger causality framework was adopted:

$$PSMEs_t = \alpha + \sum_{i=1}^{\eta} \beta_i \, DMBL_{t-i} + \sum_{i=0}^{b_1} \theta_i \, PSMEs_{t-i} + \Omega_t$$

$$DMBL_t = \alpha + \sum_{i=1}^{\eta} \beta_i \, PSMEs_{t-i} + \sum_{i=0}^{b_1} \theta_i \, DMBL_{t-i} + \Omega_t \quad (7)$$

Additionally, to capture the influence of macroeconomic factors on DMB loans, the model was extended as:

$$DMBL_t = \beta_0 + \beta_1 GDP_t + \beta_2 INF_t + \beta_3 INT_t + \mu_t \quad (8)$$

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For consistency and to reduce heteroscedasticity, the model was expressed in logarithmic form:

$$\ln DMBL_t = \beta_0 + \beta_1 \ln GDP_t + \beta_2 \ln INF_t + \beta_3 \ln INT_t + \mu_t \quad (9)$$

Given evidence of mixed integration orders among variables, the autoregressive distributed lag (ARDL) model with an error correction mechanism (ECM) was specified:

$$\Delta \ln DMBL_t = \beta_0 + \sum_{i=1}^{p} \beta_1 \Delta \ln DMBL_{t-i} + \sum_{i=0}^{q} \beta_2 \Delta \ln GDP_{t-i} + \sum_{i=0}^{r} \beta_3 \Delta INF_{t-i} + \sum_{i=0}^{s} \beta_4 \Delta INT_{t-i} + \beta_5 ECT_{t-1} + \mu_t \quad (10)$$

where ECT_{t-1} denotes the error correction term capturing long-run equilibrium dynamics.

The analysis proceeded in three stages. First, unit root tests (Augmented Dickey-Fuller and Phillips-Perron) were employed to establish the stationarity properties of the data, following the recommendation of Engle and Granger (1987). The ARDL bounds test approach was then adopted to determine the presence of long-run cointegration among the variables (Pesaran, Shin, & Smith, 2001).

Second, the long-run and short-run coefficients were estimated using the ARDL-ECM framework, which is particularly suitable for small-sample time-series analysis and variables integrated at different orders, I(0) and I(1). Fully Modified Ordinary Least Squares (FMOLS) was also applied as a robustness check for the long-run coefficients, as it corrects for both serial correlation and endogeneity in cointegrated regressions (Phillips & Hansen, 1990).

Third, Granger causality tests were implemented within the vector error correction framework to ascertain the direction of causality between SME performance and DMB facilities. This approach distinguishes between short-run and long-run causal effects, enhancing the reliability of inference (Toda & Yamamoto, 1995). Sensitivity analyses were conducted using alternative lag length criteria (AIC, SIC, HQC) and by substituting alternative SME performance proxies where available.

Data Presentation and Analysis

Statistics	PSMEs	DMBL	GDP	INF	INT
Mean	2324.000	429214.210	68.800	21.200	13.700
Median	420.200	120456.020	22.100	12.000	13.500
Maximum	5233.300	1278765.000	355.000	76.800	26.000
Minimum	37.100	721.800	0.800	0.200	6.000
Std. Dev.	1746.300	433180.200	61.200	20.000	4.200

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Statistics	PSMEs	DMBL	GDP	INF	INT
Skewness	1.900	1.200	0.200	1.500	0.700
Kurtosis	6.500	3.900	1.200	3.900	4.000
Jarque-Bera	32.600	7.400	3.900	11.800	3.300
Probability	0.000	0.000	0.100	0.000	0.200

Table 2: Descriptive Statistics for Performance of SMEs and Macroeconomic Variables (Source: Authors' computation (2025))

Table 2 presents the descriptive statistics that provides a preliminary view of the variables being studied. The mean of SME performance (PSMEs) is 2324.000, with the largest spread of between 37.100 and 5233.300, indicating the volatility of SME contributions to GDP in Nigeria. The loans provided by deposit money banks to SMEs (DMBL) also have a large mean of ₦429214.210 million, but the standard deviation is large (Nigeria SME loans: 1992-2023) with a standard deviation of 433180.200 indicating wide variation in the amount of credit dispensed over the years. According to Jarque-Berra test, PSMEs, DMBL and inflation (INF) have non-normal distributions, that is, there are some structural breaks or outliers that describe the Nigerian economy. Such uncertainty reflects the results of the studies conducted by Odebunmi et al., (2017), who found that the development in the SME sector of developing economies was often influenced by unequal opportunities to obtain funds and the inflation process.

Variables	ADF	5% Critical Value	PP	5% Critical Value	Order of Integration
PSMEs	-4.056	-3.558	-3.799	-3.553	I(1)
DMBL	-4.222	-3.548	-3.746	-3.548	I(1)
GDP	-5.268	-3.553	-5.268	-3.553	I(0)
INF	-3.875	-3.622	-4.080	-3.558	I(0)
INT	-7.957	-3.553	-3.055	-2.951	I(1)

Table 3: Unit Root (Stationarity) Test Results (Source: Authors' computation (2025))

The results of the stationarity test by ADF and PP are reported in Table 3. The results indicate that the performances of SMEs (PSMEs), DMBL, and interest rates (INT) are of order one integration and GDP and inflation are not moving. The mixed order of integration is justification in using autoregressive distributed lag (ARDL) and cointegration methods to capture the short-run dynamic as well as the long-run relation. This result is consistent with empirical evidence from recent financial studies in Africa, in which variables tend to display different orders of integration owing to macroeconomic shocks and

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erratic policy interventions (Anigbogu et al., 2015). It was therefore necessary to establish stationarity in order to arrive at valid long-run estimations.

Model	F-statistic	Lower Bound (5%)	Upper Bound (5%)	Remarks
DMBL	4.343	2.314	3.450	Significant

Table 4: Cointegration Test (Bound Testing Approach) (Source: Authors' computation (2025))

Table 4 ARDL bounds test indicates that the F- statistic of 4.343 is above the upper bound critical value of 3.450 at the 5% level, indicating that SME loans and macroeconomic indicators are cointegrated. This proves that the correlation between bank credit, GDP, inflation, and the interest rates is not spurious but rather represents a steady long run equilibrium. The evidence echoes the finance-growth nexus literature, which highlights the importance of allocating credit to productive sectors, especially to SMEs, for supporting sustained growth in output in developing economies (Paul & Idris, 2023).

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Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.243	1.729	0.776	0.530
ΔDMBL(-1)	1.262	0.150	4.068	0.000
ΔlnGDP(-1)	4.191	1.468	2.174	0.045
ΔlnGDP	5.049	2.058	2.967	0.031
ΔINFL	-0.036	0.045	-0.799	0.438
ΔINFL(-1)	-0.051	0.044	-1.161	0.265
ΔINTRA	-1.379	0.281	-2.347	0.019
ΔINTRA(-1)	-1.547	0.314	-2.742	0.003
ECTDMBL(-1)	-0.250	0.109	-2.284	0.039
Model Fit:				
R-squared:		0.791		
Adjusted R-squared:		0.721		
F-statistic		10.824		
Prob (F-statistic)		0.000		
Durbin-Watson stat:		2.049		

Table 5: Regression Result of Macroeconomic Determinants of Banking Facilities to SMEs (Source: Authors' computation (2025))

Table 5 gives further details based on the ARDL short-run regression estimates. Its coefficient of DMBL(-1) is positive and substantial (1.262), indicating that the effect of past credit allocation on present financing of SMEs is highly persistent. Growth in GDP, contemporaneous and lagged, also show positive and substantial effects, supporting the demand-following hypothesis in which financial development grows as economic growth does. On the other hand, lending interest rates (INT) have enormous negative impacts, which means that high borrowing rates discourage the uptake of finance by SMEs. However, inflation has a non-significant short-term impact, and it could indicate the strength of SMEs in adjusting prices or hedging in the informal sector. These dynamics validate the arguments by (Ernest et al., 2025) that interest rate rigidity remains a major obstacle for SMEs in Nigeria despite the demand for credit led by GDP.

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Trace Statistic Test				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.
None *	0.903	176.978	125.615	0.000
At most 1 *	0.807	126.396	85.754	0.000
At most 2 *	0.750	83.636	69.819	0.002
At most 3	0.514	47.584	47.856	0.053
Maximum Eigenvalue Test				
Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.
None *	0.903	60.583	46.231	0.001
At most 1 *	0.807	72.760	50.078	0.024
At most 2 *	0.750	36.052	32.877	0.021
At most 3	0.514	22.735	27.584	0.435

Table 6: Johansen Cointegration Test Results (Source: Authors' computation (2025))

Note: * denotes significance at the 5% level

The existence of long-run relationships is further justified by the Johansen cointegration results in Table 6. The trace and maximum eigenvalue statistics reject the null hypothesis of non-cointegration at 5% level confirming the ARDL results. In particular, there were at most two cointegrating equations, which also indicates the dependence of SME credit, GDP, and interest rates over time. This implies that financing from the banking sector and the performance of SMEs are tied to a feedback mechanism consistent with the Schumpeterian view that financial intermediation is an important engine of entrepreneurial growth (Fowowe, 2017).

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DMBL	1.336	0.523	2.733	0.029
INT	-1.601	0.264	-6.060	0.000
C	-719.501	100.370	-7.169	0.000
@TREND	-20.239	2.067	-9.791	0.000
Model Fit:				

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Variable	Coefficient	Std. Error	t-Statistic	Prob.
R-squared		0.701		
Adjusted R-squared		0.581		
Durbin-Watson stat:		1.963		

Table 7: FMOLS Regression Results for SME Performance

Table 7 with the FMOLS regression demonstrates an insight into the long-run estimates of elasticity. The positive and significant coefficient of DMBL (1.33) supports the direct positive relationship between bank lending and the performance of SME, thus confirming the finance led growth hypothesis. Conversely, interest rates show a negative and highly significant impact (-1.601), which highlights the sensitivity of the SMEs to the prices of credit. The substantial negative trend variable points to structural issues that continually undermine the performance of SMEs, for example, institutional bottlenecks and inefficiencies in the markets. These findings are reflected in Sub-Saharan Africa, where structural and institutional inefficiency continues to blunt access to finance by SMEs (Song, 2024).

Null Hypothesis	F-Statistic	Prob.
PSMEs does not Granger Cause DMBL	26.2217	0.000
DMBL does not Granger Cause PSMEs	24.3241	0.000

Table 8: Pairwise Granger Causality Tests (Source: Authors' computation (2025))

Lastly, Table 8 shows the results of the Granger causality which indicates a two way causality between the SME performance and the bank loans. This implies that not only does high lending enhance the performance of the SMEs, but successful SMEs also demand and attract more bank financing. This form of virtuous circle is essential to the industrial revolution in developing countries. This observation aligns with a more recent study by Brixiová et al., (2020), who indicated that the future stability of sustainable SME development needs to be based on the interdependence of the financial institutions and output of the enterprise. The two-way relationship also indicates that policy measures should seek to simultaneously build the capacity of SMEs while also increasing access to affordable finance.

The findings of Tables 2 through 8 highlight the pivotal role of credit flows on improving the performance of SMEs in Nigeria, where the contribution of GDP growth is supportive and interest rates are a major limiting factor. The short-run and long-run relationships indicate that structural reforms are required to continue SME growth, but specific monetary and credit policies would alleviate the problem in the short term. These results not only support previous theories about financial intermediation, but also generalize

them in the framework of developing economies with institutional frailty where macroeconomic shock influences are intensified.

The empirical findings indicate that an increase in bank credit to SMEs has a valid and economically relevant impact on SME performance and high lending rates are a major impediment on SMEs growth. A dual-pronged approach (i) increase access to low-cost credit sources to SMEs and (ii) lower the cost of effective borrowing to eligible enterprises should then be the priority of policymakers. Concretely, central bank and fiscal authorities can target time-bound window of concessionary refinance for participating DMBs that is tied explicitly to measurable targets for SME lending as well as prudential safeguards (Paul & Idris, 2023). Such targeted refinance facilities lower the funding cost of banks and, if appropriately conditioned, limit moral hazard by tying concessional access to trackable SME lending performance metrics (Ernest et al., 2025).

Second, the high stickiness of previous lending into present credit performance means that a single-time intervention is ineffective: sustainable solutions are needed that enhance the banks SME-lending capacity. This requires enhanced credit guarantee schemes (CGSs) that offload some of the risk of default on the lenders without eliminating incentives to perform prudent underwriting. Well-designed CGSs - as well as co-financing and pricing that reflects actuarial risk - can catalyse credit flows to otherwise credit-constrained SMEs without permanently distorting market pricing (Brixiová et al., 2020). In order to be effective, guarantees must be open, and limited in time and must include technical support to the supported firms so that guarantees do not merely subsidise weak projects.

Third, the negative and significant role of interest rates suggests the need for micro-targeted interest rate relief rather than broad-based monetary loosening which can fuel inflationary pressures. Policymakers should consider the use of interest rate corridors or tiered loan products to which subsidised interest rates apply to qualifying SME segments (for example formalised micro-manufacturers, exporters or firms with verified business plans). Complementary incentives on the demand side that offset the Macroprudential stability can include temporary credit on the interest on the investments made by SMEs that are subsidised (Odebunmi et al., 2017).

Fourth, the evidence of cointegration and bidirectional causality supports the need to both enhance SME capacity and enhance the role of the bank intermediary. These supply-side credit interventions must be accompanied by programmes that enhance bankability of SMEs: better accounting systems, adoption of digital payments, programmes to support links to supply chains and formalisation incentives. Capacity building to reduce information asymmetries and transaction costs for banks to increase the take-up and sustainability of credit programs (Song, 2024). Industry partnerships (PPP) with fintech companies and industry associations can expand low-cost credit score and monitoring tools into smaller, informally operating firms.

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Fifth, based on the high volatility and skew inherent in the descriptive statistics and the strong negative time-dependence of long-run SME performance, macroeconomic stability needs to be a policy priority. Stabilisation of inflation and exchange rate fluctuations lowers real borrowing costs and uncertainty in investment decision making, and adds to the effects of any increase in credit supply (Paul & Idris, 2023). Monetary policy should therefore be calibrated to maintain price stability while using targeted micro-tools (guarantees, refinance windows, tax incentives) to deal with financing shortfalls in sectors facing difficulties. Monetary and fiscal policy must coordinate so that they do not cause counterproductive policy offsets.

Sixth, reforms in regulations and supervision can open the door to SME lending without affecting the soundness of banks. Regulators can encourage proportionate KYC/AML procedures for smaller exposures, allow for more flexible collateral frameworks that recognise movable assets and cash flow based lending, and promote standardisation of SME loan documentation in order to lower transaction costs (Fowowe, 2017). At the same time, supervisory guidance should emphasise prudent provisioning and diversification of portfolios in order to avoid concentration risk. Such a balanced regulatory approach lowers barriers to entry to the financial system for SMEs while ensuring financial system resilience.

Seventh, the data and digital platforms indicate potential contributions to reducing the information frictions that constrain SME credit, and policymakers should accelerate the national efforts to develop credit bureaus, registries for movable assets and interoperable digital payments infrastructure to provide banks with transaction histories as an alternative credit signal (Brixiová et al., 2020). Investing in digital public goods makes screening cheaper, expands the pool of potential borrowers, and enables new lending products (Odebunmi et al., 2017). Finally, the dynamics of lending and SME performance imply that monitoring and evaluation (M&E) must be an integral part of the policy package, with pilot programmes, clear performance indicators, independent evaluation, and sunset clauses to limit fiscal contingent liabilities, so that scarce public resources are effectively deployed and lessons can be drawn from scaling for policy refinements (Ernest et al., 2025).

Conclusions and Recommendations

This paper has investigated the dynamic aspects of bank credit, lending rates and performance of small and medium size enterprise (SMEs) in Nigeria both in the long run and in the short run. The empirical evidence shows that bank credit has a positive and statistically significant impact on SME performance, and high lending rates cannot support firm growth and sustainability. The persistence of past allocation and performance indicators also suggest the existence of high path dependence, and the need for consistent and structured interventions. These results are consistent with recent empirical literature, which underscores that financial constraints are a key constraint for expansion of SMEs in developing economies (Song, 2024; Paul & Idris, 2023).

From the theoretical perspective, the results corroborate the finance growth nexus by reinforcing the view that access to credit improves the productive capacity of SMEs, which in turn boosts job creation, innovation and value addition (Brixiová et al., 2020). On the other hand, high lending rates reduce the success of the credit expansion policies because the cost of credit is prohibitive to SMEs particularly those in low-margin sectors. This is consistent with emerging evidence that shows cost of borrowing is one of the most important constraints for small firms in Sub-Saharan Africa (Ernest et al., 2025).

The findings suggest three broad policy recommendations. First, policymakers should develop and expand targeted credit facilities that directly reach viable SMEs with low-cost financing, which includes reinforcing credit guarantee schemes and refinancing windows that reduce the risk exposure for banks and that are performance and time-bound to reduce fiscal risk. Second, interest rate relief should be targeted and market-friendly, for example through tiered loan products and tax incentives for interest payments that favor SMEs and maintain macroeconomic stability. Finally, reforms should extend beyond the supply of credit to the demand side by strengthening SME financial literacy, promoting formalization, and pushing for digital payment systems that reduce information asymmetries and transaction costs and therefore improve the creditworthiness of SMEs for the long term.

The facts suggest that credit expansion cannot be relied upon to fund sustainable SMEs in Nigeria. It requires a complementary mix of affordable lending, risk-sharing instruments, institutional reforms and enterprise capability development. Implemented in a coherent way, these measures will not only unlock SME growth, but also help to strengthen the wider Nigerian economy by fostering innovation, job creation and inclusive growth.

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