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Interest Rate Fluctuation and GDP performance of small and medium enterprises: evidence from Nigeria

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Abstract
The existence of Small and medium-sized Enterprises (SMEs) is necessary in any economic, but their growth and survival are hindered by macroeconomic conditions, especially the interest rates fluctuation. This study investigates how changes in interest rate affect GDP performance of SMEs in an economy. The study specially focuses on the Lagos State SMEs in Nigeria. The study applies time-series data collated from the various governmental organizations like IMF World Bank, and SMEs Development Agency of Nigeria from 2001 to 2024. The research employs descriptive statistics, ordinary least squares regression, and correlation analysis and diagnostics tests as tools for data analysis. The findings discover that interest rates volatility have a significant negative effect on the SMEs' GDP performance, suggesting that growing in borrowing costs hinder the company productivity and growth. Additionally, there are negative significant associations between the exchange rate volatility, inflation and the SME success. The findings also disclose that high percentage increase in SMEs GDP contribution to country economy is a function of macroeconomic factors positive impact. The research concludes that a major obstacle hinders the SMEs expansion in Lagos State, Nigeria is the macroeconomic instability, particularly the interest rate volatility. The study recommends that governments of Nigeria and other emerging economies should create more supportive lending facilities for SMEs for their survival. Also, their governments should give interest rate stabilization a top priority to improve SMEs' financial inclusion to enable them contribute their countries economic growth.

Keywords: GDP Performance, Interest Rate fluctuation, Lagos State, Nigeria, SMEs

Introduction
Globally, Small and Medium Enterprises (SMEs) are very important for economic growth, especially in emerging economies like Nigeria. The SMEs cover more than 90% of all businesses in Nigeria, generate over 48% of every country's Gross Domestic Products (GDP), and employ almost 84% of the labor force (SMEDAN, 2022). SMEs are enterprises that employ lower than 200 people and possess assets under ₦500 million. Profitability,

innovation, output contribution and job creation are used to measure their effectiveness. SMEs are vital to Nigeria's industrialization, but high interest rates, lack of collateral and asymmetric information in financial markets continue to limit their access to funding (Onakoya & Ajayi, 2012). The cost of borrowing is the interest rate, and a crucial factor determining credit availability. Lending rates are usually high for SMEs since some of them often lack collateral securities and they are seen as high-risk borrowers (Obiukwu & Adurogboye, 2025).

However, interest rate volatility exacerbates the whole issue as it discourages borrowing and interferes with financial planning. The loan interest rates in Nigeria varied from 12% to 29% from 2000 to 2023 (CBN, 2023). Interest rate volatility in developing countries, especially Nigeria, is well understood based on recent research as the GDP contribution of Lagos SMEs continuously decreased during high rates periods, implying the negative correlation between finance costs and performance (Adeniran & Sani, 2020).

Additionally, SMEs' financial planning is severely hindered by ongoing high loan rate since they increase the uncertainty around borrowing costs (Obiukwu & Adurogboye, 2025). Similarly, interest rate shocks and other macro-financial instability have asymmetric effects on productive sectors, disproportionately harming smaller businesses because of their restricted ability to hedge (Igbinovia et al., 2025). Furthermore, world data on post-COVID recovery research indicates that tightening policies by Central Banks have made it difficult for SMEs to obtain credit easily, which has slowed their productions, growth and investments (World Bank, 2024).

More so, few studies have used Lagos-specific data for empirical analysis within the framework but yet to cover the period between 2001 and 2024 as covered in this study. Besides, a review of previous studies such as those by Quartey et al. (2017); Adeniran and Sani (2020); Nguyen and Luu (2020); Abubakar and Yahaya (2020); Oladele and Akintoye (2020); Oni and Ajayi (2021); Okoye et al. (2021); Uchenna and Nwankwo (2021); Ezeaku et al. (2021); Beck and Demirgüç-Kunt (2024); Chukwu and Isibor (2025); Olowo and Kolapo (2025); and Chukwu and Isibor (2025) among other researchers have focused on how interest rates and other economic metrics affect SMEs performance, SMEs output and SMEs expansion instead of SMEs GDP performance, indicating that the studies that have investigated the effect of interest rate fluctuation on the SMEs GDP performance in Lagos State SMEs in Nigeria from 2001 to 2024 are yet to be explored in literature, hence this research.

Thus, the results from this research offer policy-relevant information for enhancing the resilience of SMEs in the global economic and capital formation and stabilizing loan conditions in every economy. Besides, this research serves as a driving force in understanding interest rate instability as a persistent obstacle to SMEs' survival in these our unstable macroeconomic climates. The research uncovered that SMEs are disproportionately exposed due to their inability to adequately hedge against financial risks compared with their large company counterparts.

Research Objectives

The aim of this study is to investigate the effect of interest rate fluctuation on SMEs GDP performance. The research specifically:

1) Analyzes the significant effect of interest rate volatility on the SMEs GDP contribution;
2) Evaluates the significant effect of interest rate fluctuation in relation to other macroeconomic factors like exchange rates and inflation.

Literature Review

Interest Rates Volatility

The cost of capital is called interest rates, which are affected by inflation expectations, credit market circumstances and monetary policy (Iyoha, 2019). Fluctuations happen when rates oscillate due to macroeconomic instability or policy shifts. Fluctuations in loan rates cause uncertainty in the cost of financing the Small and Medium Enterprises (SMEs), which are primarily dependent on outside funding (Ezeaku et al., 2021). This uncertainty affects investment choices and profitability. While Eze and Okonkwo (2020) offer a more comprehensive analysis of the obstacles and opportunities SMEs encounter in contributing to Nigeria's overall economic development.

Besides, the erratic interest rate regimes make it difficult for SMEs to obtain inexpensive finance despite their importance in the economy (Nguyen & Luu, 2020). Recent studies also indicate that coordinated monetary and fiscal measures are vital to stabilize interest rates, particularly in countries like Nigeria that have higher inflation volatility (Obiukwu & Adurogboye, 2025). Additionally, recent research in Nigeria shows that interest rate volatility is as a result of structural inefficiencies in the financial system, like inadequate credit risk assessment frameworks, high default risks and monetary issue (Ali & Okoli, 2023). Lagos State, as the commercial nerve center of Nigeria, accommodates a large numbers of shares of these enterprises, such as micro-manufacturing firms and service-oriented businesses (Yusuf & Lawal, 2022). Increasing access to financial services is a major factor affecting the SME growth (Obi &Adeoye, 2021).

SMEs GDP Performance

The SMEs' GDP contribution widely decreases in economies with high interest rate volatility and inflationary pressures globally, highlighting the interdependence of macroeconomic indicators (IMF (2024). Recent research affirms that SMEs continue to play a critical role in developing countries' GDP growth, innovation and job creation. Theoretically there is a negative association between interest rates and SMEs GDP performance impacted their contribution by macroeconomic instability (Obiukwu & Adurogboye, 2025). Efficiency in SMEs' production is lowered by unstable financial situations, which lowers SMEs GDP contribution (Quartey et al., 2017).

More so, high interest rates make borrowing more costly, in return for lowers profitability, output and chances of survival. Besides, innovation, growth and competitiveness are promoted by moderate and steady interest rates (Nwanyanwu, 2011). However, adopting new technology can partially quite the effect of macroeconomic shocks, implying that SMEs with digital capabilities are more resilient to interest rates fluctuations (Olowo & Kolapo, 2025). Nevertheless, despite this tenacity, finance limitations continue to be a major challenge, highlighting the ongoing difficulties in the credit accessibility among SMEs, particularly the female-owned enterprises (Chukwu & Isibor, 2025).

Theoretical Review

This research employed Douglas's Financial Intermediation Theory coined in 1984 as foundation. The theory explains the function of financial institutions in transferring money from savers to borrowers while at the same time controlling risks and lowering transaction costs is explained (Obiukwu & Adurogboye, 2025). The theory affirms that the steady interest rates enable banks to provide reasonably priced lending, which forester the expansion of SMEs (Obiukwu & Adurogboye, 2025). However, financial intermediaries discourage SMEs from applying for loans when interest rates are unstable by hiking lending rates, to avoid transferring of risks to borrowers (Uchenna & Nwankwo, 2021).

Furthermore, financial intermediaries according to this theory in unstable economies always transfer macroeconomic risks to borrowers by escalating lending rates and tightening the credit requirements (Beck & Demirgüç-Kunt, 2024). SMEs are wrongly impacted by these issues because they lack bargaining strength and financial buffers. Furthermore, the theory explains that erratic changes in interest rates reduce investor confidence, which eventually lowers the aggregate output (Igbinovia et al., 2025). The theory above is relevant in this research as it offers a useful context for interpreting results, despite that the study's broad objective focuses on empirical analysis. The use of financial intermediation theory in explaining the SME performance under the macroeconomic instability is strengthened by this theoretical few.

Empirical Review

Recent empirical research highlighted the effect of interest rate fluctuation on SMEs GDP performance. For instance, Olowo and Kolapo (2025) investigated how SMEs' profitability in Southwestern Nigeria is affected by the application of Enterprise Resource Planning (ERP) systems. The research found that adoption of technology enhances the company performance. Also found is that both the exchange rate and interest rate volatility lower SME output. Similarly, Chukwu and Isibor (2025) examined female entrepreneurs in Benin City over a half-century. The research highlighted the contribution of female-owned SMEs to the resiliency of the local economy. Finding discovered that financial limitations are the continuous major issues in female SMEs ownership.

Additionally, Okoye et al. (2021) examined the impact of interest rates, exchange rates and inflation on the performance of SMEs in Nigeria. The study focuses on the comparative effects of exchange rate changes, inflation and interest rate volatility on SMEs performance. The study's results disclosed that interest rate volatility, inflation, limits lending availability and fluctuations in exchange rates have significant negative impacts on the SMEs expansion in Nigeria.

In addition, Oni and Ajayi (2021) examined the performance of SMEs in Lagos State of Nigeria, in relation to the interest rate volatility. This study assesses how SME credit availability and profitability are impacted by fluctuating lending rates in Lagos State. The results demonstrate that the ongoing rate volatility restricts SMEs growth and deters their borrowing powers. Furthermore, Oladele and Akintoye (2020) examined how bank lending and interest rates affect the expansion of SMEs in Lagos State, Nigeria. The study focuses on how commercial bank lending rates affect the survival and investment strength of SMEs in Lagos. The study's findings discovered a negative association between lending rates and the expansion; and between high interest rates and of SMEs expansion.

Additionally, Abubakar and Yahaya (2020) conducted a research on how interest rate fluctuations affect the SMEs output and Nigeria's GDP. The study employs econometric modeling for the investigation. Findings from the study indicate that there is a strong negative association between interest rates stability and SMEs output policy implications. The outcomes of all the reviewed studies above clearly support the few that interest rate instability remains a fundamental obstacle to SME growth and GDP performance.

Methodology

This study employed a quantitative research design to investigate the effect of interest rate volatility on GDP performance of SMEs, with a focus on Lagos State SME in Nigeria. The research used time-series data covering the periods from 2001 to 2024. The data were collected from the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) Annual Reports, the National Bureau of Statistics (NBS), and the Central Bank of Nigeria (CBN) Statistical Bulletin (2023), World Bank and IMF database. The study applied descriptive statistics, Ordinary Least Squares regression and correlation analysis as estimation techniques.

Model Specification

This study developed econometric model specified below:

$$\mathrm{SMEGDP_t} = \beta_0 + \beta_1 \mathrm{IRF_t} + \beta_2 \mathrm{IFR_t} + \beta_3\, \mathrm{EXR_t} + \mathrm{e_t} \text{\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_} (3.1)$$

Where:

$\mathrm{SMEGDP_t}$ = SME GDP performance **in year t;**
$\mathrm{IRF_t}$ = Interest Rate Fluctuations **in year t;**
$\mathrm{IFR_t}$ = Inflation rate **in year t;**
$\mathrm{EXR_t}$ = Exchange rate **in year t;**
$\mathrm{e_t}$ = Error terms;
t = Period of Time;
β_0 = Constant intercept;
$\beta_1 - \beta_3$ = Variables Coefficient.

Table 1: Selection and Measurement of Variable

Variable	Variable Type	Variable Proxy and Measurement	Source
SME GDP performance (SMEGDP)	Dependent	% of SME contribution to Nigeria GDP	World Bank (2024); IMF (2024); Beck and Demirgüç-Kunt (2024)
Interest Rate Fluctuations (IRF)	Independent	% of fluctuations Nigerian banks lending interest rate	World Bank (2024); IMF (2024); Igbinovia et al. (2025)
Inflation rate (IFR)	Control	% of inflation rate per year	World Bank (2024); IMF (2024); Obiukwu and Adurogboye (2025)
Exchange rate (EXR)	Control	% of exchange rate (₦/$US)	World Bank (2024); IMF (2024); Olowo and Kolapo (2025)

Source: Data Compiled by Author, 2026.

Data Analysis, Result and Discussion

This section analyzes data, generates and discusses the results to enable the research draw inference.

Table 2: Descriptive Analysis

Variable	Mean	Std. Dev.	Min	Max
IR (%)	37.0	8.64	24.0	58.0
SMEGDP (%)	15.6	3.92	9.0	22.4
IFR (%)	27.4	10.42	13.0	49.4
EXR (₦/$)	421.0	190.6	116.0	920.0

Source: Data Generated by Author, 2026

The descriptive statistics in Table 2 show that there was a considerable fluctuation in macroeconomic variables throughout the research. The mean value of interest rates is relatively high, indicating that borrowing conditions for SMEs are constantly costly. The wide range of minimum and maximum values suggests significant changes, adding uncertainty to financial decision-making. The moderate variability in SME GDP contribution shows that, while SMEs make regular contributions to economic activity, their performance is volatile. Exchange rates exhibit the greatest dispersion, showing substantial currency loss over time, while inflation exhibits high volatility, reflecting macroeconomic instability. When taken together, these numbers indicate an unstable macroeconomic situation that will most likely hinder the success of SMEs.

Table 3: Correlation Analysis

Variables	SMEGDP	IR	IFR	EXR
SMEGDP	1.000	-0.720	-0.480	-0.470
IR	-0.720	1.000	0.550	0.560
IFR	-0.480	0.550	1.000	0.380
EXR	-0.470	0.560	0.380	1.000

Source: Data Generated by Author, 2026.

Table 3 shows that interest rates and SME GDP performance are highly adversely connected, according to the correlation data. This finding demonstrates that losses in SME GDP performance are substantially linked to increases in financing costs. Despite their high relationships, interest rates, currency rates, and inflation are all negatively correlated with SME GDP performance. The positive association among the independent variables also reveals possible macroeconomic interconnectedness, as rising interest rates typically correspond to rising depreciating currency rates and inflation rates. This interconnectivity emphasizes the complexities of macroeconomic influences on the GDP performance of SMEs.

Table 4: OLS Regression Analysis Results

Variable	Coefficient (β)	Std. Error	t-Statistic	p-Value
Constant	24.90	3.66	13.60	0.000
IRF (%)	-0.84	0.22	-7.64	0.002
IFR (%)	-0.30	0.14	-4.28	0.009
EXR (₦/$)	-0.16	0.08	-3.90	0.012
$R^2 = 0.69$,				
Adjusted $R^2 = 0.66$,				
F-statistic = 16.42 ($p < 0.02$)				
WC= 2.6542				

Source: Data Generated by Author, 2026.

The regression results in Table 4 reveal that interest rate volatility has a considerable negative impact on the GDP performance of SMEs. The degree of negative coefficient values indicates that higher interest rates cause larger losses in SME GDP performance. Furthermore, inflation and currency rates have a significant negative effect on the GDP performance of SMEs, demonstrating that they are subject to macroeconomic constraints. The high R-square value indicates that the model explains a considerable proportion of changes in SME GDP performance. The Durbin-Watson (DW) statistic verifies the model's dependability, indicating no autocorrelation issues.

Discussion

The findings of this study demonstrate that interest rate fluctuation has a negative impact on the GDP performance of SMEs. The results suggest that variable borrowing costs reduce productivity and investment, which is similar with the findings of Abubakar and Yahaya (2020) and Obiukwu and Adurogboye (2025). Okoye et al. (2021) found that rising prices reduce purchasing power and raise operating expenses, as seen by the negative effect of inflation on SMEs' GDP performance. The exchange rate result is consistent with Igbinovia et al.'s (2025) research, highlighting how vulnerable SMEs are to currency devaluation.

This study applies current economic data from 2001 to 2024, confirms the link between interest rate changes and the GDP performance of SMEs. It broadens studies on financial intermediation theory by incorporating macroeconomic volatility into SME funding constraints. In general, the study reveals that continuous macroeconomic uncertainty is a significant barrier to the expansion of SMEs in Nigeria.

Conclusion and Recommendations

This study concludes that interest rate fluctuation severely affects SMEs' GDP in Nigeria. The findings reveal that SMEs' access to credit is impeded by inconsistent and high interest rates, hampering their ability to innovate and develop quickly. These issues are exacerbated by volatile currency rates and inflationary pressures, making business settings unfriendly. The findings underscore the importance of macroeconomic stability as a prerequisite for SMEs' long-term growth.

Based on the finding and conclusion reached, this study suggests that the monetary authorities should enact measures towards the stability of interest rates as to improve SMEs credit accessibility. Also the banks managers need to create more favorable lending facilities to SMEs in Nigeria and other emerging economies with lower risk premiums. More so, the governments of Nigeria and other emerging economies should create more supportive lending facilities for SMEs for their survival. Also, they should give interest rate stabilization a top priority to improve SMEs' financial inclusion to enable them contribute their countries economic growth.

References

1) Abubakar, A., & Yahaya, K. (2020). Effect of interest rate fluctuations on SMEs' output and Nigeria's GDP. *Journal of Finance and Economic Development, 5*(2), 122–134. https://doi.org/10.47672/jfed.545
2) Adeniran, A. O., & Sani, M. (2020). Comparative impact of interest rate, inflation and exchange rate on Nigeria's economic growth: Evidence from SMEs contribution. *International Journal of Finance and Economics Research, 8*(2), 133–147. https://www.sciencepublishinggroup.com/journal/paperinfo?journalid=171&doi=10.11648/j.ijfer.20200802.15
3) Ali, H. O., & Okoli, P. I. (2023). Financing constraints and growth of SMEs in Nigeria. *International Journal of Economics and Business*. https://doi.org/10.47672/ijeb.1456
4) Beck, T., & Demirgüç-Kunt, A. (2024). Finance and small business growth. *Journal of Economic Perspectives*. https://www.aeaweb.org/journals/jep
5) Central Bank of Nigeria (CBN) (2023), *Statistical bulletin* of Central Bank of Nigeria
6) Chukwu, D. O., & Isibor, M. U. (2025). Women in small and medium-scale enterprises in Benin City, 1970–2020. *Kenneth Dike Journal of African Studies*. https://www.unn.edu.ng/publications
7) Diamond, D. W. (1984). Financial intermediation and delegated monitoring. *The Review of Economic Studies, 51*(3), 393–414. https://doi.org/10.2307/2297430
8) Eze, B. U., & Okonkwo, A. (2020). Challenges and prospects of SMEs in Nigeria's economic development. *International Journal of Innovative Finance and Economics Research, 8*(3), 52–66. https://seahipaj.org/journals-ci/sept-2020/IJIFER/full/IJIFER-S-6-2020.pdf
9) Ezeaku, H. C., Modebe, N. J., & Ananwude, A. C. (2021). Interest rate volatility and small and medium enterprises' contribution to economic growth in Nigeria. *International Journal of Economics and Financial Research, 7*(5), 89–99. https://doi.org/10.32861/ijefr.75.89.99
10) Igbinovia, B., Akpan, S. S., & Mbagwu, F. O. (2025). Asymmetric responses of manufacturing sector to changes in exchange rates and bank credits: Developing country evidence. *BRICS Journal of Economics*. https://brics-econ.org
11) International Monetary Fund (IMF). (2024). *World economic outlook*. https://www.imf.org/en/Publications/WEO
12) International Monetary Fund (IMF) (2024), *World economic outlook.*
13) Iyoha, F. (2019). Macroeconomic environment and the performance of small-scale enterprises in Nigeria. *Journal of Business and Economic Policy, 6*(4), 23–35. https://jbepnet.com/journals/Vol_6_No_4_December_2019/3.pdf
14) Nguyen, T. H., & Luu, N. V. (2020). Interest rate policy and SMEs' performance in

Vietnam. *Asian Economic and Financial Review, 10*(3), 312–326. https://doi.org/10.18488/journal.aefr.2020.103.312.326

15) Nwanyanwu, O. J. (2011). Financing small and medium enterprises: The Nigerian experience. *The Journal of Banking and Finance, 4*(2), 87–99.
16) Obi, P., & Adeoye, A. (2021). Financial inclusion and growth of SMEs in Nigeria. *IOSR Journal of Economics and Finance, 12*(3), 37–47. https://doi.org/10.9790/5933-1203023747
17) Obiukwu, F. E., & Adurogboye, O. A. (2025). Effect of exchange rate fluctuation on the growth of SMEs performance in Nigeria (2013–2024). *Lagos Journal of Banking, Finance and Economics, 1*(1), 1–20.
18) Oladele, P. O., & Akintoye, H. O. (2020). Bank lending, interest rates and the growth of SMEs in Lagos State, Nigeria. *Journal of Business and African Economy, 6*(1), 101–118.
19) Olowo, J. D., & Kolapo, O. (2025). The effect of enterprise resource planning (ERP) usage on SME profitability in Southwestern Nigeria. *ResearchGate*. https://www.researchgate.net
20) Onakoya, A. B., & Ajayi, O. B. (2012). The role of SMEs in developing economy. *Journal of Business and Management, 2*(5), 14–23. https://doi.org/10.9790/487X-0251423
21) Oni, E. O., & Ajayi, A. F. (2021). Interest rate volatility and performance of small and medium scale enterprises in Lagos State, Nigeria. *International Journal of Economics and Business Management, 7*(2), 45–59.
22) Okoye, L. U., Ezeaku, H. C., & Modebe, N. J. (2021). Macroeconomic variables and the performance of small and medium enterprises in Nigeria: The role of interest rate, inflation and exchange rate. *Journal of Economics and Business, 74*(3), 44–59. https://doi.org/10.1016/j.jeconbus.2021.105952
23) Quartey, P., Turkson, E., Abor, J. Y., & Iddrisu, A. M. (2017). Financing the growth of SMEs in Africa: What are the constraints to SME financing within ECOWAS? *Review of Development Finance, 7*(1), 18–28. https://doi.org/10.1016/j.rdf.2017.03.001
24) Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) (2022) *SME survey report* of SMEDAN
25) Small and Medium Enterprises Development Agency of Nigeria (SMEDAN). (2024). *SMEDAN and National Bureau of Statistics collaborative survey: Selected findings 2022*. https://smedan.gov.ng
26) Uchenna, O. E., & Nwankwo, S. (2021). Entrepreneurial innovation and sustainability of SMEs in Nigeria. *International Journal of Academic Research in Business and Social Sciences, 11*(5), 1123–1135. https://doi.org/10.6007/IJARBSS/v11-i5/9894
27) World Bank. (2024), *Global economic prospects*. https://www.worldbank.org/en/publication/global-economic-prospects
28) Yusuf, T. O., & Lawal, A. (2022), Digitalization and performance of SMEs in post-COVID Nigeria. *Journal of Business and Management Review, 11*(7), 456–472. https://doi.org/10.47153/jbmr1172022