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# Impact of Selected Financial Institutions on Growth of Small and Medium Scale Enterprise (SMES) in Nigeria: 1992-2023

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***ABSTRACT***

*The study analysed impact of financial institutions on growth of small and medium scale enterprises (SMEs) in Nigeria using Autoregressive Distributed Lagged Model (ARDL). The Augmented Dickey Fuller (ADF) was used to test for unit root with ADF result showed that SMEQ, CBC, MFC, and SCS were stationary at first difference while AGS and LER were stationary at level. The result of the error correction model (ECM) showed that the speed of adjustment is 38%, meaning that in the following periods, about 38% of the previous period's disequilibrium is brought back into equilibrium. The result also revealed that commercial bank credit (CBC) has a positive insignificant impact and a negative significant impact on Nigeria's SMEs growth in the short run and the long run, respectively. Microfinance bank credit (MFC) and aid and grant to SMEs (AGS) have a positive significant impact on Nigeria's SMEs growth both in the short run and the long run while SMEs credit schemes (SCS) has a positive insignificant impact on Nigeria's SMEs growth both in the short run and the long run. Finally, lending rate (LER) has a negative significant impact on Nigeria's SMEs growth both in the short run and the long run. The study concluded that financial institutions have significant impact on Nigeria's SMEs growth. Therefore, recommended that microfinance institutions in Nigeria should increase the availability of loans to SMEs in Nigeria with a view to provide them with the necessary capital to invest in their businesses and to enable SMEs to take advantage of new opportunities, leading to increased growth and development in the sector. Monetary authorities through CBN should partner with commercial banks in order to increase loan facilities to SMES at reduced cost with a view to promote SMEs activities in Nigeria and small and medium businesses in Nigeria should be supported with aid and grant by government at various levels, and private individuals with intention to create massive jobs, promote growth and business expansion of SMEs in Nigeria.*

**Keywords:** *Financial Institutions, Small and Medium Scale Enterprise (SMES), Commercial Bank, Microfinance Institutions, ARDL*

## INTRODUCTION

The role of Small and Medium Enterprises (SMEs) in development of any nation cannot be overemphasized. Globally, SMEs contributes to the economic growth and development, job creations, poverty alleviation, and among many others most especially in developing economy (Ifekwen & Ademola, 2016; Akomolafe, Obida, & Gombe, 2024). Hence, they are regarded as the catalysts of developing nations (Ebitu, Basil, & Ufot, 2016). Small and Medium Scale Enterprises (SMEs) are critical drivers of economic growth, employment generation, and innovation in both developed and developing economies (El-Yaqub, Ismail & Eke, 2024). SMEs are typically characterized by their small workforce, limited capital, and modest market share compared to large corporations (Ayyagari, DemirgüçKunt, & Maksimovic, 2022; Akomolafe, *et.al;* 2024).

The exact definition of SMEs varies globally, with different countries using criteria such as the number of employees, annual turnover, and assets to classify businesses as SMEs (El-Yaqub, Ismail, Usman, 2025). For example, in the European Union, SMEs are firms with fewer than 250 employees and annual turnover not exceeding €50 million, while in the United States, SMEs generally have fewer than 500 employees (OECD, 2023). SMEs are important agents of economic growth as they provide more than half of the Gross Domestic Product (GDP) of developing nations (Ismail, Musa & Magaji, 2025). They are the source of supply of both human and financial capital, a source of innovation and technological development and raw materials to bigger firms and the main source of entrepreneurship and businesses (Ismail, El-Yaqub, & Eke, 2025; Yahaya, Geidam, & Usman, 2016). Masama & Brower (2018) regard these businesses as the pillar of economic development, and as such imperative for the sustenance of any economy.

Small and Medium Enterprises (SMEs) play a crucial role in the economic development of Nigeria, contributing significantly to job creation, innovation, and overall economic growth (El-Yaqub, Ismail & Bappayo, 2024). According to World Bank Reports (2020), MSMEs account for about 90% of enterprises, over 50% of GDP and 75% of new jobs created globally. Likewise, their role in the sustainability of the Nigerian economy cannot be overemphasized. They contribute about 46.31% to the GDP with over 96.7% of Nigerian business outfits, providing 84.02% of jobs thus increasing growth, reducing unemployment and boosting economic capacity (NBS, 2021). The report also revealed that MSMEs accounted for 6.21% of gross exports. A strong MSME sector promotes innovations and investment opportunities which in turn facilitates employment generation and sustainable growth in the GDP of an economy (Adekoya, Magaji & Ismail, 2025; Ogbeide & Adeboje, 2017).

Motilewa, Ogbari and Aka (2015) highlight the role of SMEs to include mobilization of domestic savings for investment, enhancing real sector growth, creation of employment, poverty reduction, increase in income per capita, hence high living standard, economic diversification, promoting technological advancement and innovative industrial sector, curbing rural-urban migration and contribution to overall growth and development of the country. Granting credit to entrepreneurs at affordable cost is key to realizing the above-mentioned goals. That is where role financial institutions to provide affordable loans cannot be downplayed. Financial institutions are organizations that facilitate financial transactions and provide services such as deposits, loans, investments, and currency exchange, playing a critical role in the economic infrastructure of a country. These institutions include commercial banks, investment banks, insurance companies, credit unions, microfinance institutions, and pension funds (Mishkin & Eakins, 2022). They act as intermediaries between savers and borrowers, ensuring efficient allocation of resources within the economy. By accepting deposits and lending to individuals and businesses, financial institutions contribute to the flow of capital and stimulate economic activities. In recent years, the rise of fintech companies has further diversified the landscape, offering digital financial services such as mobile payments and peer-to-peer lending, which enhance financial inclusion, especially in underserved populations (Zhang *et al*., 2023).

Despite their importance, SMEs in Nigeria face numerous barriers in accessing credit from convention banking, which significantly hinder their growth prospects (El-Yaqub, & Ismail, 2025). Many SMEs face significant challenges in accessing finance from financial institutions, which can hinder their growth and sustainability. High-interest rates are a primary challenge, as commercial banks often impose rates that are prohibitive for small businesses, thereby limiting their ability to secure necessary funds (Taiwo & Falohun, 2016). Limited access to financial services, high-interest rates, stringent collateral requirements, and inadequate financial knowledge among SME owners are persistent issues that can prevent these businesses from obtaining the necessary funding to thrive. Moreover, the financial landscape for SMEs in Nigeria has been influenced by various factors over the years, including changes in economic policies, the operational dynamics of financial institutions, and the evolving needs of the business environment. The lack of comprehensive research on how these factors have affected SMEs' access to financing and their subsequent growth poses a gap in understanding the overall impact of financial institutions on SMEs.

In literature, impact of SMEs financing on SMEs growth globally have been conducted which include Onyeiwu, Muoneke & Nkoyo, 2020; Obasan and Arikwuyo (2018); Swamy (2016); Hans (2016); Gregori and Lee (2018); Maduka & Weiss (2019), Etale, & Light (2021), Taiwo & Falohun (2016), most these studies focused on SMEs and economic growth. Also, some studies examined the impact SMEs financing on poverty such as Ajala and Fakoya, 2019; Jibril, 2019, and Akeke and Oladunjoye, 2018; Ojodu, 2015 studies investigated the impact SMEs financing on unemployment but this study was motivated to bridge the gaps in literature by examining the impact of selected financial institution on SMEs growth in Nigeria with inclusion of aid and grant to SMEs, and SMEs credit schemes.

Furthermore, there was conflicting results noted in previous studies that also motivated this study; the studies of Rahman & Jahan (2019), Bhattacharya & Singh (2020), Olowookere *et al*. (2021); Sanni, *et al*. (2020), revealed that SMEs financing impact growth positively. However, Etale & Light (2021), Uchehara (2019), and Ofeimun, Nwakoby & Izekor (2018) claimed that SMEs financing has negative impact on growth. It is based on inclusive results noted in previous studies that this study was put forward to re-examined the impact of selected financial institution on SMEs growth in Nigeria. In all, this study tends to fill the gaps identified in literature and also to provide insights on how selected financial institutions can better support SMEs, ultimately contributing to their growth and enhancing their role in the economy. Addressing these issues is vital for policymakers, financial institutions, and SME owners, as it can lead to improved financial strategies, targeted support programs, and a more conducive environment for SME development in Nigeria. The paper is structured into five sections; section one is the introduction while section two is literature review. Section three is the materials and methods, section four is data presentation, and section five is conclusion and recommendations.

## LITERATURE REVIEW

Akintayo, *et al.* (2024) examined credit accessibility and SMEs in Osun State, Nigeria. The research underscored the role of microfinance institutions and government schemes in providing much-needed financial support to SMEs. Despite these efforts, the study finds that many SMEs still face considerable difficulties in securing adequate financing due to limited awareness of available credit facilities and the cumbersome application processes. The study suggested that improving the dissemination of information and simplifying credit application procedures could significantly enhance SMEs' access to financial resources.

Ediri (2024) examined the impact of credit financing accessibility on the growth and sustainability of Small and Medium Scale Enterprises (SMEs) in Nigeria for the period of 1981-2022. The study utilizes the Autoregressive Distributed Lag (ARDL) model to analyze both short-run and long-run relationships between the variables. The results reveal that access to credit, measured by credit to the private sector, has a significant positive impact on the growth and sustainability of SMEs in the long run. However, high lending rates and the number of loans approved exhibit a more complex relationship, with lending rates negatively affecting SME growth in both the short and long run. The study also finds that policy inconsistencies and financial sector inefficiencies hinder the effective distribution of credit to SMEs. Enhanced access to affordable credit is crucial for the growth and sustainability of SMEs in Nigeria. Policy interventions should focus on reducing lending rates and improving the approval process for SME loans to stimulate economic growth.

Ibrahim, El-yaqub and Magaji (2024) examined the empirical analysis of the impact of bank sector credit on small and medium scale Enterprises (SMEs) in Nigeria and attempts to confirm its validity or otherwise using yearly data from 1991 to 2020. Autoregressive Distributed Lag (ARDL) model was adopted to explore the dynamic relationship of short run and long run effects of the variables due to an exogenous shock. Generally, the findings revealed that a 0.0598 percent increase occurs in SMEs output in the long run with a percent change in the bank credit. Moreover, it is statistically significant at a 1 percent significance level in explaining small and medium enterprises output in Nigeria. Likewise, government expenditure was found to increase SME's output significantly

in the short run. However, there is a negative relationship between interest rates and SMEs output in Nigeria.

Msomi (2023) investigated the effect of interest rates on credit access for small and medium-sized enterprises (SMEs) in South Africa. The study employs a quantitative research design, using data collected from 200 SMEs in South Africa. The data was analyzed using descriptive statistics, Pearson's correlation coefficient analysis, and multiple regression analysis. An inverse relationship between interest rate and credit accessibility was found using the Pearson correlation coefficient ($r = –.199$, $p < 0.05$). The results showed that interest rates have a significant negative effect on credit access for SMEs in South Africa. Moreover, the study finds that SMEs experience considerable obstacles in obtaining affordable credit, and that interest rates play a crucial role in this. The study suggested that SMEs should focus on building a good credit history to improve their creditworthiness and increase their chances of accessing credit.

Li., Wang& Zhang (2021) examined the impact of digital financial services on SME growth in China using a population of 200 Chinese SMEs through cluster sampling technique. Instrument for data collection are surveys and financial data from SMES while the method of data analysis is panel data regression. The study revealed that digital financial services provided by fintech firms significantly enhanced access to finance for SMEs, thereby promoting their growth.

Bhattacharya & Singh (2020) investigated the role of commercial bank lending on SME growth in India using a sample of 300 SMEs through stratified random sampling technique. Instruments for data collection included questionnaires and bank loan records, while the method of data analysis was econometric analysis. The study revealed that commercial bank lending positively impacted SME growth, particularly when loans had flexible repayment options. However, high interest rates and lengthy approval processes hindered many SMEs from accessing finance.

Muriithi, Wachira & Muturi (2020) investigated the impact of government credit guarantee schemes on SME growth in South Africa using a sample of 250 SMEs through random sampling technique. Instruments for data collection included surveys and government reports, while the method of data analysis was regression analysis. The study revealed that government credit guarantee schemes had a significant positive impact on SME growth. However, many SMEs were unaware of these schemes, indicating a need for greater awareness and outreach.

Wambua & Musau (2020) investigated the effectiveness of government policies in promoting SME growth in Kenya using a sample of 120 SMEs through stratified sampling technique. Instruments for data collection included structured interviews and secondary data, while the method of data analysis was content analysis and descriptive statistics. The study revealed that government policies, particularly tax incentives and credit guarantee schemes, positively influenced SME growth. However, implementation challenges and bureaucratic inefficiencies posed significant barriers.

Ibrahim & Aliero (2020) investigated the impact of microfinance on the growth of SMEs in Nigeria using a sample of 200 SMEs through purposive sampling technique. Instruments for data collection included questionnaires and interviews, while the method of data analysis was regression analysis. The study revealed that access to microfinance significantly contributed to the growth of SMEs in Nigeria, particularly in terms of capital accumulation and business expansion. However, the high interest rates charged by microfinance institutions posed a major challenge.

Ibrahim & Daniel (2020) studied access to credit and the growth of small enterprises in Nigeria. The sample is 150 SMEs and sampling technique is simple random sampling. Instrument for data collection are questionnaires while they used multiple regression analysis as method of data analysis. The study shows that access to credit from microfinance institutions had a positive effect on SME growth. However, high interest rates from microfinance banks remained a significant challenge. There is need to exploration alternative finance mechanisms for SMEs.

Ayyagari, DemirgüçKunt & Maksimovic (2020a) investigated the role of commercial banks in facilitating SME innovation in the European Union using a sample of 400 SMEs through random sampling technique. Instruments for data collection included surveys, while the method of data analysis involved factor analysis and structural equation modeling. The study revealed that

commercial banks' support for SMEs through innovation loans significantly enhanced their technological development. However, many SMEs perceived bank loans to be expensive and difficult to access.

**Theoretical Framework**

Financial intermediation theory focuses on the role those financial intermediaries, such as commercia banks, microfinance institutions, credit unions, insurance companies, pensions fund, mutual funds play in the financial system by channeling funds between savers and borrowers. These intermediaries provide essential services that reduce transaction costs, manage risk, and improve the allocation of resources in the economy. The theory highlights the efficiency gains and challenges of having specialized institutions that mediate between those who have excess funds (savers) and those who need funds (borrowers).

One of the key contributions of financial intermediaries is their ability to reduce transaction costs. Individual savers and borrowers would face high costs if they had to directly match with one another in financial markets. Intermediaries, like banks, act as a middle party, efficiently matching funds and creating economies of scale (Diamond, 1984). These intermediaries reduce the costs associated with searching for a counterparty, negotiating terms, and enforcing contracts. Another critical aspect is risk management. Financial intermediaries pool resources from many savers, which allows them to diversify risk. By lending to a variety of borrowers and investing in various financial products, intermediaries reduce the overall risk that any one saver or investor might face (Allen & Santomero, 1998). This diversification is beneficial to savers who might otherwise not have the expertise or means to manage risks independently. Moreover, financial intermediaries improve the allocation of resources by monitoring borrowers, which helps reduce information asymmetry. Borrowers often have more information about their ability to repay loans than lenders do. Financial intermediaries specialize in gathering and processing information about borrowers, reducing the likelihood of adverse selection (Leland & Pyle, 1977). As such, they are better positioned to allocate credit efficiently and ensure that loans are given to those who are more likely to use the funds productively and repay them.

The theory also emphasizes the maturity transformation function of financial intermediaries. Banks often take short term deposits from savers but provide long term loans to borrowers. This transformation of maturities allows for liquidity in the financial system, ensuring that savers can withdraw their funds when needed while borrowers can finance long term projects (Diamond & Dybvig, 1983). However, financial intermediation is not without challenges. One such issue is the risk of moral hazard, where borrowers may take on excessive risks once they have secured financing, knowing that the intermediary bears some of the loss (Holmström & Tirole, 1997). Additionally, intermediaries themselves may face liquidity risks or solvency issues, as demonstrated by banking crises in history when banks overextend themselves or mismanage credit risk.

Financial intermediation theory highlights the essential role intermediaries play in reducing transaction costs, managing risk, and efficiently allocating resources by providing channels through bank credits, microfinance credit to SMEs, aid and grants to SMEs, and SMEs credit schemes are moved to where they are needed. These middlemen help SMEs in Nigeria to have unhindered access to fund and thereby promote growth and expansion in the sector.

## MATERIALS AND METHOD

In this study, an ex-post facto research design is utilized, which entails the use of secondary data to explore the relationship between the dependent variable and independent variables. Because of its unique characteristics, the ex-post facto design was chosen for the study. The data used in the study is pre-existing and outside the researcher's control, and it covers a period of more than a year. The study's primary focus is analysis, and it uses secondary data to investigate the impact of financial institutions on the growth of SMEs in Nigeria. The study began with a descriptive statistic of variables, and various analyses were conducted such stationary tests (ADF), cointegration tests bound test (ARDL

bound test), ARDL short run and long run analysis, and postestimation tests including autocorrelation test, heteroscedasticity, multicollinearity test, normality test, stability tests, and Ramsey test. The data used for this research were secondary data and all quantitative in nature. The time series that were collected on SMES output (SMEQ), commercial bank credit (CBC), microfinance bank credit (MFC), aid and grant to SMEs (AGS), credit scheme to SMEs (SCS), and lending rate (LER) for the period of 32 years. All the variables were sourced from Central Bank of Nigeria (CBN) Statistical Bulletin, 2023.

**Model Specification**

The regression model is specified to examine the relationship between the dependent variable (growth of SMEs) and independent variables (factors related to financial institutions). The model was adapted from Ediri (2024) as follows:

SMEGDP = f(CPS, LR, SLA) - - - - - - - 3.1

SMEGDP = $\beta$0+$\beta$1CPS+ $\beta$2LR +$\beta$3SLA+ Ut - - - - - 3.2

Where:

SMEGDP= SME Output (Contribution of SMEs to GDP)

CPS = Credit to the private sector

LR = Lending rate

SLA = SMEs loan

$\beta$0= Constant

$\beta$1- $\beta$3 =coefficients of independent variables

Ut = error term.

Therefore, this study modified Ediri (2024) with introduction commercial bank credit (CBC), microfinance bank credit (MFC), aid and grant to SMEs (AGS), credit scheme to SMEs (SCS) with intention to capture the objective of the study.

The general form of the regression model can be expressed as:

SMESQ = f(CBC, MFC, AGS, SCS, LER) - - - - - - 3.3

SMESQ = $\alpha_0$+ $\alpha_1$CBC+ $\alpha_2$MFC+ $\alpha_3$AGS+ $\alpha_4$SCS+ $\alpha_5$LER+ ut - - - 3.4

The ARDL Model is specified as:

$$\Delta SMEQ_t = \emptyset 0 + \sum_{j=1}^{m} \emptyset_{1j} \Delta SMEQ_{t-j} + \sum_{j=1}^{m} \emptyset_{2j} \Delta CBC_{t-j} + \sum_{j=1}^{m} \emptyset_{3j} \Delta MFC_{t-j} + \sum_{j=1}^{m} \emptyset_{4j} \Delta AGS_{t-j} +$$

$$+\sum_{j=1}^{m} \emptyset_{5j} \Delta SCS_{t-j} + \sum_{j=1}^{m} \emptyset_{6j} \Delta PLR + \theta_1 CBC + \theta_2 MFC_{t-1} + \theta_3 AGS_{t-1} + \theta_4 SCS_{t-1} +$$

$\theta_5 LER_{t-1} + \theta_6 ECM_{t-1}$ - - - - - - - - - - - 3.5

Where:

SMEQ = SMEs Output (contribution of SMEs to GDP proxy for SMEs growth)

CBC = commercial bank credit SMEs

MFC = microfinance credit to SMEs

AGS = aid and grant to SMEs

SCS = credit scheme to SMEs

LER = prime lending rate (proxy for cost of borrowing)

$\alpha_0$ – is the intercept

$\alpha_1$ – $\alpha_5$ are Coefficients to be estimated,

ε = error term

$\theta_6$ = ECM Coefficients that measures the speed of adjustment

**A priori Expectations**

This is the expected sign that independent variables should have on dependent variable based on theory. Theoretically, it is expected that commercial bank credit SMEs (CBC), microfinance credit to SMEs (MFC), aid and grant to SMEs (AGS), credit scheme to SMEs (SCS) should have positive impact on SMEQ growth. That is, $\alpha_1$, $\alpha_2$, $\alpha_3$, $\alpha_4 > 0$ while prime lending rate should have negative relationship with SMES growth. This implies that if there if increase in lending rate, SMEs growth should fall. That is, $\alpha_5 < 0$.

**Variable Measurement and Discussion**

This study examined the impact of financial institutions on the growth of SMEs with commercial bank credit (CBC), microfinance bank credit (MFC), aid and grant to SMEs (AGS), credit scheme to SMEs (SCS) and lending rate as independent variables while SMEs growth (SMESQ) as dependent variable. Commercial bank credit SMEs (CBC), microfinance credit to SMEs (MFC), aid and grant to SMEs (AGS) and credit scheme to SMEs (SCS) are measured in billions of Naira. Prime lending rate (LER) proxy for cost of borrowing is measured in percentage. SMEQ is the contribution of SMEs to GDP which is the proxy SMEs growth is measured in billions of Naira.

## RESULTS AND DISCUSSION

**Summary Statistics**

**Table 4.1 Summary Statistics**

| | SMEQ | CBC | MFC | AGS | SCS | LER |
|---|---|---|---|---|---|---|
| Mean | 6916.411 | 49.79473 | 38125.55 | 304.0731 | 150.8735 | 17.79433 |
| Median | 6806.707 | 40.97235 | 35628.63 | 348.5450 | 138.2082 | 17.57032 |
| Maximum | 12141.37 | 355.0375 | 83567.56 | 593.1800 | 258.7257 | 29.80000 |
| Minimum | 2363.606 | 10.74789 | 1314.000 | 13.15000 | 79.85829 | 11.48313 |
| Std. Dev. | 3947.633 | 62.51782 | 33043.07 | 197.8999 | 43.96460 | 3.569842 |
| Skewness | 0.042835 | 3.818153 | 0.128172 | -0.249072 | 0.869488 | 1.052243 |
| Kurtosis | 1.259498 | 19.05105 | 1.299160 | 1.592713 | 3.183237 | 5.667714 |
| Jarque-Bera | 4.048916 | 421.2656 | 3.944759 | 2.971471 | 4.076821 | 15.39408 |
| Probability | 0.132065 | 0.000000 | 0.139125 | 0.226336 | 0.130236 | 0.000454 |
| Sum | 221325.2 | 1593.431 | 1220018. | 9730.340 | 4827.952 | 569.4185 |
| Sum Sq. Dev. | 4.83E+08 | 121162.8 | 3.38E+10 | 1214095. | 59919.46 | 395.0570 |
| Observations | 32 | 32 | 32 | 32 | 32 | 32 |

**Source: E-Views Version 10.0 Output, 2025**

Table 1 contains the mean, median, maximum, minimum, standard deviation, skewness, kurtosis, and Jarque-Bera for variables used in the study. The mean value for SMEQ, CBC, MFC, AGS, SCS, and LER are 6916.411, 49.79473, 38125.55, 304.0731, 150.8735, and 17.79433, respectively while 12141.37, 355.0375, 83567.56, 593.1800, 258.7257, and 29.80000 are maximum values for SMEQ, CBC, MFC, AGS, SCS, and LER, respectively. It was also reported that Table 1 contains minimum values of 2363.606, 10.74789, 1314.000, 13.15000, 79.85829, and 11.48313 for SMEQ, CBC, MFC, AGS, SCS, and LER, respectively.

Furthermore, all the variables display a moderate right-skewed distribution (skewness) for which all are positive respectively, except AGS that is negatively skewed. Finally, with Jargue-Bera (J-B) statistics, all the variables are normally distributed except CBC and LER that are not normally distributed. The normality assumption does not hold in a situation where the average value for each variable is used. This is predicated on the central limit theorem, which postulated that the normality assumption is unrelated to the average value of the observations.

**Unit Root Test for Stationarity**

**Table 4.2: Unit Root Test Result**

| Time Series | ADF Statistics at level | Critical Value at level | | ADF Statistics at 1st Diff | Critical Value at 1st Diff | | Stationary Status at 5% |
|---|---|---|---|---|---|---|---|
| **SMEQ** | -3.057400 | -4.323979 | 1% level | -3.384191 | -3.670170 | 1% level | I(1) |
| | | -3.580623 | 5% level | | -2.963972 | 5% level | |
| | | -3.225334 | 10% level | | -2.621007 | 10% level | |
| **CBC** | -0.668727 | -4.284580 | 1% level | -4.819727 | -4.296729 | 1% level | I(1) |
| | | -3.562882 | 5% level | | -3.568379 | 5% level | |
| | | -3.215267 | 10% level | | -3.218382 | 10% level | |
| **MFC** | -2.417226 | -4.284580 | 1% level | -5.900851 | -4.296729 | 1% level | I(1) |
| | | -3.562882 | 5% level | | -3.568379 | 5% level | |
| | | -3.215267 | 10% level | | -3.218382 | 10% level | |
| **AGS** | -4.628672 | -4.284580 | 1% level | -9.303273 | -4.296729 | 1% level | I(0) |
| | | -3.562882 | 5% level | | -3.568379 | 5% level | |
| | | -3.215267 | 10% level | | -3.218382 | 10% level | |
| **SCS** | -3.374123 | -4.296729 | 1% level | -6.245210 | -4.309824 | 1% level | I(1) |
| | | -3.568379 | 5% level | | -3.574244 | 5% level | |
| | | -3.218382 | 10% level | | -3.221728 | 10% level | |
| **LER** | -5.861897 | -4.284580 | 1% level | -5.80607 | -4.309824 | 1% level | I(0) |
| | | -3.562882 | 5% level | | -3.574244 | 5% level | |
| | | -3.215267 | 10% level | | -3.221728 | 10% level | |

**Source: Source: E-Views Version 10.0 Output, 2025**

Table 2 contains Augmented Dickey Fuller (ADF) for unit root testing among the variables. The results of ADF show that SMEQ, CBC, MFC, and SCS were stationary at first difference with 5% level of significance. But AGS and LER were stationary at level. Since the unit root results were stationary at level I(0) and at first difference I(1), then ARDL estimation technique is used.

**ARDL Bound Test Results**

**Table 3: ARDL Bound Test Results**

| F-Bounds Test | | Null Hypothesis: No levels relationship | | |
|---|---|---|---|---|
| Test Statistic | Value | Signif. | I(0) | I(1) |
| F-statistic | 18.09248 | 10% | 2.08 | 3 |
| k | 5 | 5% | 2.39 | 3.38 |
| | | 2.5% | 2.7 | 3.73 |
| | | 1% | 3.06 | 4.15 |

**Source: E-Views Version 10.0 Output, 2025**

The long run relationship is tested with ARDL bounds test in a situation where the unit root result for the variables employed are integrated of order I(0) and (1). Hence, the result presented in Table 3 clearly shows that there is existence of a long-run equilibrium relationship (cointegration) among the variables because the value of F-statistic is 18.09248, which is greater than both the lower and upper bound critical values at the 5% significance level.

Decision rule: Since F-statistic is greater than both the lower and upper bound critical values at the 5% significance level we reject the null hypothesis and accept the alternate hypothesis that there is cointegration among the variables used for this study.

**ARDL Short Run Estimation**

**Table 4: ARDL Error Correction Regression**

Dependent Variable: DLOG(SMEQ)

Selected Model: ARDL(1, 1, 0, 3, 0, 1)

ECM Regression

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| DLOG(CBC) | 0.007193 | 0.012361 | 0.581923 | 0.5683 |
| LOG(MFC)** | 0.096042 | 0.035956 | 2.671064 | 0.0161 |
| DLOG(AGS) | 0.063611 | 0.015112 | 4.209219 | 0.0006 |
| DLOG(AGS(-1)) | -0.074806 | 0.018345 | -4.077799 | 0.0008 |
| DLOG(AGS(-2)) | -0.067950 | 0.015440 | -4.400959 | 0.0004 |
| LOG(SCS)** | 0.014079 | 0.033684 | 0.417975 | 0.6812 |
| D(LER) | -0.001526 | 0.002604 | -0.585953 | 0.5656 |
| CointEq(-1)* | -0.383158 | 0.029271 | -13.08993 | 0.0000 |
| R-squared | 0.829290 | Durbin-Watson stat | | 2.529174 |
| Adjusted R-squared | 0.792180 | | | |

**Source: E-Views Version 10.0 Output, 2025**

The short-run results of the estimated model are presented in Table 4 which contains the impact of independent variables on the dependent variable. The coefficients of MFC and AGS have a positive significant impact on SMEQ with about 1% rise in MFC and AGS on average will lead to about 10% and 6% rise in SMEQ, respectively holding other variables constant. However, CBC and SCS have a positive insignificant impact on SMEQ with implies that 1% rise in CBC and SCS on average will lead to 0.7% and 1% rise in SMEQ, respectively while other variables are held constant. It was noted that LER has a negative insignificant impact on SMEQ with 1% rise in LER will lead to 0.02% reduction in Nigeria's SMEQ holding other variables constant.

Furthermore, the result of the error correction model (ECM) shows that deviations from the long-run equilibrium are rectified quickly, with a p-value of 0.0000 and a negative and highly significant result. It follows that the speed of adjustment is 38%, meaning that in the following periods, roughly 38% of the previous period's disequilibrium is brought back into balance. The $R^2$ measures the percentage of variability in SMEQ that can be explained by the explanatory variables employed in the study. There is a significant positive correlation between the dependent and explanatory variables, as indicated by the $R^2$ value of 0.829290. This implies that explanatory variables in the model explained approximately 83 percent of the changes in SMEQ while other factors not included in the model accounted for 27% of the changes, the model is thus a good fit.

**Long-Run Estimation Results**

**Table 5: Long-Run Estimation Results**

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| LOG(CBC) | -0.100622 | 0.033814 | -2.975776 | 0.0085 |
| LOG(MFC) | 0.250659 | 0.061008 | 4.108606 | 0.0007 |
| LOG(AGS) | 0.207633 | 0.070890 | 2.928955 | 0.0094 |
| LOG(SCS) | 0.036744 | 0.091962 | 0.399559 | 0.6945 |
| LER | -0.025707 | 0.011803 | -2.177979 | 0.0438 |
| C | 5.837690 | 0.694800 | 8.401967 | 0.0000 |

**Source: E-Views Version 10.0 Output, 2025**

The estimated results of long-run impact of CBC, MFC, AGS, SCS, and LER on SMEQ are presented Table 5. The results shows that MFC and AGS have positive significant impact on SMEQ in

Nigeria. This implies that about 1% rise in MFC and AGS on average will lead to about 25% and 21% rise in SMEQ, respectively holding other variables constant. These results conform with a prior expectation because in the long run, it is expected that increase in access to MFC and AGS should bring about increase in SMEQ.

On the other hand, CBC and LER have a negative significant impact on SMEQ with about 1% rise in CBC and LER on average will result to about 10% and 3% fall in SMEQ, respectively holding other variables constant. The result of CBC is not conformed with a priori expectation while LER conform with theoretical explanation that increase in interest rate (LER) will reduce SMEQ. SCS has a positive insignificant impact on SMEQ with about 1% rise in SCS on average will lead to about 4% rise in SMEQ holding other variables constant.

**Autocorrelation Test**

Table 6: Autocorrelation Test

| Breusch-Godfrey Serial Correlation LM Test: | | | |
|---|---|---|---|
| F-statistic | 0.750064 | Prob. F(2,15) | 0.4892 |
| Obs*R-squared | 2.636568 | Prob. Chi-Square(2) | 0.2676 |

**Source: E-Views Version 10.0 Output, 2025**

The autocorrelation test is shown in Table 6. The F-statistic tests the joint significance of the lagged values of the dependent variable in explaining the variation in the residuals. The result shows that the F-statistic is 0.750064 and has a prob value of 0.4892. Therefore, since the probability is greater than the typical significance level of 0.05, we fail to reject the null hypothesis of no serial correlation at the 5% significance level implying that that the ARDL model adequately captures the autocorrelation structure of the data, and our results are reliable.

**Heteroskedasticity Test**

Table 7: Heteroskedasticity Test

| Heteroskedasticity Test: Breusch-Pagan-Godfrey | | | |
|---|---|---|---|
| F-statistic | 1.899056 | Prob. F(11,17) | 0.1137 |
| Obs*R-squared | 15.98852 | Prob. Chi-Square(11) | 0.1416 |
| Scaled explained SS | 3.442580 | Prob. Chi-Square(11) | 0.9835 |

**Source: E-Views Version 10.0 Output, 2025**

The results of the Glejser heteroskedasticity test are displayed in Table 7 P-values are 0.1137, 0.1416, and 0.9835 for the F-statistics (1.899056), Obs*R-squared (15.98852), and Scaled explained SS chi-square (3.442580), in that order. The null hypothesis of homoscedasticity null hypothesis at the 5% significance level cannot be rejected since the probability is higher than the usual significance threshold of 0.05. This implies that the evidence of heteroskedasticity is not statistically significant. In other words, there is no problem of heteroskedasticity.

**Normality Result**

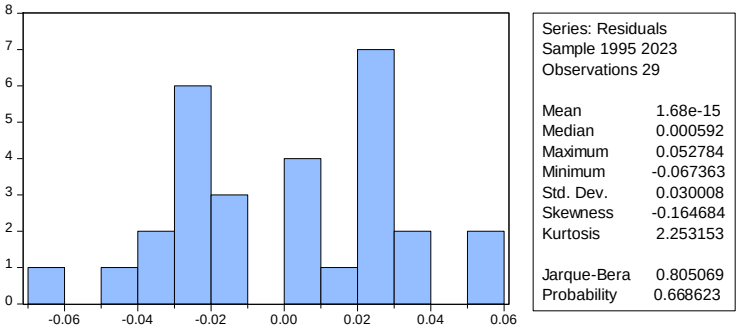
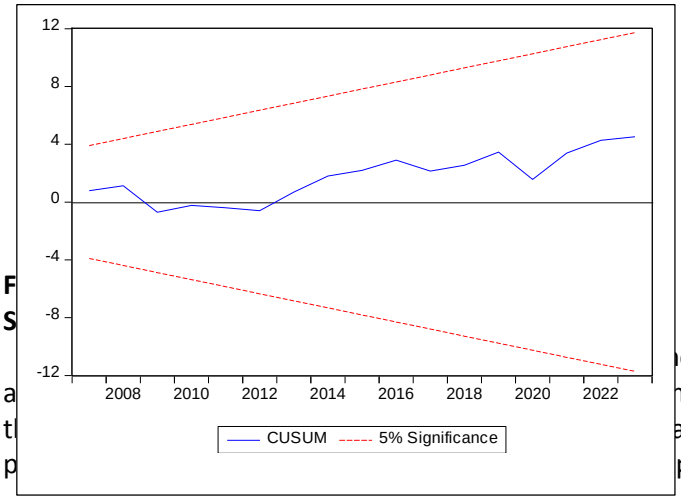


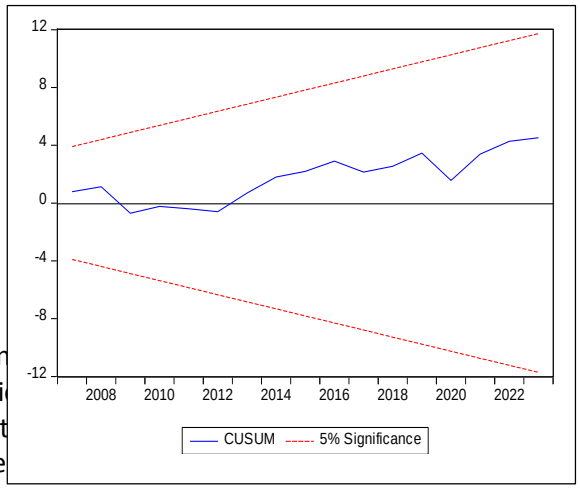

**Fig 1: Normality Test**

**Source: E-Views Version 10.0 Output, 2025**

The Jarque-Bera Statistics and its probability of 0.805069 and 0.668623, respectively, are displayed in Fig.1. The histogram has a bell shape, and the probability value error residual is not significant because the p-value is 0.668623, which is higher than 0.05. It follows that the error residual has a normal distribution.

**Stability Test**




**Ramsey RESET Test**

Table 8: Ramsey RESET Test

| Ramsey RESET Test | | | |
|---|---|---|---|
| Omitted Variables: Squares of fitted values | | | |
| | Value | Df | Probability |
| t-statistic | 0.280904 | 16 | 0.7824 |
| F-statistic | 0.078907 | (1, 16) | 0.7824 |

**Source: E-Views Version 10.0 Output, 2025**

The Ramsey RESET Test is used to test for omission of important variable(s) in the model and to know if the model is well specified. This Ramsey RESET Test is shown in Table 8, and its p-value (0.7824) that is greater than 0.05 shows that the model is not misspecified and there is no issue of an omitted significant variable in the model. Hence, the estimated result can be relied upon and accepted for policy and decision-making.

## CONCLUSION AND RECOMMENDATIONS

The study analysed the impact of selected financial institutions on Nigeria's SMEs growth for the period of 32years with the short run and long run results. Commercial bank credit (CBC) has a

positive insignificant impact and a negative significant impact on Nigeria's SMEs growth in the short run and the long run, respectively. This implies that commercial credit to SMEs has not yielded desirable result. It expected that access to commercial credit by SMEs should increase the SMEs output in the long run but the reverse is the case. This result is obtainable in a situation where cost of borrowing from commercial is high which reduces the profit made by SMEs because high percentage of their profit will be used to service the commercial bank loan, then SMEs output and growth will be reduced. Also, in a situation where majority of SMEs are denied access to credit due high-cost borrowing from commercial banks which significant affect SMEs output in Nigeria.

The study is contrary to Osei-Assibey & Baah (2021) who revealed that commercial banks' credit services positively impacted SME development in Ghana. In the same vein, Bhattacharya & Singh (2020) revealed that commercial bank lending positively impacted SME growth, particularly when loans had flexible repayment options. Furthermore, Ayyagari., DemirgüçKunt & Maksimovic (2020b) revealed that commercial banks' support for SMEs through innovation loans significantly enhanced their technological development.

Microfinance bank credit (MFC) has a positive significant impact on Nigeria's SMEs output both in the short run and the long run. This means increase in access to microfinance credit SMEs will bring about increase in SMEs out in Nigeria. In other words, microfinance credit is very effective and efficient source of credit to SMEs because the issues of collateral security, and other stringent requirements such as informal nature of SMEs, repayment plan by conventional banking before advancing loan to SMEs are resolved through microfinance institutions. This enables SMEs in Nigeria to access fund provided by microfinance institutions which provide them to run their businesses, thereby improve their output and profit as well.

This study collaborates with Ibrahim & Aliero (2020) that access to microfinance significantly contributed to the growth of SMEs in Nigeria, particularly in terms of capital accumulation and business expansion. In the same vein, Martínez & Valenzuela (2019) also revealed that microfinance had a significantly positive impact on SME growth, particularly for startups and young enterprises. In alignment with this finding, Ibrahim & Daniel (2020) and Rahman & Jahan (2019) reported that access to credit from microfinance institutions had a positive effect on SME growth. Kaur & Gupta (2019) also revealed that microfinance loans significantly boosted the growth of female-led SMEs in rural areas.

Likewise, Aid and grant to SMEs (AGS) has a positive significant impact on Nigeria's SMEs output both in the short run and the long run. The implication of this finding is that aid and grant received by SMEs in Nigeria has significantly improved and promoted SMEs activities in Nigeria. That is, if the SMEs in Nigeria continue to have access to this pool of fund there will corresponding increase in SMEs output either in the short run or long run. Wambua & Musau (2020) upholds this finding that government policies, particularly tax incentives and credit guarantee schemes, positively influenced SME growth.

SMEs credit schemes (SCS) has a positive insignificant impact on Nigeria's SMEs output both in the short run and the long run. This finding does not conform with a priori expectation because it is expected that access to SMEs credit schemes should bring about positive significant impact on SMEs output in Nigeria but reverse is the case. This finding is obtainable in a situation where SMEs lack knowledge or training to credit efficiently. In line with this finding, Ibrahim and Aliero (2019) revealed that lack of financial literacy were major barriers to SME access to finance in emerging economies. Similarly, Muriithi, Wachira and Muturi (2021) revealed that financial illiteracy among SME owners posed a significant challenge to accessing finance. Many SMEs struggled to understand loan terms and lacked the capacity for effective financial planning, leading to frequent loan rejections. Similarly, Li, Wang and Zhang (2021) found that rural SMEs continue to encounter challenges due to inadequate technological infrastructure and digital literacy.

Also, in a situation where there is weak financial management that make some SMEs to use the credit for personal expenses instead of injecting loans into their businesses. Likewise, unreliable infrastructural, policy instability (hike in lending rate due to inflation) and regulatory burden will also constraint SMEs output. Once there are situations like these, there is no way SMEs credit schemes will

bring about positive impact on SMEs' profitability and output in Nigeria. Muriithi, Wachira & Muturi (2020) revealed opposing results that government credit guarantee schemes had a significant positive impact on SME growth.

Finally, lending rate (LER) has a negative significant impact on Nigeria's SMEs output both in the short run and the long run. The study clearly revealed that high lending rate will bring about significant reduction in SMEs output in Nigeria. That is, anytime loans to SMEs become expensive or too expensive, there will be corresponding decrease in accessing funds by SMEs in Nigeria. High -cost borrowing make it more difficult for businesses to expand their activities, reduces their profit because larger percentage of their profit will be set aside to repay the loan. When SMEs are unable to repay their loans due high interest rate, they may be forced to close their businesses, which can have a negative impact on the economy as a whole.

High interest rates on loans can also limit the amount of capital that SMEs can access, which can make it difficult for them to invest in their businesses and grow. When SMEs are unable to access sufficient capital, they may be unable to take advantage of new opportunities and invest in their businesses, which can limit their growth and development. This study conforms with theoretical expectation and also with Kaur & Gupta (2019) that high interest rates on loans from financial institutions are not just a factor that contributes to the decline of SMEs, but rather a necessary condition for their decline. In alignment with this finding, Ibrahim & Daniel (2020) reported that high interest rates from microfinance banks remained a significant challenge.

Therefore, the study concluded based on the research findings that financial institutions have significant impact on Nigeria's SMEs growth. Hence, microfinance bank credit (MFC) and aid and grant to SMEs (AGS) remain the most effective and efficient sources of finances to SMEs with a positive significant impact on Nigeria's SMEs growth both in the short run and the long run. However, lending rates on loans from financial institutions have a negative impact on growth of SMEs. Based on the findings, the study recommended that:

i. Microfinance institutions in Nigeria should increase the availability of loans to SMEs in Nigeria with a view to provide them with the necessary capital to invest in their businesses and to enable SMEs to take advantage of new opportunities, leading to increased growth and development in Nigeria.
ii. Monetary authorities through CBN should partner with commercial banks in order to increase loan facilities to SMES at reduced cost with a view to promote SMEs activities in Nigeria.
iii. Commercial banks should prioritize lending to small and medium scale enterprises in Nigeria with a view to achieve rapid growth in the sector.
iv. Small and medium businesses in Nigeria should be supported with aid and grant by government at various levels, and private individuals with intention to create massive jobs, promote growth and business expansion of SMEs in Nigeria.
v. The operators of SMEs credit schemes should strictly adhere to rules and regulations that guides the module of operandi of credit disbursement and recovering process. Doing this will enable SMEs in Nigeria to grow their businesses.
vi. Monetary authorities through CBN should reduce the interest rates on loans to SMEs in Nigeria to make them more affordable and accessible. This will enable SMEs to access the necessary capital to invest in their businesses and expand their operations.

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