

MICROFINANCE BANKING AND THE PERFORMANCE OF SMALL AND MEDIUM SCALE ENTERPRISES NIGERIA IN NIGERIA

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ABSTRACT

The study examines micro-finance banking and the performance of micro, small and medium enterprises in Nigeria from 1995 to 2023. The research utilized time series data sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin and the Central Bank of Nigeria Annual Report, 2023. The study employed an Error Correction Model to assess the rate at which a dependent variable moved back to equilibrium following alterations in other variables. The study demonstrates that the deviation from long-run equilibrium in the previous era, referred to as the error, affects its short-run dynamics. Moreover, the findings indicate a negative and insignificant effect of microfinance bank credits to the agriculture sector on SMEs' contributions to gross domestic product. Microfinance bank financing to the agriculture sector demonstrates a significant and positive impact on small-scale businesses to gross domestic product. The study shows a positive but insignificant effect on micro-finance bank credit to manufacturing sector and small scale business contribution to gross domestic product. In conclusion, the research reports that microfinance banking influences the SMEs performance in Nigeria. The study recommends that microfinance banks ease borrowing conditions, extend loan durations, and allow for prolonged repayment periods. Additionally, it suggests that the government, via the central bank of Nigeria, establish a minimum percentage of deposits that micro-finance banking must allocate for loans and advances on small business in Nigeria.

Keywords: *Microfinance Banking, Performance, SMEs, Secondary Data, Error Correction Model*

INTRODUCTION

Since the attainment of Nigeria independence in 1960, concerted attention has been on the country's industrial growth. Initial initiatives were spearheaded by the government via large industries; however, recent focus has transitioned to Small scale businesses due to their proven immense contribution to economic performance in industrialized nations (Ojo, 2021). Consequently, in recent time Nigeria concentrate its industrial advancement initiatives to a sustainable small and medium scale enterprise growth.

Arguably, the effect of micro-finance credit on the development of SMEs has been recognized as a significant factor in economic literatures that stimulates economic growth and development in Nigeria. Ofoegbu, et al., (2018) opined that SMEs act as solution to economic advancement of many emerging economy like Nigeria. Their research established that appropriate in SMEs stimulates creation of Jobs, enhance productivity within the economy, diminish income inequality, foster skill advancement and development, and serve as a catalyst for technology innovation and advancement, particularly in refining and optimizing emerging technological breakthroughs. Furthermore, research conducted by Ogujiuba, et al., (2017) and Kadiri, (2019) made support to the assertion that SMEs represent a significant majority of value added, sales and total employment. Small and medium term enterprise represents an effective and authentic means for fostering growth and self development, as they are uniquely positioned to cultivate an indigenous enterprise culture more effectively than any alternative strategy.

The absence of documentation regarding micro financing practices in Nigeria has hindered the development of supportive programs for the sector's growth. The elevated failure rate of SMEs has emerged as a significant concerned to emerging economy as reports in 2012 by International

Finance Corporation shows that merely 20% of new businesses in Nigeria survive beyond their fifty year. The assertion was supported by the Small and Medium Enterprise Development Agency of Nigeria, which established that only 15% of newly business survive the initial five years (Emmanuel & Ikenne, 2018). Hence, it is an indication that there is an existence of literature gap. The essential function of finance in the advancement and development of small and medium term enterprise, coupled with the reliance on microfinance as the primary funding source for SMEs in Nigeria, necessitates a focused examination of the extent to which micro-finance bank can stimulate small business performance.

Moreover, several previous studies have elucidated microfinance banks and small to medium-sized enterprises from various viewpoints. Some researchers including (Chiyah and Forchu, 2010; Diagne, & Zeller 2001; Jamil, 2008; Taiwo, et al., 2016). Olufemi, (2019) reported that micro finance bank has significant contribute to small and medium term enterprise in Nigeria. While Ofoegbu, et al., (2013) contested the literatures on Micro-finance banking and resolved that does not have a significant effect on the performance of small and medium scale enterprise in emerging country like Nigeria. The study went further and pointed out that microfinance bank mechanism has no link on small business growth in Nigeria. Given the varied findings within and outside African nations, the research has focus its attention to elucidate the intricate influence microfinance bank activities has on the performance of small businesses, as well as its significance to the Nigerian economy. This research is significant since it assesses the impact of the Nigerian micro-finance banking credit to small and medium-term business.

Theoretical Framework

This research theoretical framework is based on Schumpeter's (1911) theory of finance and growth for analyzing micro-finance and SMEs performance. The Schumpeter's (1911) theory was brought forward by the neoclassical growth model which also includes financial development model into the study (Easterly & Levine, 1997). Consequently, the basic functional model incorporates financial development parameter, which is conventional to production function, to establish the neoclassical growth model. The theory has abruptly provided evidence that financial development has a greater influence on the economic growth.

Empirical Literature

Numerous empirical studies have been undertaken on micro-finance banking boosting small SMEs. Literature indicates that microfinance positively influences SMEs by participation in microcredit schemes, characterized by less rigorous lending requirements, enabling small and medium scale enterprise to utilize resources, consequently enhancing profit, and revenue and full employee.

Olufemi, (2019) carried out a study on the impact of micro-finance banking and the development of SMEs. The research focus was base in the metropolitan of Lagos. Questionnaires approach where adopted for the study to the Owner of small business with accounts at micro-finance banking within the metropolitan of Lagos. Of the 209 surveys distributed to respondents, 205 valid were collected and evaluated utilizing the SPSS software. The results indicated that the savings of SMEs are promising due to elevated rate of interest relative to deposit banks, expedited loan disbursement, while most SMEs reported financial growth using MFB products; they also posit the inability of MFBs to provide training for SMEs.

Jack and Roland, (2016) investigated market women's opinions regarding access to microcredit and economic development in Yenagoa metropolis. The research employed a descriptive research, randomly selecting 180 market women from the Tombia, Opolo and Swali market. The research employed the simple percentage approach, particularly utilizing frequency tables to analyze the data. Research indicates that there is a decrease in socioeconomic activities among the market women attributed to cultural and financial drawback that limit the involvement of entrepreneur behavior, consequently, leading to economic advancement. The research depicted that the

accessibility of credits program and scheme where limited to the market women due to inflexible policies by existing microcredit institutions, gender discrimination and lack of awareness.

Oluyombo, (2011) analyzes micro-finance banking activities on the development of Nigeria economy during a fifteen-year period, utilizing time series data obtained from CBN bulletin and statistic annual reports. The ordinary least squares estimate method was employed utilizing a linear regression model. The research identified a tenuous positive correlation between the microfinance banks financing and long-term growth of the Nigeria, as well as between microfinance banks' financing and capital formation. A substantial positive impact existed between the financing of microfinance banks and their penetration ratio. The findings indicate a net financial outflow from microfinance institutions that could threaten the nation's economic prosperity.

Babajide, (2012) in South West Nigeria analyzed micro-financing activity on SMEs using multiple Regression techniques, Hazard Model and Diagnostic Test Kaplan-Meier Estimate. The research established that in South West Nigeria micro-finance banks stimulate small business sustainability. On the other hand the results show that microfinance bank does not stimulate expansion process in other part of Nigeria. Moreover, in South West Nigeria microfinance substantially impacts the growth of MSE. Whereas the delivery of non-banking services by micro-finance institutions improves the growth of small business within the South West region in Nigeria.

In another study in Ibadan Metropolis Oyo State Nigeria by Olowe, et. al., (2013) analyzed the effect of growth of small and medium scale enterprise through microfinance bank. The research applied a purposive sampling model to select the respondents. A total of 82 SMEs were formulated from Simple Random model. The Pearson correlation coefficient and multiple regression analysis were utilized to analyze the data. The research indicated that financial services provided by MFBs significantly positively influence the growth of MSEs in Nigeria. The findings indicated that the duration of the loan positively influences the growth of SMEs, albeit the effect is not statistically significant. The findings indicated that elevated borrowing rates, collateral requirements, and repayment frequency can hinder the growth of SMEs in Nigeria.

METHODOLOGY

Many time series datasets often exhibit infinite variations that lack mean reversion and. As estimation derived may result to spurious regression analysis lacking validation of the economy.

The loading of the endogenous variable is negligible when a long-term relationship exists between it and the underlying economic fundamentals. Consequently, research study have pointed out that results gotten from the model might be spurious if the variables included in the model are non-stationary and co-integrated (Enders, 1995). Thus, stationarity analysis will be conducted through Augmented Dickey-Fuller and Philip Perron test from 1987. The approach will be utilized to assess the co-integration status of the variables, if there is co-integration among the variables then it necessitating the introduction of the error correction mechanism.

Meanwhile, the statistical method employed is a multiple regression approach to examine the impact of microfinance bank credit specifically to the transportation industry, agricultural sector, and manufacturing sector on the contribution of SMEs to Nigeria's gross domestic product. This study employs a multivariate linear regression model for its predictive and informative capacity on the relationship direction between the dependent and independent variables. The econometric model is predicated on the following functional form:

$$\text{SMEGDP} = F(\text{MFCTS}, \text{MFBCAS}, \text{MFBCMS}) \quad (1)$$

$$\text{SMEGDP} = \beta_0 + \beta_1\text{MFCTS} + \beta_2\text{MFBCAS} + \beta_3\text{MFBCMS} + \mu \quad (2)$$

Whereas,

SMEGDP = Small and Medium Enterprise Contribution to Gross Domestic Product

MFCTS = microfinance bank credit contribution to the transportation sector

MFBCMS = microfinance bank credit contribution to the manufacturing sector

MFBSAS = Microfinance Bank Credit contribution to the Agricultural Sector

$\beta_0, \beta_1, \beta_2, \beta_3$ = Constant Parameters
 μ = The Error Term or Stochastic Variable

Results

Table 1 Summary of Descriptive

	SMEGDP	MFBCTS	MFBCAS	MFBCMS
Mean	4710.141	69375.04	3664.923	89109.01
Median	2401.190	28504.80	1644.300	34162.30
Std. Dev.	5732.470	83144.95	4276.363	105452.3
Minimum	414.1300	1129.800	40.43000	967.2000
Maximum	25201.40	255470.0	16097.00	343883.1
Skewness	2.137256	0.976498	1.291878	1.110715
Kurtosis	7.755611	2.462519	4.079214	3.116991
Jarque-Bera	42.59093	4.274038	7.840492	5.154623
Prob.	0.36474	0.118006	0.419836	0.875978
Summation	117753.5	1734376.	87958.15	2227725.
Sum Sq Dev	7.89E+08	1.66E+11	4.21E+08	2.67E+11
Obs.	29	29	29	29

Source: Authors Compilation 2025

Table 1 presents the descriptive values of the time series data. Additionally, the table presents the skewness to ascertain whether the series exhibit distributive character. The findings indicate that all series exhibit a normal distribution. This indicates that the series possesses a greater value than the sample mean. The p-values from the Jarque-Bera (J-B) statistical test indicate that all series are normally distributed at the 5% significance level.

Table 2 Correlation Matrix

SMEGDP	1			
MFBCTS	-0.806	1		
MFBCAS	0.609	0.896	1	
MFBCMS	0.052	-0.722	-0.584	1

Source: Authors Compilation 2025

The correlation matrix in Table 2 indicates that microfinance loan to the transportation industry exhibits a negative association with the contribution of SMEs to gross domestic product, while there exists a positive correlation of 0.609 between microfinance banks and SME GDP. Moreover, microfinance credit to the agriculture sector exhibits a strong positive association of 0.896 with microfinance credit. The table indicates a weak association of 0.052 between MFBCMS and SMEGDP in Nigeria.

Table 3 Stationarity Test

ADF Results

Variables	at Level (With constant & Trend)			at 1 st Difference (With constant & trend)		
	T- Stats	Critical		T- Stats	Critical	
		Value @5%	Prob		value @5%	Prob
SMEGDP	6.225591	-3.587527	1.0000	-3.515760	-4.356068	0.0059**
MFBCTS	-0.147121	-3.580623	0.9911	-4.504556	-3.595026	0.0072**
MFBCAS	2.894467	-3.580623	1.0000	-3.772913	-3.587527	0.0342**
MFBCMS	1.637380	-3.622033	1.0000	-4.134982	-3.644963	0.0195**

Source: Authors Compilation 2025

PP Test

Variables	at Level (With constant & Trend)			at 1 st Difference (With constant & trend)		
	t- stats	Crit Value		t- stats	Crit Value	
		@5%	Prob		@5%	Prob
SMEGDP	20.31249	-4.339330	0.9999	3.441307	-3.595026	0.0084**
MFBCTS	1.599602	-3.580623	1.0000	-5.315840	-3.587527	0.0010**
MFBCAS	2.894467	-3.580623	1.0000	-3.730175	-3.587527	0.0374**
MFBCMS	5.435836	-3.603202	1.0000	-6.640213	-3.622033	0.0001**

Note; ** indicates stationary at first Difference in Both ADF and PP.

Source: Authors Compilation 2025

Table 3 indicates that all variables are stationary after first differencing, as confirmed by both PP and ADF stationarity test, signifying they are integrated of order 1. The stationarity results verified that the series are integrated at order one, I(1), hence fulfilling the preliminary assumption for co-integration analysis.

Table 4 Lag Selection Criterion

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-797.1034	NA	3.30e+26	69.57420	69.72231	69.61145
					64.04416	63.60073
1	-717.6949	131.1965*	7.31e+23	63.45173	*	*
2	-708.0432	13.42853	7.26e+23*	63.39506*	64.43181	63.65580

Note; * Denotes Acceptance

Source: Authors Compilation 2025

The lag time was determined to be one (1) based on information criteria and met the mathematical stability condition as indicated in table 4.

Table 5 Johansen Cointegration Test

Trace Test Statistics Results

Hypothesized No. of CE(s)	Eigenvalue	Trace	0.05	Prob**
None *	0.959105	104.4680	47.85613	0.0000
@ most 1 *	0.612103	34.13954	29.79707	0.0149
@ most 2	0.322054	13.30522	15.49471	0.1041
@ most 3 *	0.194342	4.754101	3.841466	0.0292

Maximum Eigenvalue Test

Hypothesized No. of CE(s)	Eigenvalue	Maximum-Eigen Statistic	0.05 Crit Value	Prob.**
None *	0.959105	70.32849	27.58434	0.0000
@ most 1	0.612103	20.83432	21.13162	0.0550
@ most 2	0.322054	8.551121	14.26460	0.3254
@ most 3 *	0.194342	4.754101	3.841466	0.0292

Source: Authors Compilation 2025

The maximal eigenvalue and trace test statistics results for the two models are displayed in Table 5. The p-values at the 5% significance level show that the hypothesis of no cointegration among the variables for Nigeria can be rejected. Both the Trace test and the Maximum Eigenvalue test

identified at most one cointegrating association at the 5% significance level. The cointegration of the variables indicates that there is a long-term equilibrium relationship among them.

Table 6 Error Correction Model

Predictive Variable: D (SMEGDP)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-204.2868	429.1115	-0.476069	0.6395
D(MBCTS)	-0.005659	0.023792	-0.237836	0.8146
D(MBCAS)	1.394206	0.177004	7.876687	0.0000
D(MFBCMS)	0.012157	0.009614	1.264454	0.2214
ECM	-0.619831	0.155052	-3.997579	0.0008
R-squared	0.892081	Mean dependent var		2115.893
Adjusted R-squared	0.869361	S.D. dependent var		4621.035
F-statistic	39.26432	Durbin-Watson stat		1.225666
Prob(F-statistic)	0.000000			
Breusch-Godfrey Serial Correlation LM Test:				
0.5438				
Heteroskedasticity Test: Breusch-Pagan-Godfrey:				
0.3498				

Source: Authors Compilation 2025

The ADF results indicate that all variables reports stationarity following their first differencing. In light of the stionarity characteristics, our research highlighted co-integration method of Engle-Granger, and the resultant findings affirmed existence of long-run impact, this prompt for the use of error correction model as display in table 6. The error correction technique shows the deviation from long-run equilibrium in the previous era, referred to as the error, affected by its short-run dynamics. The error correction result indicates a value of -0.619831 and a probability of 0.0008, which is below the 5% significance level, suggesting that short-run disequilibrium can converge to equilibrium long run at a rate of 61.98%. the research is also associated with the work by Ofoegbu et al. (2018), which conducted an empirical investigation utilizing an error correction model for analysis.

Table 6 presents further diagnostic tests of the Breusch-Godfrey serial correlation, confirming the absence of serial correlation in the model, as evidenced by the probability value of 0.538, which is not statistically significant at the 5% level. The null hypothesis of no serial correlation in the coefficient is been accepted. Also the Heteroskedasticity Breusch-Pagan-Godfrey test with probability a value of 0.3498 indicates no statistical significance at the 5% level, demonstrating the model's stability.

Discussion of Findings

The outcome reveals a remarkable discovery. Initially, contrary to expectations, microfinance bank credit to the transportation industry exhibits an inverse and insignificant impact on SMEs gross domestic product. It is observed that microfinance bank credit to the transportation industry for SMEs contributed -0.005659 to gross domestic product. This implies that for each unit change in microfinance bank credit to the transportation industry, there is a corresponding negative change in SMEs' contribution to gross domestic product. This study contrasts with Oluyombo's (2011) research utilizing loan disbursement by microfinance institutions as a proxy for their operational operations, which seeks to examine the contributions of micro-finance banking activities economic performance, utilizing credits disbursed by microfinance institutions as a proxy for their operational operations.

The results from Table 6 microfinance bank credit to the agricultural sector indicates positively and significantly impact on agricultural sector and the contribution of small-scale businesses to gross domestic product. Microfinance bank credit to the agricultural sector to small-scale businesses contributed 1.394206 on gross domestic product. The implication is that for each unit change in microfinance credit to the agricultural sector, there is a corresponding negative shift of -0.002035 in the attribution to small-scale businesses to GDP. The study aligns with Jack and Roland's (2016) investigated market women's opinions regarding access to microcredit and economic development in Yenagoa metropolis. The research employed a descriptive research, randomly selecting 180 market women from the Tombia, Opolo and Swali market. The research employed the simple percentage approach, particularly utilizing frequency tables to analyze the data. Research indicates that there is a decrease in socioeconomic activities among the market women attributed to cultural and financial drawback that limit the involvement of entrepreneur behavior, consequently, leading to economic advancement. The research depicted that the accessibility of credits program and scheme were limited to the market women due to inflexible policies by existing microcredit institutions, gender discrimination and lack of awareness.

The empirical research indicates a positive but insignificant effect of microfinance bank loan to the manufacturing sector on the contribution of small-scale businesses to gross domestic product. Microfinance bank credit to the manufacturing sector contributed 0.012157 to the gross domestic product of SMEs. This implies that for each unit change in microfinance assets, there is a corresponding positive change of 0.012157 in the GDP of SMEs in Nigeria. The study pertains to Oluyombo's (2011) analyzes micro-finance banking activities on the development of Nigeria economy during a fifteen-year period, utilizing time series data obtained from CBN bulletin and statistic annual reports. The ordinary least squares estimate method was employed utilizing a linear regression model. The research identified a tenuous positive correlation between the microfinance banks financing and long-term growth of the Nigeria.

Table 6 indicates that the coefficient of determination R^2 is 0.961975, suggesting that the explanatory factors collectively account for over 96.1% of the total changes in the explanatory parameter gross domestic product, whereas 3.9% of the variation is attributed to other parameters not included in the research. The corrected R-squared of 0.956543% confirmed the model's goodness of fit.

CONCLUSIONS AND RECOMMENDATIONS

The research on microfinance banking and the performance of small and medium business in Nigeria is an important endeavour if sufficient micro loan are established in other to stimulate the advancement of small business enterprise in Nigeria. Then enterprises might capitalize on emerging markets, thereby yielding new opportunities and fostering economic development.

In conclusion, the study demonstrated that microfinance banking impacts the performance of Nigeria SMEs.

The research recommends that microfinance banks should ease borrowing conditions, extend loan durations, and allow for prolonged repayment periods. Additionally, it suggests that the government, via the Central Bank of Nigeria (CBN), establish a minimum percentage of deposits that microfinance banks must allocate for loans and advances. The study additionally recommends that other parameters of microfinance credit services be integrated to assess the impact of micro-finance banking activities on the performance of Nigerian small and medium

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