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COMMERCIAL BANK CREDIT AND SMALL AND MEDIUM ENTERPRISE (SMES) PERFORMANCE IN NIGERIA

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Abstract

This paper empirically examines the nexus between commercial banks' credit (loan) and small and medium enterprise (SMEs) performance in Nigeria. It employed the Ordinary Least Squares (OLS) on annual time series data covering the period 1999-2021. Commercial bank loans to SMEs as a percentage of total loans (credit) are favorably and significantly associated to SMEs performance in Nigeria, according to the empirical findings. In Nigeria, the interest rate (a proxy for the loan rate) has a negative and considerable impact on SMEs' performance. Commercial bank deposits are positively connected to SMEs' success, but the relationship is not significant, but the Real GDP growth rate (a proxy for the economy's growth rate) is positively and significantly related to SMEs' performance in Nigeria. In order to improve the performance of SMEs, we advocate, among other things, increased commercial bank credit to SMEs through an appropriate monetary policy framework, concessional loan rates, and measures that encourage economic activities (output) in Nigeria.

Keywords: Commercial banks' loan, Monetary Policy framework, Nigeria, OLS, SMEs.

Introduction

The importance of credit financing to the profitability and performance of any firm, particularly SMEs, which hold the key to long-term economic growth and job creation, cannot be overstated. For example, the start-up and efficient performance of any business, large or little, is highly dependent on its capacity to operate. Before manufacturing can begin, money are required to bring together the other aspects of production, such as land, labor, and capital, in addition to the entrepreneur. In this regard, policymakers in both the public and private sectors have been particularly interested in commercial banks' lending intermediation role for small and medium-sized firms (SMEs) (OECD, 2017). Given commercial banks' intermediation role in providing credit for real-economy growth and development, the Nigerian government has placed a higher emphasis on sectorial credit distribution at affordable and concessional interest rates. SMEs expansion is critical to rapid industrialization, in addition to creating jobs and eliminating poverty (Nappon & Huddlestone, 1993). Because the Nigerian economy is characterized by high rates of unemployment and poverty, particularly in rural areas, commercial bank financing of SMEs has the potential to considerably improve SMEs' performance and growth, hence facilitating rapid economic growth. As a result, the purpose of this study is to investigate experimentally the relationship between commercial banks' financing (credit) of SMEs and SMEs output in Nigeria.

Low managerial skills, insufficient infrastructures, lack of access to capital and contemporary technology, government bureaucracy, unfair competition, a hostile business environment, and various taxation are among the issues that SMEs in Nigeria confront. While these issues tend to stifle SMEs' performance and growth, the shortage of inexpensive and long-term credit funding is particularly acute. Their ability to grow and compete is hampered by a lack of cash. According to Onugu (2005), while SMEs contribute significantly to industrial employment in Germany, the United States of America, South Korea, and other industrial economies, accounting for as much as 64 percent of industrial employment in Germany, the United States of America, and other industrial economies, SMEs contribute only about 1% of GDP in Nigeria. Part of the reason for the low contribution is related to poor and insufficient financial access. Given Nigeria's alarming rate of unemployment and SMEs' ability to contribute considerably to job creation, there is a higher need for commercial bank loans to SMEs. Because SMEs' performance and growth cannot be realized without adequate commercial bank credit (loans), an empirical study of this kind that looks into the role of commercial banks' credit to SMEs is critical for policy analysis and implementation. This is where the significance of this research come into the picture.

Literature Review

Credit Intermediation and SMEs Performance

The theoretical literature on the function of financial intermediation in financing real-world economic activities is extensive. Credit mobilization, according to Levinon (1973) and Levine (2005), drives real sector economic activities. Financial sector intermediation, according to these thinkers, is crucial to the operation, survival, viability, efficiency, and growth of SMEs. Credit channeling by commercial banks is crucial to real-world activities, as SMEs' performance cannot be assured without adequate credit transmission. The provision of loanable money by the banking sector to real-estate initiatives will encourage capital accumulation, technology, enterprise, and innovation, all of which will contribute to economic growth. SMEs will experience fewer financial crises, funding costs, and illiquidity issues if commercial banks provide adequate credit intermediation, allowing them to perform efficiently and create real sector growth. Levine et al., 1997.

Credit intermediation (in this context) is intended at addressing challenges such as a lack of or poor start-up capital, operational inefficiencies directed toward operational efficiency, stability, and profitability of SMEs, according to Kishan and Opiela (2000) and Deccan (2004). In support of this, Boyd and Runkle (1993) suggested that well-capitalized businesses (in this context) are more profit-efficient and less vulnerable to fragility. This is despite the fact that the increased profits as a result act as a buffer against unfavorable shocks and unexpected financial catastrophes. Financial liberalization, development, and fragility studies have all bolstered the case for bank financial intermediation. In this regard, Demirguc-kunt and Levine (2003) assert that there is a strong positive relationship between bank credit financing and real sector efficiency, productivity, employment, and poverty reduction. They maintain that a sufficient capital base, as a result of banking's financial intermediation role, will not only improve real sector output performance and efficiency. Increased real sector output, capital accumulation, entrepreneurship, and innovation are linked to the development of the financial sector through regulatory policies (bank supervision and prudential regulation) that stimulate competition and financial deepening (Abiad & Mody, 2005).

Savings and credit intermediation are critical to capital accumulation, performance, and efficiency, according to the Harrod-Domar growth model. Other models, such as the endogenous growth model, proposed that capital accumulation is caused by either a high savings rate or the accumulation of resources across productive technologies (Romer, 1986, Lucas, 1988, Rebelo, 1991). The rate of technical innovation in the financial system has the potential to alter steady-state growth (Romer, 1990; Grossman & Helpman, 1991, Aghion & Howitt, 1992). The functional approach is a prominent method of determining the relationship between SMEs' finances and performance. This method looks at how bank credit (loans) affects the performance of small businesses. Financial intermediation is responsible for the

mobilization and accumulation of credit resources, which promote capital accumulation and growth. Credit intermediation thus has an impact on capital formation, technical innovation, and business.

Empirical Studies

A slew of empirical investigations have created a body of literature claiming to prove the link between bank credits and small businesses. A summary of some of the relevant studies is provided. In the context of agricultural finance, Zuberi (1989) estimates the production function for Pakistan. He investigated the influence of bank credits on SMEs in Nigeria using a dynamic Cobb-Douglas production function and discovered that bank credits considerably increased SMEs output in Nigeria. In Nicaragua, Carter (1989) investigates the impact of credit on farmer output. The results of the OLS econometric approach demonstrate that bank credits had a considerable impact on small-scale output.

Direct credit programs were also positively associated with the adoption of modern technologies in Morocco and Bangladesh, according to Yaron, Benjamin, and Pripek (1997), and these innovations were positively associated with increased productivity gains in the industrial sector, particularly in small and medium-sized businesses

In Nigeria, Ijaiya and Abdulraheem (2000) looked into the influence of commercial bank loans on small and medium-sized agricultural and industrial businesses. He obtained evidence that commercial bank credits have a great capacity to influence and predict outputs in the sectors using a calibration method.

Credit constraints reduce the value of SMEs output, according to Iqbal, Ahmad, and Abbas (2003). Sririam (2007) looked into the productivity of rural credit in South Asian nations and discovered evidence that credit has a substantial impact on SMEs' growth. According to Guirkinger and Boucher (2008), the Peruvian economy's production was hampered by a lack of adequate finance for SMEs.

Oni, Amao, and Ogbowa (2005) look into the factors that influence credit demand among Nigerian rural farmers. According to the findings, the distance to the financial institution, the farmer's income, and the desire to boost agricultural production all influenced the demand for loan among farming households.

In Nigeria, Emmanuel (2008) investigates the impact of macroeconomic variables on SMEs growth. Credits to the agricultural sector, nominal interest rates on loans, exchange rate, world agricultural output prices, foreign private investment, government expenditure, and inflation rate were among the macroeconomic factors studied. He discovered that the nominal interest rate is positively related to the index of SMEs agricultural production using multiple regression techniques. This means that with a higher nominal interest rate, there are fewer credit facilities available. Nigeria's agricultural output index for major commodities is likewise found to be favorably related to global prices. This means that higher global prices boost Nigeria's agricultural output. Similarly, the agricultural production index was found to be positively associated to agricultural government spending. Moreover, the index of agricultural production

is found to be negatively related to the level of inflation, implying that as inflation becomes high, agricultural output declines. Macroeconomic policies that improve favourable exchange rates, make agricultural finance broadly available at low interest rates, reduce inflation, and encourage foreign direct investment in agriculture, he believes, will be crucial in supporting Nigeria's agricultural output growth.

Brehanu and Fufa (2008) find that increasing small-scale farmers' access to financing is one of the crucial variables for increasing SMEs output in Ethiopia, using Two-Limit Tobit analysis. Wynne and Lune (2003) and Lahiff and Cousins (2005) investigated the influence of bank credit on SMEs output in the setting of smallholder farmers in South Africa, finding that commercial bank credit is one of the major variables required to raise output in South Africa.

In a study on the determinants of small industrial output in India, Tripathi and Prasad (2010) discovered that capital, labor, and bank credits are now essential variables significantly affecting output growth in India.

Nkurunziza (2010) looks into the impact of bank loans on Kenyan SMEs' output. He used a multiple regression technique, and the results suggest that commercial bank credit in Kenya has a substantial positive association with production.

Enoma (2010) studies the impact of bank credits on Nigerian sectorial output using a multiple regression model. Bank credits have a positive and significant association with output in Nigeria, and output is favorably correlated with national income, according to the empirical findings. Improved financing and credit, according to the report, will help Nigeria's agricultural and industrial sectors grow.

In Pakistan, Sial, Awan, and Waqas (2011) investigate the impact of institutional loans on agricultural and SMEs. Bank financing has a favorable and considerable impact on SMEs, according to the empirical results obtained using the OLS econometric technique.

Using the Cobb-Douglas production function, Chisasa and Makina (2013) investigate the influence of bank lending on SMEs output in South Africa. He used time series data from 1970 to 2009 on SMEs output, bank lending, capital accumulation, and labor, with agricultural output as the dependent variable. He discovered that bank credit had a positive and large impact on output in South Africa using the OLS approach to estimate the Cobb-Douglas production function. The findings reveal that a 1% increase in bank credit results in a 0.6 percent rise in output while other determinants of production remain constant. Capital accumulation has a positive and considerable impact on output, though not as much as credit, with a 1% rise in capital accumulation resulting in a 0.4 percent increase in output when all other factors are held constant. In terms of Cobb-Douglas elasticities, the combined effect of credit (0.6%) and capital accumulation (0.4%) produces constant returns to scale, implying that doubling the two inputs will double output.

Igbinovia and Okoye (2017) investigate the factors that influence entrepreneurship in Nigeria. Data was collected from 140 entrepreneurs working in poultry, fish farming, bakery/confectioneries, sachet water production, transportation companies, canopy and chair

rental services, and general buying and selling SMEs using a cross sectional survey study approach. They analyzed the data using ordinary least square regression techniques using spearman's correlation. The findings show that, among other things, a lack of access to credit finance has a negative and significant impact on entrepreneurship. In light of these findings, they urge that the government provide the necessary infrastructure (including access to bank financing) for entrepreneurial activity, as well as favorable policies and governance stability, to improve SME performance in Nigeria

Methodology

The link between commercial bank loan to SMEs and SMEs performance in Nigeria is investigated using the Ordinary Least Squares (OLS) technique. Because of its Best Linear Unbiased Estimator (BLUE) features, the approach is acceptable. Prior to that, descriptive statistics and correlation analysis are performed, which indicate the summaries and patterns of association between the variables. Various diagnostics are performed to ensure that the results are legitimate, reliable, and resilient. The research makes use of annual time series data from the period (1999-2021). The timeframe was chosen due to data availability as well as heightened policy attention on SMEs growth in Nigeria during that time. The data are obtained from the Central Bank of Nigeria (CBN) Statistical Bulletin and National Bureau of Statistics (NBS).

The model for this study is specified in the empirical form below:

 $SMEsQ = \acute{a} + \acute{a} CBLSMEs + \acute{a} DEPC + \acute{a} INT + \acute{a} RGDP + U....(3.1)$

0 1 2 3 4

Where:

SMEsQ = Small and Medium Scale Business output (a measure of the performance of SMEs) CBLSMEs = Commercial Bank Loan to SMEs as ratio of total loans DEPC = Deposit of Commercial Banks

INT = Interest Rate (Proxy for Lending Rate)

RGDP = Real GDP

U= Stochastic Error term

á, á á > 0; á **o** 1 2, 4 3<

The model for this study is specified in the empirical form below:

 $SMEQ = \acute{a} + \acute{a} CBLSME + \acute{a} DEPC + \acute{a} INT + \acute{a} RGDP + U....(3.1)$

0 1 2 3 4

All the variables are as earlier defined.

U= Stochastic Error term

á ,á á >0;á <0.

1 2, 4 3

Results and Discussion

Descriptive Statistics

We present in Table 1 the descriptive statistics of the data on the variables used for the analysis. The mean (average) growth of SMEs performance) is 24. 30, with a median value of 19.2. The maximum and minimum growth values are and 62.4 and 5.2 respectively. The standard deviation is 6.90. The average value of commercial bank loans to SMEs is 20.3, with a median value of 21.4. The maximum and minimum values are 83.4 and 1.10, respectively. The average value of deposit of commercial banks, interest rate and real GDP growth rate are 25.01, 20.2 and 6.88 percent, respectively.

Table 1: Descriptive Statistics

	Mean	Median	Max.	Min.	Std.
	ivieun	Mediun	<i>IV1UX</i> .	IV1111.	Dev.
SMEsQ	24.30	19.22	62.42	5.2	6.90
CBLSME	20.30	21.14	83.40	1.10	4.50
DEPC	25.01	22.42	20.00	2.02	6.25
INT	20.22	18.26	30.17	9.40	3.62
RGDP	6.88	6.25	15.20	-1.58	5.22

Source: Authors' Computation

Correlation Analysis

The correlation matrix is used to examine the pattern of relationship among the time series variables. The results is presented in tabl

	SMEsQ	CBLSME	DEPC	INT
SMEsQ				
CBLSME	0.16			
DEPC	0.21	0.02		
INT	0.13	0.12	0.19	
RGDP	0.23	0.28	0.18	0.20

Table 2: Correlation Results

The correlation results show a positive correlation between SMEs performance and commercial bank loans to SMEs. A positive correlation is also evident between SMEs, deposit of commercial banks and real GDP. Thus, increase commercial bank credit and growth rate of real GDP tend to stimulate SMEs performance. On the other hand, rising interest rate tends to reduce the performance of SMEs, as high cost of borrowing discourages entrepreneurial creation, and thus SMEs.

Diagnostic Tests

In order to ensure the reliability and validity of the results obtained from the empirical analysis, some diagnostic test are carried out to check for the problems of multi-collinearity, and hetreoskedasticity. The test results are shown in table 3.

Model (Heteroscedasticity and Mu	ticollinearity Test).	
Mean VIF	3.27	
Heteroscedasticity Test (P>chi ²)	0.002	
So)	

The test for heteroskedasticity is based on the need to test for the presence of heteroscedasticity among the variables examined. To test for heteroskedasticity, from the table above, we accept the alternative hypothesis of absence of heteroskedasticity in the

data set since the P>chi is significant at 5%.

Alternatively, multicollinearity signifying the existence of a strong linear relationship between two or more explanatory variables is investigated. Pearson correlation matrix indicates that if the association among variables is less than 0.8, then there is absence of

multicollinearity (Gujarati 2003). Added to this, the result of the variance inflation factor

(VIF) suggests clear absence of multicollinearity since the mean of variance inflation factor

(VIF) in table 4 above is less than 10 as suggested by Gujarati (2003).

Following the reliability and validity of the diagnostic test results, the result of the empirical estimation is presented in the table below:

Variables	Coefficient	T-Ratios	Prob	
Constant	0.605	0.825	0.39	
CBLSMEs	0.401	2.517	0.03	
DEPC	0.118	1.224	0.14	
INT	-0.529	-2.961	0.00	
RGDP	0.2697	2.464	0.04	
Adjusted R ⁻² =0.71	F = 79.30	DW = 1.85	DW = 1.85	
O [×]				

Table 4: The OLS Result Dependent Variable: SMEsO

An examination of the empirical results reveals that the R is 0.74 while its adjusted counterpart stands at 0.71. With this, over 71 percent of the systematic variations in small and medium scale business' output is explained by commercial banks loans (credit) and other relevant variables in the model. The F- Value of 79.30 is highly significant at the 1 percent level, thus the hypothesis of a significant linear relationship small and medium scale business output and all the independent variables combined cannot be rejected. The DW statistic value of 1.85 can easily be approximated to 2, thus confirming the absence of autocorrelation in the model. The implication of this is that the estimated model is reliable for structural analysis and policy directions.

In terms of the explanatory variables in the model, the result shows that all the coefficients of the explanatory variables have the correct signs. The empirical results show that the coefficient of commercial bank loans to SMEs (CBLSMEs) is significant at the 5 percent level. This statistical significance shows that the banking sector's intermediation role in increasing SMEs performance (output) is crucial, especially in Nigeria's unrivaled quest to generate jobs and considerably reduce poverty. As a result, increased financing (credit channeling) to SMEs by the banking sector will invariably stimulate SMEs and improve their overall performance in Nigeria.

Although positive, the coefficient of commercial bank deposit failed the significance test at the 5% level. This could be ascribed to the excess and idle funds at the tills of most Nigerian commercial banks, which had previously not been converted into a pool of loanable funds for SMEs. This means that commercial bank loans to SMEs account for a modest percentage of overall commercial bank deposits. (i.e. a low proportion of commercial banks' loans to SMEs compared to total deposits). The recent announcement by the Central Bank of Nigeria that commercial banks should set aside a significant portion of their total deposit, up to 60 percent, for real sector lending and financing, particularly SMEs, is in response to these underutilized and idle funds.

The interest rate coefficient is negative, as expected, and statistically significant at the 5% level, whereas the Real GDP coefficient is positive and statistically significant at the 5% level. As a result, rising interest rates have a negative influence on the performance of small and medium-sized businesses in Nigeria, as the high cost of borrowing (loan rate) discourages borrowing, limiting SMEs' performance and growth. Real GDP, on the other hand, demonstrates that increased economic output (economic activities/growth rate of the economy) increases SMEs' output and performance. This is in line with economic theory, as increasing economic activity (output) boosts the performance of small businesses. Overall,

the empirical findings show that increasing commercial loans to small and medium-sized businesses in Nigeria will surely boost the sector's output.

Conclusion and Recommendations

It is common knowledge that increasing financial intermediation in the form of finance (credit facilities) is crucial to improving the performance of Nigeria's small and medium-sized businesses. Small and medium-sized businesses are thought to be the key to creating considerable job opportunities and alleviating poverty in Nigeria. Small and medium-sized businesses are also thought to be the basis and bedrock of industrialization, as they represent the key starting point for any long-term industrialization. The search for industrialization, job creation, and major poverty reduction will be impossible without a thriving small and medium-sized firm sector, which serves as the industrial sector's vital "backbone."

The purpose of this study was to look into the impact of commercial bank credits (loans and advances) to Nigerian SMEs. The contribution of SMEs to overall GDP is used to assess their performance. The empirical results show that commercial bank loans to SMEs have a favorable and significant impact on SMEs' performance in Nigeria, using OLS estimating techniques. In Nigeria, the lending rate has a positive and substantial relationship with SMEs' performance, while the growth rate of real GDP has a positive and significant relationship with SMEs' performance.

Given the critical role of credit/financial intermediation in SMEs' activities and performance, the Nigerian government must implement aggressive policies and strategies to increase small and medium-scale enterprise financing in Nigeria, particularly through the Central Bank of Nigeria's monetary policy intervention (CBN). Without a doubt, SMEs are critical to Nigeria's rapid economic growth, job creation, and poverty alleviation. Friendly macroeconomic and sectorial policies capable of stimulating SMEs activities must be implemented to achieve this goal.

Our research findings provide crucial policy implications for desired action in Nigeria. These are some of them:

Sectoral policies that promote the growth of SMEs in Nigeria should support more credit channeling from the banking sector to small and medium-sized firms.

Banks should be required by monetary authorities to commit a significant amount of their credit portfolio to small and medium-sized business financing in Nigeria, using low-interest loans and other stimulative financial measures.

Banks in Nigeria should convert idle funds in the form of under-utilized deposits into a larger credit portfolio for SMEs.

Good macroeconomic policies, such as lower lending rates and policies to boost real GDP growth, should be implemented.

Government and policymakers also should work hard to enhance the investment climate and ensure political stability in order to shape a robust and healthy economic environment that will promote foreign direct investment. This will allow the manufacturing sector to attract a significant portion of investment while also making it competitive in the quest to drive swift and sustained economic growth in Nigeria through SMEs.

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