Institutional Credit and Growth Nexus of SMEs in Nigeria: The Banking Sector Perspective

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Abstract: The paper is on institutional credit and growth nexus of SMEs in Nigeria; the banking sector perspective. Time series date spanning the period of forty five (45) years was sourced from CBN statistical bulletin for 2019. The SMEGDP shows a rising trend and recorded major peaks in 2010, 2011, 2014. The commercial bank credit to SMEs (CBC) exhibit unstable trend with remarkable peak in 2002 and 2017. Microfinance bank credit to SMEs also shows an unstable trend. The regression result above shows that commercial bank credit to small and medium enterprises (CBC) and banking system lending rate (BSL) have a negative impact on SMEs growth in Nigeria. Also, there is a direct/positive relationship between microfinance credit to SMEs (MFC) and SMEs growth which implies that, unit increase in MFC will lead to 5.550403 unit increases in SMEs growth in Nigeria. We conclude that institutional credit to SMEs is determinant variable of SMEs growth in Nigeria. Based on the findings of this study, it is recommended that, banks should increase their lending activities to small and medium enterprises in Nigeria.

1. INTRODUCTION

SMEs represent a large and economically important sector in emerging market. As a sector they are central to economic development and growth of Nigeria. For SMEs to grow and make positive impact on the economy, they need access to finance which of course has historically been severely constrained.

A thriving SMEs sector is commonly considered a sign of a thriving economy of a whole. According to Nigeria Bureau of statistics (NBS) in 2016 SMEs in Nigeria have contributed about 48% of the National GDP, account for about 50% of

industrial jobs and 90% of the manufacturing sector, in terms of number of enterprise. As a primary driver for job creation and GDP growth, SMEs greatly contribute to economic diversification and social stability and play vital role in the development of private sector in Nigeria. Despite their crucial role in driving the country's economic development, evidence suggests that SMEs in Nigeria experience a severe shortfall in financing which has historically hindered their growth. A study conducted by Dada (2014) and Iwedi (2015) found that the primary factor constraining the growth of SMEs in Nigeria is access to finance. Their respective studies also found a weak link between SMEs growth and bank credit. In Nigeria, many SMEs often rely on informal sources of capital such as borrowing from relatives to meet finance needs. However, when a small or medium enterprise does not access formal channels, it looks forward to the banking sector as its primary source of finance. The banking sector in this perspective includes commercial banks, merchants banks, microfinance banks and other related institutions. In this study particular emphasis and attention are paid to commercial and microfinance banks which are the most important financial intermediaries in Nigeria. These institutions link savings and investments. They lend to SMEs and offer a broad suite products and services including deposits, credit, transaction and advisory services to SMEs.

In Nigeria, SMEs have great unharnessed growth potential, strong export and employment potential and currently SMEs in Nigeria are distributed along sections and regions thereby creating operational and cost synergies potential. Thus the big challenge before SMEs in Nigeria is poor financial support and credit environment that have failed to channel funds to this economically important sector of the Nigeria economy, huge infrastructural gaps, high levels of unskilled workforce and little or no legal and regulatory framework for SMEs. It is in the light of the above, this study is carried out to assess the role of the Nigerian banking sector in promoting and financing SMEs growth and development in Nigeria.

1.2. Definition of SMEs

SMEs are firms whose financial needs are too large for microfinance bank but are too small for corporate banking models. In a simple term, SMEs are registered business with their 250 employees while broadly SMEs are business with turnover of less than N100 million per annum and have less than 300 employees on these business pay roll. Generally, SMEs account for at least 95 percent of registered firms globally, particularly in Nigeria, 96 percent of registered firm are under the SMEs subsector. However, there are other alternative criterion for deducting SMEs,

this include SMEs annual sales, assets base and size of loan or investment. It is on this pedestal that the World Bank defined SMEs as presented in table 1 below.

Table 1: World Bank Definition SMEs

Firm Size	Employees	Assets Base	Annual Turnover
Micro	<10	<$100,000	<10$100,000
Small	<50	<N3 million	<N3million333333
Medium	<300	<$15million	<N15million
	Loan size proxies		
Micro	<$10,00		
Small	<$100,000		
Medium	< N1 million	< N2million for some advance countries	

Source: Ayyagari, Beck and Demurguc-Kuat (2005)

1.3. Economic Contribution of SMEs in Nigeria

The economic importance of SMEs in Nigeria cannot be overemphasized. SMEs have significantly contributed to Nigeria economic advancement through job creation, revenue generation, poverty reduction, economic diversification and technological advancement among others. This is a sub sector of the Nigeria economy that have reformed and actively influenced the economy through creatively and innovation. Notably, the economic importance of SMEs in Nigeria is explained below.

Increased GDP and Value Contribution

SMEs in Nigeria are the bedrock and engine for economic transformation, advancement and industrialization (NBS-SMEDAN 2017). This is seen in the value of contribution SMEs made to national income (GDP) between 2013 and 2017; SMEs in Nigeria have contributed 49.7 percent to GDP

Job and Employment Creation

SMEs are critical to Nigeria economic advancement especially with respect to job creation. The figure reported by NBS shows that unemployment rate stood at 27.1 percent as at third quarter of 2018. However, in the midst of growing unemployment rate SMEs generated total employment of 2,889.714 persons (NBS – SMEDAN 2017). Furthermore, it was discovered that the major economic sectors that generated job were manufacturing sector which accounted for 47.4 percent, agriculture 29.6 percent, trade sector 10.1 percent while services contributed 5.6 percent. SMEs also

promoted industrial employment during this period through the utilization of local resources production of intermediate goods and the transfer/transformation of rural technology (Rasak, 2012).

Promotion of Economic and Industrial diversification

The diversity witnessed in different sectors of the Nigeria economy was promoted through the activities of SMEs. This of course aligns with the federal government objective of economic diversification. The 2017 survey conducted by NBS-SMEDAN in micro small and medium enterprises in Nigeria reports that SME in Nigeria consisted of the education and manufacturing sectors. Further, the survey reveals that the medium enterprises were covered by 43 percent manufacturers.

Poverty Reduction

Ample of studies have reveal the ability of SMEs in alleviating poverty through their capacities in creating job opportunities, employment and self sufficiency. For Bruton, Ketchen and Ireland (2013) and Mitra, Abubakar and Sagagi (2011) entrepreneurship knowledge and entrepreneurial activities as pathways to reduce poverty. Mohammad, Abul, Said and Halin (2017) acknowledged that promoting small and medium enterprise is one means off eradicating poverty. The SMEs sector is a significant source of generating employment for the people. It helps in amplifying economic growth which ultimately reduces poverty in society. An increase in SMEs growth may transform the citizens into higher household income due to economic activities (Maksinov, Wang and Luo, 2017) for Beck, Demuurguekunt and Levine (2008) and Mohd Shariff, Deou and Ali (2010) SMEs has played an important role for development of the economic advancement of a country as well as alleviating poverty through jobs creation which provide income for the people.

Promotion of Domestic Investment

The economic headwinds and unfriendly business environment have cause reluctance on the part of foreign investors to invest in Nigeria economy. This development among other made SMEs to flood the Nigeria business environment with various business and economic activities and this activities have encouraged the circulation of money with the economy (Gbemi, 2020). Consequently, the SMEs sub sector has employed 87.5 percent of local sourcing of raw materials during production activities.

Innovativeness and Digitalization of the Economy

As engine of socio-economic transformation, SMEs have managed to change the narrative and have actively engaged in technological advancement and digitalization through digital marketing, online transactions to any parts of the world and ICT engagements (Gbemi, 2020) SMES are seen as platforms to explore various opportunities and connections.

2. LITERATURE REVIEW

2.1. Theoretical Framework

In this section some theories are reviewed to form as basis for the paper such as the credit channel theory, credit rationing theory and the theory of enterprise growth hypothesis. According to Iwedi (2020) the credit channel theory mechanism of monetary policy describes how an Apex monetary authority policy changes the amount of credit that banks issue to firms which in turn affects the real sector. The credit channel theory has been divided into the balance sheet and the bank lending channels.

2.1.1. Bank Lending Channel Theory

This theory states that monetary policy also affects the external finance premium by shifting the supply of the intermediated credit, especially loans from commercial banks. Miskin, (1993), the bank lending channel is founded on the special role that banks play in the financial system by dealing with borrowers (particularly small firms and households) for whom asymmetric information problems are more severe. Further, the theory stress that if supply of bank loan is disrupted for some reasons, bank dependent borrowers may not be necessarily shut off but incur cost of funding tenders.

2.1.2. Balance Sheet Channel Theory

This theory stressed that external finance premium facing a borrower depends on borrower net worth, the lower the external finance premium and overall term of credit. The theory further state that the quality of borrowers' sheet similarly affects their investment and spending decision. The balance sheet channel arose due to shift from central bank's policy not only affects interest rate but also the financial position of borrowers. Like the bank lending channel, the balance sheet channel arises from the presence of asymmetric information problems in credit markets

when an economic agent net worth falls, adverse selection and moral hazard problems increase in credit market. By lower net worth, we mean that the economic agent has less collateral, thereby increasing adverse selection and increasing the incentive to boost risk taking, thus exacerbating the moral hazard problems.

2.1.3. Credit Rationing Theory

Access to finance is explained by credit rationing theory (Stiglitz and Weiss, 1981, Bester, 1985; Cressy, 1996, Battwensperger and Devinney, 1985). For Stiglitz and Weis (1981) credit rationing is said to occur when some borrower receives a loan, while others do not credit rationing takies place at either financier level due to loan market imperfection and information asymmetric or voluntarily by the borrowers. At financier level credit rationing occurs in a situation where demand for credit exceeds supply at the prevailing interest rate (Stiglitz and Weiss, 1981).

2.2. Empirical Literature Review

In literature, diverse studies with mixed results exist on the subject under investigation in this paper.

Okpara (2011) investigated the factors that obstruct the growth and survival of small business in Nigeria. The study used a survey method and conducted social statistical analyses to found that the most common constraints obstructing small business growth and survival of SMEs in Nigeria is lack of financial support. Onakoya, Fasanya and Abdulrahmin (2013) in their work found that credit to low-income operators enhance the growth of SMEs while interest rate was found to reverse effect. Eigbremolen and Igberaese (2013) investigated the role of small and medium enterprise (SMEs) in achievement of economic growth in Nigeria, using regression model and granger causality test. The study found that there is a positive impact between SMEs and economic growth in Nigeria while causality test reveals a unidirectional causal relationship between SMEs and economic growth, running from the former to the later. Imoughele and Ismaila (2014) employed co-integration and error correction model to examine the impact of bank credit to SMEs performance between 1986 – 2012. The study found that SMEs growth and bank credit correlate on the long run.

Iwedi (2015) attempt to examine the anatomy of banking system credit and SMEs growth in Nigeria from 1980 – 2014. The study applied the econometric tool of the Johanson and Juselium co-integration test and Engle granger causality test and it found that banking system credit to SMEs accelerate growth of the sector and

the Nigeria economy in general. Zihra and Charles (2017) investigated the impact of SMEs financing on business growth in Nigeria. The study utilizes the t-test statistic in testing of hypotheses and it was found that banks credit to have no significant impact on growth of Nigeria economy. Also interest rate charged on credit has no effect on SMEs business expansion in Nigeria.

Nwakoly, Ezejiofor and Ajike (2019) examined the impact of government financial incentives on SMEs and growth of the economy between 1999-2013. Using regression analysis it was found that credit facilities have significant impact on SMEs output and the growth of Nigeria economy.

3.   METHODOLOGY

In the course of this paper, the econometric procedures were adopted. The ordinary least square method (OLS) was employed for estimation of the relationships between the predictor variable and the criterion variables. Unit root test was conducted using the Augmented Dickey Fuller to ascertain the stationary property of the time series. This is done to avoid spurious regression. To further verify the relevance of the model, the co-integration test was performed to determine whether there exists long run equilibrium relationship among the variables and also OLS model was estimated to capture short run relationships.

3.1. Data

The data for the study is time series in nature and as such was obtained mainly from secondary sources which include Central Bank of Nigeria (CBN) publication and National Bureau of Statistics (NBS) publications. Annual time series data on SMEs growth, proxy by GDP for wholesale and retail trade for the period of forty five (45) years was sourced which is dependent variable. Annual time series data on commercial bank credit to SMEs, microfinance bank credit to SMEs and banking system lending rate was also sourced for the same periods and these are explanatory variables.

3.2. Model Specification

The model for this study was developed using the following functional relationship.

$$\text{SME GDP} = f(\text{CBC, MFC, BSL}) \qquad (1)$$

Using the cobb Douglas production function $X = \beta_{01}{}_t{}^B k_2{}^B$

The above functional relationship can be expressed as

$$\text{SME GDP} = a_0 \; \beta_1 \, CBC_1^{\ B} \quad \beta_2 \, Mfc_2^{\ B} \; \beta_3 \, BSL^B_{\ 3} \qquad (2)$$

Where SME GDP = Small and Medium Enterprise Growth

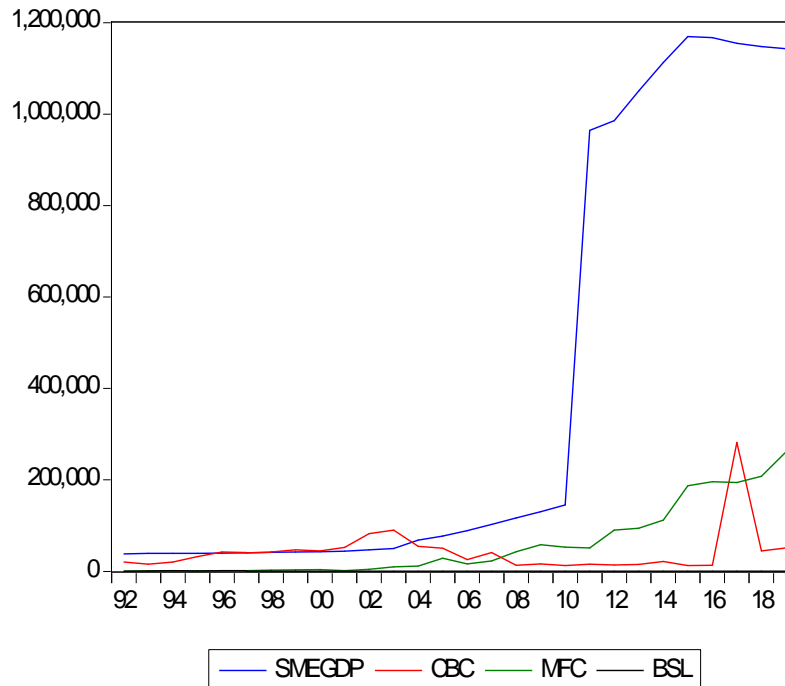CBC = Commercial bank credit to small and medium enterprise

MFC = Microfinance bank credit to SMEs

$\beta_1 \, \beta_2$ and β_3 are parameter estimates of the explanatory variables

μ_i = is the error term the aprior expectation is that β_1 and $\beta_2 > 0$, $\beta_3 < 0$

4.   RESULTS AND INTERPRETATIONS

Figure 1: Trend of institutional lending and SMEs Growth Nexus in Nigeria

The trends in institutional credit parameters and SMEs growth nexus in Nigeria are summarized in figure 1 above. The SMEGDP shows a rising trend and recorded major peaks in 2010, 2011, 2014. The commercial bank credit to SMEs (CBC) exhibit unstable trend with remarkable peak in 2002 and 2017. Microfinance bank credit to SMEs also shows an unstable trend.

Table 2: Regression Result for Institutional Lending and SMEs growth in Nigeria

Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*
C	298690.8	299491.9	0.997325	0.3286
CBC	-0.495141	0.890331	-0.556131	0.5833
MFC	5.550403	0.624826	8.883117	0.0000
BSL	-11267.97	15371.05	-0.733065	0.4706
R-squared	0.811510	Mean dependent var		397437.4
Adjusted R-squared	0.787949	S.D. dependent var		494713.7
S.E. of regression	227810.6	Akaike info criterion		27.64198
Sum squared resid	1.25E+12	Schwarz criterion		27.83230
Log likelihood	-382.9877	Hannan-Quinn criter.		27.70016
F-statistic	34.44264	Durbin-Watson stat		2.052252
Prob(F-statistic)	0.000000			

E-view 9.0 Output

The regression result above shows that commercial bank credit to small and medium enterprises (CBC) and banking system lending rate (BSL) have a negative impact on SMEs growth in Nigeria. These negative impact or relationship are not significant because the probability follows of commercial bank credit to small and medium enterprises (0.5833) and banking system lending rate (0.4706) are greater than 0.05 percent. This prove that commercial bank credit to small and medium enterprises (CBC) and banking system lending rate (BSL) does not explain the growth in SMEs in Nigeria in a good way. On the other hand, the microfinance bank credit to small and medium enterprises (MFC) is important and significant for this model. This is because the probability follow of MFC (0.0000) is less than 0.05 percent, which is an indication that the microfinance bank credit to small and medium enterprises (MFC) explains the growth of Nigeria SMEs in a good way. There is also a direct/positive relationship between MFC and SMEs growth which implies that, unit increase in MFC will lead to 5.550403 unit increase in SMEs growth in Nigeria. We conclude that microfinance credit to SMEs is determinant variable of SMEs growth in Nigeria. The results of other important statistical tools applied in this study reveal that the coefficient of determination (R^2), as used to measure the success of the regression in predicting the value of the dependent variables within the sample and test the goodness of fit, is considered high (over 78.79%). The adjusted R-square, the Durbin-Watson statistics and the entire regression test are statistically significant, including the f-test.

Table 3: Unrestricted Co-integration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	TraceStatistic	0.05Critical Value	Prob.**
None *	0.722263	61.21969	47.85613	0.0017
At most 1	0.465774	27.91164	29.79707	0.0812
At most 2	0.342908	11.61130	15.49471	0.1766
At most 3	0.026305	0.693096	3.841466	0.4051

E-view 9.0 Output

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Table 4: Unrestricted Co-integration Rank Test (Max-Eigen Statistic)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.722263	33.30805	27.58434	0.0082
At most 1	0.465774	16.30034	21.13162	0.2078
At most 2	0.342908	10.91821	14.26460	0.1583
At most 3	0.026305	0.693096	3.841466	0.4051

E-view 9.0 Output

Max-eigenvalue test indicates 1 co-integrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

 **MacKinnon-Haug-Michelis (1999) p-values

The result of the co-integration test shows that the value of trace (61.21969) and max-eigen statistic (33.30805) is greater that the critical value (47.85613 and 27.58434) at 5 percent at none hypothesis, therefore, we reject the null hypothesis of there is no co-integration equation in this model. The second and third null hypotheses say that there is at most 1 or 2 co-integrating equation. A look at the value of trace and max-eigen statistic shows that value of trace and max-eigen statistic are less than the critical value at 5 percent. Therefore, we fail to reject the null hypotheses, so we agree with the null hypotheses that in this model we have at most 1 or 2 co-integration equation. This implies the series are co-integrated that is exhibit a long run relationship.

The pairwise granger causality tests suggest evidence of unidirectional causality flowing from SMEGDP to MFC. Also the result shows the presence of a strong

Table 5: Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.
CBC does not Granger Cause SMEGDP	26	0.41902	0.6631
SMEGDP does not Granger Cause CBC		0.87576	0.4312
MFC does not Granger Cause SMEGDP	26	0.48845	0.6204
SMEGDP does not Granger Cause MFC		3.64674	0.0437
BSL does not Granger Cause SMEGDP	26	0.14481	0.8660
SMEGDP does not Granger Cause BSL		0.81318	0.4569
MFC does not Granger Cause CBC	26	2.96792	0.0733
CBC does not Granger Cause MFC		1.18540	0.3253
BSL does not Granger Cause CBC	26	0.18822	0.8298
CBC does not Granger Cause BSL		0.03396	0.9667
BSL does not Granger Cause MFC	26	0.41340	0.6667
MFC does not Granger Cause BSL		0.82577	0.4516

E-view 9.0 Output

causal effect between of small and medium enterprises and microfinance bank credit to the SMEs. By implications it suggests that the growth of small and medium enterprises causes microfinance bank credit to the sector.

5. CONCLUSION

The paper is on institutional credit and growth nexus of SMEs in Nigeria; the banking sector perspective. Time series date spanning the period of forty five (45) years was sourced from CBN statistical bulletin for 2019. The SMEGDP shows a rising trend and recorded major peaks in 2010, 2011, 2014. The commercial bank credit to SMEs (CBC) exhibit unstable trend with remarkable peak in 2002 and 2017. Microfinance bank credit to SMEs also shows an unstable trend. The regression result above shows that commercial bank credit to small and medium enterprises (CBC) and banking system lending rate (BSL) have a negative impact on SMEs growth in Nigeria. Also, there is a direct/positive relationship between microfinance credit to SMEs (MFC) and SMEs growth which implies that, unit increase in MFC will lead to

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