

# THE NEXUS BETWEEN BANKS' CREDIT AND SMALL AND MEDIUM ENTERPRISES (SMEs) FOR SUSTAINABLE ECONOMIC GROWTH AND DEVELOPMENT IN NIGERIA

<sup>1</sup>ADEDEJI, LATEEF OLABISI\*, <sup>1</sup>ADEKANYE, TAIWO,  
<sup>2</sup>TOGUN, OLAROYEKE RANTI, <sup>2</sup>BALOGUN, JIMOH. A. & <sup>2</sup>ADEBISI, NAFISAT  
TOYOSI

<sup>1</sup>Department of Banking and Finance, Osun State Polytecnic, Iree, Nigeria

<sup>2</sup>Department of Accountancy, Osun State Polytecnic, Iree, Nigeria

[\\*adedejiltf@yahoo.com](mailto:*adedejiltf@yahoo.com)

## Abstract

*The role played by deposit money banks' credit in facilitating the growth of small and medium enterprises (SMEs) towards economic growth and development in Nigeria cannot be over emphasized. Against this backdrop, the study examined the nexus between banks' credit to SMEs and the growth of SMEs for sustainable economic growth and development in Nigeria. The paper adopted ex-post facto research design method on secondary data sourced from central bank of Nigeria (CBN) Statistical Bulletin between 2001 and 2021. The paper employed descriptive, unit root and OLS multiple regression techniques to establish the relationship between credit to SMEs, interest, and inflation rates (dependent variables) and gross domestic product, SMEs' output (independent variables). Finding of the study revealed that banks' credit has a significant and positive effect on the growth of SMEs also, SMEs output has a significant and positive impact on gross domestic product in Nigeria. The paper recommends that the monetary authority should ensure a regime of single digit lending and inflation rates and stringent rudiments be relaxed to allow SMEs' access to banks' credit for sustainable development and economic growth in Nigeria.*

**Keywords:** SMEs' output, bank credit, inflation rate, interest rate, gross domestic product

## Introduction

The development of a vibrant private sector that allowed small and medium enterprises to contribute significantly to socio-economic development of a nation cannot be over emphasized. Small and medium-sized enterprises (SMEs) played major roles in most economies, particularly in developing economies including Nigeria. They form the bulk of the businesses that comprises fast numbers of people and are generally entrepreneurial in nature. As a result, they drive the economic and industrial transformation through job creation, provision of goods and services thereby significantly contribute to nation's economy (Khan, 2015). However, the existence, growth and survival of these SMEs are significantly depending on a vibrant financial sector development for the

supply of required banks' financing to the private sector (Ovat, 2016).

According to Obokoh, Akinlo and Goldman (2015), SMEs are finding it difficult to have access to loans and advances despite deposit money banks (DMBs) liquidity level and the adoption of the government liberalization policy to alleviate SMEs funds constraints. This is because of the banks' reluctance to extend credits to small scale enterprises due to associated credit risks and higher costs involved as well as inability of the sector to provide collateral and true reports of their financial position. Apart from the enterprises been considered as highly risky ventures for banks' financing, higher lending and inflation rates have made it unbearable for SMEs to utilize the available banks' loans and advances profitably.

### Statement of the Problem

Despite the significant contributions of SMEs to the economic growth and development, the sector is still constrained and remained stagnated due to many factors such as inadequate capital, limited access to banks' credits and higher interest and inflation rates. Furthermore, large number of SMEs' failures recorded was attributed to unwillingness of banks to extend loans to the private sector due to SMEs small capital base and higher credit risk involved (Obokoh, Akinlo and Goldman (2015). Even, despite the continuous government policies and strategies to boost SMEs performances and grow the nations' economy, studies such as Iloh and Chioke (2015); Bello and Mohammed (2015); Ovat (2016); Ubesie, Onuaguluchi and Mbah (2017) have observed that lack of finance has been a threat to good performance of SMEs, and this make it difficult to positively contribute to economic growth and development in Nigeria. Against this backdrop, this study examines the impact of banks credit on the growth of SMEs and explores how credit to SMEs can contribute to economic growth in Nigeria hence, the research questions to be answered are; what is the effect of banks credit on SMEs to the growth and development of Nigerian economy; to what extent does SMEs' financing and growth impact on the economic growth in Nigeria?

Most of the previous studies in Nigeria focused on either impact of bank credit to SMEs development or impact of credit to SMEs on economic growth whereas, this study is unique as it examines the nexus between banks' credits to small and medium enterprises and economic growth and development in Nigeria between 2001 and 2021. The study is significant because of the important role played by small and medium scale enterprises in the economic growth process of nations. Even though there exists vast literature on the subject matter, the outcome of this study will contribute to a body of knowledge and increase understanding of the significant of loan

assessment to small scale business owners. Therefore, the study outcome will be of immense importance to small business operators, government, industrialists, and other stake holders in the industrial sub-sector. Furthermore, this study will be an innovative addition to the existing literature on the subject matter

### Objectives of the Study

The main objective of the study is to investigate the effect of bank credit on the growth of small and medium scale enterprises for socio-economic development in Nigeria. The specific objectives are:

1. To examine the effect of banks credits on SMEs to the growth and development of Nigerian economy.
11. To examine the impact of SMEs' financing and output on the economic growth in Nigeria.

### Research Hypotheses

To achieve the objectives of this study, the following null hypotheses were formulated:

H<sub>01</sub>: There is no significant effect of banks credits to SMEs on the growth and development of Nigerian economy.

H<sub>02</sub>: There is no significant impact of SMEs' financing and output on the economic growth in Nigeria.

### Review of Related Literature

#### Conceptual Review

#### The Concept of Small and Medium Scale Enterprises (SMEs)

Conceptually, there is no universally established definition of SMEs. According to Bello and Mohammed (2015), Small and Medium Scale Enterprises (SMEs) can be classified as micro, small, medium or large by using different criteria. The observed various definitions also depend on the level of development of each country and other common indicators which include size of total assets and labour force employed, size of annual turnover and size of capital investments (Oluwarotimi & Adamu, 2017). According to Afolabi (2013), micro enterprises are categorized as the smallest

firms which employ up to 9 employees or without any employee in UK and US, while in Australia they employ fewer than 5 employees.

Also, according to International Labour Organisation (2019), SMEs has been described as individuals, micro and medium firms with fewer employees of less than ten (10) and two hundred and fifty (250) respectively. Obitayo (1991), defined small scale enterprises by the Nigerian Industrial Policy as industries with total investment of between N100,000 and N2 million, exclusive of land but including working capital whereas, the National Council on Industries (2001) described SMEs as industries with a labour size of 11 to 100 or between 101 to 300 workers or a total cost of not more than or over N50 million but not more than N200 million, including working capital but excluding cost of land. Furthermore, the Small and Medium Industries Equity Investment Scheme (SMIEIS) described SMEs as firms with a total capital employed not less than N15 million, but not exceeding N200 million, including working capital, but excluding cost of land. Also, any firm established through entrepreneurial activities of individual with staff strength of not less than 10 and not more than 300 employees is classified as SMEs. In terms of capital investment, Kanu and Nwadiubu (2015) described SMEs the way it was defined by Federal Ministry of Commerce and Industry, as a sole proprietorship and partnership, registered or unregistered limited liability companies with a total investment (excluding cost of land but including capital) of up to N750,000 and paid-up employment of up to fifty persons. However, the SMEs sector comprises more than 90% of all enterprises of which a large share is classified as micro firms.

### **Bank Credits and SMEs Growth and Development**

The provision of bank credit to private sector through the intermediation functions of DMBs has been a significant factor for

economic growth as finance drives investment growth (Iloh and Chioke (2015). Therefore, if small and medium-scale enterprises (SMEs) have access to banks credit and the funds are utilized profitably, it will lead to SMEs growth and consequently contribute to the nation's economic growth. Taiwo, Falohun and Agwu (2016) also observed that a significant positive relationship exists between banks credit and SMEs growth which also contribute positively to economic growth. This implied that banks credit to SMEs have been significant driving force for the growth and development of a nation economy. That is, increased SMEs access to banks credit will result to employment and wealth creation as well as economic growth of a nation (Tawose. 2012). Therefore, the establishment, growth and survival of these SMEs is significantly dependent on availability of banks' financing (Ovat, 2016). However, many banks prefer to allocate their resources to large enterprises rather than to SMEs due to lower risk of default associated to large enterprises whereas, small enterprises are perceived to be highly risky because of their small capital base and they do not have clear accounting information.

### **SMEs Contributions to Economic Development and Growth**

According to Agwu and Emeti (2014), SMEs has been a driving force for innovations and competition in various economic sectors of any nation. The European Union report (2003) indicated that SMEs comprises about 90% of all businesses in the European Union communities and accounted for 70% of the total employment worldwide thereby, serve as engines of economic growth and social development. In the same vein, they have become the main tool for the required economic growth and development in developing countries due to the lack of large firms (Mohammed and Bello, 2015). Oke and Aluko (2015) observed that SMEs have significant positive impact on employment

creation by engaging in labour-intensive technologies thereby reducing unemployment rate in the economy. According to World Bank reports, SMEs have contributed about 48% of the Nigerian gross domestic products (GDP). They also accounted for 96% of private businesses and a total number of about 17.4 million jobs representing about 50% of industrial jobs and nearly 90% of the total number of manufacturing enterprises in Nigeria (Bello & Mohammed, 2015); Ayeni-Agbaje & Osho, 2015).

### **Theoretical Framework**

The study is anchored on the finance led growth hypothesis (supply leading theory) and the bank capital channel theory of monetary policy. The finance led growth hypothesis was developed by Schumpeter in 1912. The supply leading theory emphasized the supply of financial assets, liabilities, and related financial services by financial institutions in advance prior to demand for these services by private sector enterprises. This means that the financial sector through the provision of efficient allocation of resources from surplus units to deficit units, leads other sector and contributes to growth process of these sectors to boosts the productive capacity of the economy. According to King and Levine (1993), the theory provide evidence in support of the banks significant role played through technological innovation by identifying and supplying credit to entrepreneurs in the private sector.

However, the bank capital channel theory provides useful explanation on the significant influence of interest rate on banks' lending behaviours and its capital adequacy. This theory otherwise known as loan pricing theory developed by Thompson Reuters in 1965 posits that banks cannot always set high interest rates by trying to earn maximum interest income but may induce adverse selection problem. This is because once high-risk borrowers accepted the loans at the higher rates, they may develop moral hazard behaviour since they

are likely to take on highly risky investments.

### **Empirical Review**

Bello and Mohammed (2015) used annual data to examine the impact of banking sector credit on the growth of small and medium enterprises in Nigeria between 1985 and 2010. The study employed descriptive statistics, correlation matrix and error correction model to test the hypotheses. Findings of the study revealed that banking sector credit has significant positive impact on the growth of small and medium enterprises in Nigeria.

Oke and Aluko (2015) used panel data regression analysis to examine the impact of commercial banks in financing small and medium scale enterprises (SMEs) in Nigeria between 2002 and 2012. The study collected macroeconomic time series annual data on banks credit to SMEs, the ratio of credit to SMEs to total credit in the economy and equity of commercial banks from a sample of ten (10) commercial banks drawn from a total of 21 banks in Nigeria. Finding of the study revealed that banks credit to SMEs, the ratio of credit to SMEs to total credits and equity of banks have significant positive impact on the growth of SMEs.

Iloh and Chioke (2015) examined the relationship between commercial bank credits indicators and availability of credit facility to small and medium scale enterprises in Nigeria between 1980 and 2010. The study employed unit-root test for stationarity and the generalized least squares estimation technique was used to test the hypothesis and for regression. The result showed that commercial banks' credit to SMEs have significant and positive effect on Nigerian gross domestic product hence, SMEs financing is a great catalyst and a driving force for economic growth in Nigeria.

Obokoh, Akinlo and Goldman (2015) employed commentary and inductive argument to evaluate various schemes implemented by the Nigerian government through the Central Bank of Nigeria (CBN)

to alleviate the challenges of access to finance by small and medium sized enterprises (SMEs) in Nigeria. Findings showed that these SMEs do not only face banks stringent conditions as obstacles to loans procurement, but also the commercial banks' high interest rate of between 23-26% charged on credit to SMEs sector hinder their growth and contributions to Nigerian economy.

Ayeni-Agbaje, and Osho, (2015), examined the role of commercial bank in financing small scale enterprises in Ado-Ekiti, Ekiti State using descriptive research design. The study used questionnaires to collect primary data from the sample drawn from the population of United Bank of Africa Plc staffers analyzed by correlation and chi-square. Findings revealed that there is a positive correlation between loans granted by banks and the growth and development of SMEs in Ekiti State. Similarly, Taiwo, Falohun and Agwu (2016) employed documentary method to examine various sources and challenges of SMEs financing, and its impact on the socio-economic development in Nigeria. The study found that SMEs' financing significantly contributed to employment creation and income generation thereby leads to socio-economic development in Nigeria.

Ovat (2016) used co-integration and error correction mechanisms to examine the role played by commercial banks' credit in facilitating the growth of SMEs in Nigeria. The findings revealed that Commercial Banks' credit has not contributed significantly to the growth of Small and Medium Scale Enterprises in Nigeria.

Oluwarotimi, and Adamu (2017) investigated the impact of deposit money bank credit to SMEs on economic growth in Nigeria using Ordinary least squares regression. The study further examined the relationship between SMEs credit and each of unemployment and poverty respectively by using Pearson's correlation. The results of Pearson's correlation revealed a negative but insignificant relationship between SMEs credit and unemployment, and a negative

and significant relationship between SME credit and poverty. However, the results of Ordinary Least Squares regression showed that SME credit has a negative and significant impact on economic growth in Nigeria.

Ubesie, Onuaguluchi, and Mbah. (2017) examined the effect of deposit money banks' credit to small and medium enterprises growth in Nigeria between 1986 and 2015. The study employed ex-post facto research design and ordinary least square regression method to analyse data after was used in the analysis of the data after stationarity test used to establish long run relationship between the variables. The results showed that deposit money banks' credit to private sector has significant effect on small and medium scale enterprises growth in Nigeria.

Nnabu, Udude and Egbeoma (2017) empirically investigated the impact of commercial banks credit to SMEs on unemployment reduction in Nigeria using Vector Error Correction Model (VECM) approach on the annual data from 1992 to 2014. The study also employed unit root and Johansen cointegration tests and VECM regression analyses to establish the relationship between the variables. The results revealed that there exists cointegration between banks credit to SMEs and unemployment rate whereas, banks credit to SMEs and personal savings has no significant impact on unemployment reduction in Nigeria.

Okpalaojiego (2020) examined the effect of banks credit facilities on Nigeria economy using Aguata local government area of Anambra State as a case study. The study adopted Survey research design by obtaining data from a sample of 351 from the population of 2,817 registered entrepreneurs and bank staff in Aguata local government area. The data were analyzed by using mean average and the result showed that banks credit have significant effect in alleviating poverty and boosting the capital base of small and medium scale businesses in the area.

**METHODOLOGY**

**Research Design**

The study used ex-post facto research design since the period of study covered time series data between 2001 and 2021. This research technique was chosen because it is appropriate for secondary data and the researcher will not be able to manipulate the required data for the study.

**Population of the Study**

The study covers the entire life history of Nigeria, and all Nigerian deposit money banks as at December, 2021. Therefore, the sample size is the entire population of banks within the period of study.

**Data Collection**

This study employed time series and secondary data. The aggregates data for gross domestic product, banks credits and SMEs' output as well as the entire life history of Nigeria from 2001 to 2021 were collected from the CBN Statistical Bulletins, National Bureau of Statistics and World Banks.

**Method of Data Analysis**

The data were examined using descriptive statistics and unit roots test to describe the nature of data used. Furthermore, multiple OLS regression was used in testing hypotheses and examine the relationship between the variables using E-views (Version 12.0).

**Model Specification**

This study adopted the model employed in Ovat (2016); Oluwarotimi and Adamu (2017) which follows adapted growth regression model of neoclassical growth model developed by Solow (2001) as  $Y_t = a + B_1X + B_2Z + \mu$  where:  $Y_t$  represent growth,  $X$  and  $Z$  represents independent and control variables. This model was also modified by introducing some variables meant for this study. For this study, two models were specified in performing data analysis and testing the two null hypotheses formulated. The first model was used to test the null hypothesis one ( $H_{01}$ ), where Small and Medium Enterprises Growth (SMEsQ) replaces  $Y_t$ , credit to SMEs (CRSMEs) replaces  $X$  whereas, lending and inflation

rates represent control variable  $Z$ . This is specified thus:

**MODEL: 1**

$$SMEQ = f(CRSMEs, LR) \dots\dots\dots 1$$

$$SMEQ = a + B_1CRSMEs_1 + B_2LR_2 + U \dots\dots\dots 2$$

The second model was used for testing null hypothesis two ( $H_{02}$ ) that investigates the impact of SMEs output (SMEsQ) on economic growth and development (GDPGR) in Nigeria. Therefore, the model is specified thus:

**MODEL: 2**

$$GDPGR = f(SMEQ, INFR) \dots\dots 3$$

$$GDPGR = a + c_1SMEQ_1 + c_2INFR_2 + U \dots\dots\dots 4$$

Where:  
 GDPGR = Economic growth and measured by gross domestic growth rate,  
 SMEsQ = Small and medium enterprises (SMEs)' output (SMEsQ) and is measured as

the ratio of SMEs output to gross domestic product (GDP) for the period t.

CRSMEs = Bank credit to SMEs and measured as the ratio of credit to SMEs to banks' total

credit to private sector

LR = Banks lending rate. It is measure as maximum prime interest rates charged on DMBs

loans and advances to private sector.

INFLR = Inflation rate and is measured by the historical annually consumer price in Nigeria

$U$  = Error or Stochastic disturbance term. It is expected to satisfy the usual properties of zero

mean, unit variance and zero covariance.

$a$  = constant,  $B_1, B_2$ , are coefficients of independent variables whereas,  $c_1, c_2$  are coefficients of independent variables.

**A Priori Expectation**

It is expected that banks credits to SMEs, SMEs' outputs, will positively relate to gross domestic product growth rate

(GDPGR) and SMEs' growth rate (SMEsQ) while lending and inflation rates will negatively relate to SMEs' output (SMEsQ) and gross domestic product growth rate (GDPGR). Mathematically, model 1 is express as:  $\beta_1 > 0, \beta_2 < 0$ , and model two is express as:  $\beta_1 > 0, \beta_2 < 0$

**Decision Rule**

A null hypothesis is accepted if the calculated P(f-statistic) is greater than or equal to (2:) the critical P-value at 0.05 (5%); and rejected if the calculated P(f-

statistic) is less than (<) critical P-value at 0.05 (5%) level of significant.

**Description of the Variables**

The dependent variables of this study were SMEs' growth (SMEsQ) and economic growth measured by gross domestic product growth (GDPGR). The independent variables are credit to SMEs (CRSMEs) and SMEs' contribution to gross domestic product (SMEsQ) while the control variables comprise lending rate (INTR) and inflation rate (INFR).

**Results and Discussion of Findings**

**Table 4.1: Summary Statistics**

VARIABLES	OBS	MEAN	Std. Dev.	MIN	MAX
GDPGR	20	5.3225	3.9179	-1.7900	15.3300
SMEQ	20	1.4660	2.0455	0.0900	6.0800
CRSMEs	20	1.6480	2.6932	0.0700	8.6800
LR	20	24.7150	5.1596	18.3600	38.6400
INFR	20	12.3425	3.4581	5.3900	18.8700

*Source: Author's Computation using E-views 12.0 (2021).*

**4.1 Descriptive Analysis**

Table 4.1 showed the results of the summary statistics of the variables used in the study. This indicates the total number of observations, mean, standard deviation, minimum and maximum values of all the variables between 2001 and 2021. During the entire period, the mean value of the gross domestic product growth, SMEs output and credit to SMEs were 5.3225; 1.4660 and 1.6480 whereas these values deviated from mean by 3.9179, 2.0455, 2.6932. The values of gross domestic

product growth and SMEs contribution to gross domestic product and credit to SMEs range between the maximum of 15.3300, 6.0800, 8.6800, and minimum value of and -1.7900, 0.0900, 0.0700 respectively.

The mean of lending and inflation rates during the sample period were 24.7150 and 12.3425 respectively with variability of 5.1596 and 3.4581. The minimum lending rate and inflation rate in the Nigerian economy were 18.3600 and 5.3900, and the maximum were 38.6400, and 18.8700 respectively.

**Stationarity Tests Results**

**Table 4.2: Augmented Dickey-Fuller (ADF) and Phillip Perron (PP) test**

Variables	ADF value@ 5%	Critical pp value@ 5%	Critical Level	Results
GDPGR	-3.9204 0.0008	-3.0404 0.0000	I(1)	Stationary
SMEQGD	-4.0044 0.0031	-3.0404 0.0109	I(1)	Stationary
CSME	-3.7105 0.0156	-3.0404 0.0082	I(1)	Stationary
LR	-1.9614 0.0000	-1.9614 0.0000	I(1)	Stationary
INFR	-1.9628 0.0002	-1.9614 0.0000	I(1)	Stationary

Source: Author's Computation using E-views 12.0 (2021).

The result of unit roots using Augmented Dickey-Fuller (ADF) and Phillip Perron (PP) tests in Table 4.2 indicates that all the observed variables have no unit root and were stationary at first difference. The ADF and PP test were performed at first difference at constant without trend and with trend. That is, the result indicates that all the variables are significant at 5% and are integrated of order I(1) stochastic process. This implies that there exists a long-run relationship among the dependent and independent variables of the study.

**Table 4.3: OLS Regression Results**

Dependent Variable: SMEQGD

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CRSMEs	0.6977	0.0568	12.2750	0.0000
LR	-0.0771	0.0297	-2.5983	0.0187
C	2.2214	0.7600	2.9228	0.0095

R-squared = 0.9052, Adjusted R-square = 0.8941, F-statistic = 81.1805, Prob(F-statistic) = 0.0000, Durbin-Watson stat = 2.0409.

Source: Author's computation using E-views 12.0 (2021)

The OLS regression results in Table 4.4 showed the regression equation as  $SMEsQ = 2.2214 + 0.6977CRSME - 0.0771LR$ . From the regression output, the model F-statistic of 81.1805 (p-value = 0.0000) confirmed that the independent variables statistically and significantly explained the variation in SMEs output during the period of study.

Also, the test of goodness of fit with R-squared and adjusted R-squared values of 0.9052 and 0.8941 respectively suggested

that credit to SMEs (CRSMEs) and lending rate (LR) jointly and significantly explained 89.41% variations in SMEs output and the remaining 10.59% can be explained by other factors that were not captured in the model or the presence of error terms that are contained therein. The Durbin-Watson statistics of 2.0409 also confirmed that the absence of autocorrelation problems in all the sampled data.

Furthermore, the regression equation of  $SMEQ = 2.2214 + 0.6977CRSMEs - 0.0771LR$  indicates that there exists a positive relationship between credit to SMEs (CRSMEs) and the output of SMEs (SMEsQ). The positive sign conformed with a priori expectation because an increase in credit to SMEs is supposed to cause an **increase in investment which will** subsequently increase SMEs' output. However, the lending rate shows a negative relation with SMEs output. These negative signs also conformed with a priori expectation because an increase in lending rate will increase cost of funds and subsequently decrease SMEs output.

**Test of Null Hypotheses 1**

$H_{01}$ : There is no significant effect of bank credit to SMEs on the growth and development in Nigeria.

The regression results revealed that the coefficient of alpha (constant),  $\alpha = 2.2214$  (p-value = 0.0095) indicating that SMEs output would be 2.2214 units when credit to SMEs and lending rate are kept constant. It

further showed that the coefficient of CRSME,  $\beta_1 = 0.6977$  with  $t-stat = 12.2750$  (p-value = 0.0000 < 0.05) shows a statistically significant at 5% level. This suggest that a unit increase in CRSMEs will leads to a significant increase in SMEs' output (SMEsQ) by 0.7659 units within the period of study. Therefore, the results reject the null hypothesis and accept alternative hypothesis that there is significant positive effect of bank credit to SMEs on the SMEs' growth and development in Nigeria.

The lending rate coefficient from the computed regression result shows that;  $\beta_3 = -0.0771$  with  $t-stat = -2.5983$  (p-value = 0.0187 < 0.05) indicates a statistically significant at 5% level. This result indicates that for a unit increase in lending rate, there will also be a significant decrease in SMEs output by 0.1083 units within the period of study. That is, inflation rate (INFR) that serve as control variable for CRSMEs indicates significant negative relation with SMEs output.

**Table 4.4: OLS Regression Results**

Dependent Variable: GDGGR

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SMEQ	1.3935	0.3933	3.5429	0.0025
INFR	-0.4518	0.2326	-1.9422	0.0689
C	8.8565	2.7534	3.2165	0.0051

R-squared = 0.4277, Adjusted R-square = 0.3604, F-statistic = 6.3535,

Prob(F-statistic) = 0.0087, Durbin-Watson stat = 1.5106.

Source: Author's computation using E-views 12.0 (2021)

The OLS regression results showed a regression equation of  $GDGGR = 8.8565 + 1.3935 SMEsQ - 0.4518INFR$ . The model F-statistic of 6.3535 (p-value = 0.0087) showed that the explanatory variables statistically and significantly explained the variation in gross domestic product (GDGGR) during the period of study. Also, the R-squared and adjusted R-squared values of 0.4277 and 0.3604 respectively suggested that SMEs output and inflation

jointly and significantly explained 36.04% variations in gross domestic product (GDGGR) and the remaining 63.96% can be explained by other factors that were not captured in the model or error terms. The Durbin-Watson statistics of 1.5106 also confirmed the absence of autocorrelation problems in all the sampled data.

The regression equation in Table 4.4 indicates that there exists a positive relationship between SMEs' output and the

economic growth. The positive sign was in line with a priori expectation because an increase in SMEs' output is supposed to contribute to gross domestic product in the economy. Furthermore, the lending rate indicates a negative relation with gross domestic product growth also in line with a priori expectation.

### Test of Null Hypothesis 2

H<sub>02</sub>: There is no significant impact of SMEs' financing and output on the economic growth

measured by GDPGR in Nigeria.

The regression results in Table 4.4 showed a regression equation which indicates that the coefficient of SMEs output (SMEQ),  $cp_1 = 1.3935$  with  $t-stat = 3.5429$  ( $p-value = 0.0025 < 0.05$ ) shows a positive significant at 5% level. This suggests that a unit increase in SMEQ will lead to a significant increase in gross domestic product (GDPGR) by 1.3935 units within the period of study. Since the p-value of 0.0025 is less than 0.05 level of significance, the results reject the null hypothesis and accept alternative hypothesis that SMEs' output has a significant positive impact on the economic growth measured by GDPGR in Nigeria. The results further showed that; inflation (INFR) that serve as control variable for SMEs output indicates insignificant negative and significant negative relation with economic growth (GDPGR).

### Discussion of Results

The result of unit roots tests indicates that all the observed variables used in the study have no unit root and were stationary at first difference. This means that all the variables are integrated of order 1(1) stochastic process and are significant at 5% level. This implies that there exists a long-run relationship among the dependent and independent variables of the study. Furthermore, the results of the OLS regression in models 1 and 2 confirmed that the models are of good fitness and significance for the study.

Also, the adjusted R-squared values of 0.8941 and 0.3604 for model 1 and 2 respectively suggested that all the explanatory variables jointly and significantly explained 89.41% and 36.04% variations in dependent variables and the remaining 10.59% and 63.96% can be explained by other factors that were not captured in the models or error terms. The Durbin-Watson statistics also confirmed the absence of autocorrelation problems in all the sampled data for the study.

The regression results for testing hypotheses of this study showed that there exists a direct relationship between credit to SMEs and the output of SMEs and at the same time a positive relationship between SMEs' output and the economic growth in Nigeria. These positive signs conformed with a priori expectation. That is, an increase in credit to SMEs is supposed to cause an increase in investment which will subsequently increase SMEs' output.

Further to this, banks' credit will give SMEs more opportunity for business expansion through investments in high income ventures to enhance growth with respect to size and contribution to gross domestic product. This result supports the studies of Bello and Mohammed (2015), Ayeni-Agbaje and Osho (2015) where it was observed that credit to SMEs has a significant and positive effect on the growth and development of SMEs in Nigeria.

In addition, an increase in SMEs' output is supposed to contribute to the gross domestic product in the economy leading to economic growth. These results are in tandem with the studies of Iloh and Chioke (2015), but contrary to the outcomes in Ovat (2016), Ubesie, Onuaguluchi and Mbah (2017), Oluwarotimi and Adamu (2017) where it was found that SME credit has a significant and negative impact on economic growth in Nigeria. Furthermore, it means that an increase in banks credit to SMEs will significantly increase the SMEs output which in turn leads to a significant increase **in economic growth and development in Nigeria.**

However, the lending and inflation rates show a negative relation with SMEs output and economic growth respectively. These negative signs are also conformed with a priori expectation. The lending rate position means that the higher the lending rate, the higher the cost of capital. That is a rise in lending rate will in turn reduce the level of investment capable of stimulating and sustaining growth. In addition, higher interest rate will discourage entrepreneurs to produce, and this eventually reduces the monetary value of goods and services of SMEs. For the inflation rate, it implies that higher rate of inflation will erode the purchasing power of money in the economy. Therefore, reduction in the value of naira will lead to reduction in economic production units which will adversely affect the expected increase in gross domestic products.

## Conclusion and Recommendations

### Conclusion

The study examined the nexus between bank credits and small and medium enterprises output, and SMEs output and economic growth in Nigeria. Significant roles played by the provision of banks' credit to small and medium enterprises (SMEs) in the process of industrialization and economic growth in Nigeria has been the focus of this study. It was observed that small and medium enterprises (SMEs) financing has constituted to be a great catalyst and driving force for industrial development and economic growth in Nigeria during the period of study. Specifically, the study found a significant positive effect of bank credit to SMEs on the SMEs' output and that the SMEs' output in turn significantly and positively influenced the economic growth and development in Nigeria during the period of study. The study also conformed with the supply leading theory which states that the growth and development of an economy is achieved through the allocation of financial resources to deficit economic units. Therefore, the outcome of this study will not

only be of benefits to the government, regulators and the academic world but will also serve as a good motivator for building new ideas on how banks can improve credit to SMEs as a means of boosting SMEs' outputs to achieve economic growth and development in Nigeria.

### Recommendations

In view of the outcome of this study, the following recommendations are made:

1. Since banks' credit to SMEs has direct influence on the growth and development of SMEs in Nigeria, the Central Bank of Nigeria should direct banks to increase loans and advances allocated to SMEs and at the same time the monetary policy rate should be sealed at a single digit to reduce the lending rate to enhance increased SMEs' outputs.
11. Government should provide an enduring business environment through moderate inflation rate to boost SMEs output that will improve the overall economic growth and development in Nigeria.

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