

## Impact of Commercial Bank Sectoral Credit Allocation to the Real Sector on the Output Growth of Nigerian Economy.

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### ABSTRACT

This work examined the impact of sectoral commercial bank credit allocation to the real sector on output performance of Nigerian economy from 1986 to 2018. The study adopted the ex-post facto research design in which secondary data was used. The data was sourced from Central Bank of Nigeria Annual Statistical Bulletin for the period under review. The statistical tool used for the analysis of data is a vector error correction model (VECM) which was estimated using Ordinary Least Square (OLS) techniques. This was employed to ascertain the relationship between various commercial bank credits and the real sector performance output growth. The variables were tested for stationarity using the Augmented Dickey-Fuller method and Johansen co-integration analysis. The result reveals that commercial bank credit allocation to the real sector has a long run positive relationship with the sector output performance growth. The paper therefore recommends that the commercial banks credit allocation to the real sector should be encouraged by both monetary and fiscal policy authorities since the outcomes are favourable.

Keywords: Commercial, Bank, Credit, Agricultural, Manufacturing, Sectoral output, Performance, Growth.

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### INTRODUCTION

Suffice it to say that the roles played by the financial intermediation to economic growth and development cannot be overemphasized, hence is increasingly recognized especially in emerging market economies in which Nigeria is one of them. Sequel to this fact, a distinction is sometimes made between the financial sector intermediation and the real sector growth of the economy, [1]. The financial sector plays intermediation role between the surplus and the deficit sector by mobilizing savings and allocates same to the real sector for investments. Financial intermediaries are firms that borrow from savers and lend to companies that need resources for investment. The aim of such intermediating role is to achieve growth and development in an economy, both developed and developing ones, [2]. In buttressing this point, [3], stated that the savings and investment process

in capitalist economies is organized around financial intermediation, making them a central institution of economic growth.

Nigeria has over the years pursued vigorously policies which seriously geared towards the enhancement of fund availability. Other aims include reduction of cost and access of credit to the private sector as well as the stimulation of growth in the productive sectors of the economy through investments. Consequently, credit guidelines were designed to ensure that the financial needs of all the sectors of the economy were adequately met. Banks were, therefore, required to pay greater attention to the prescribed aggregate and sectoral allocation to enhance the attainment of the objectives of the government [4]. Consequently, emphasis on credit allocations in 1980s was on sectoral bases which focused on

preferred sectors namely, production (agriculture and manufacturing), communication, services, exports and development finance institutions. Further analysis of the period under review show that, 75% of commercial banks' aggregate credit went to the preferred sectors as mentioned above, while 25% was allocated to the less preferred sectors, [5].

Recent report shows that to ensure adequate provision of credit to the priority sector, preference continued to be accorded the agricultural and manufacturing sectors in the allocation of available credit, with the manufacturing sector taking the lead above the agricultural sector, [6]. The report equally revealed that total credit to the economy from the banking sector rose from ₦4, 998.7 billion in 2013 to ₦11, 558 billion in 2014. Credit to real sector activities, agriculture, solid minerals, manufacturing, real estate, public utilities and communication on the average, accounted for 51.2 per cent of total credit. But general commerce, services and government received the balance of 48.8 per cent. The share of manufacturing in total credit to the economy rose to 18.4 per cent in both 2015 and 2016. Manufacturing average share was 18.4 per cent and had the highest credit allocation. It was followed by solid minerals and communication, the shares of which averaged 21.3 and 15.1 per cent, respectively. The average for agriculture was abysmal at 4.3 per cent [7]. In addition, the [8] shows how the sectors have performed, the industrial sector as a whole (of which the manufacturing sector is part of) contributed only 22.4 per cent of the GDP in 1980-1990, growing significantly in the next two decades to a height of 58.4 per cent in 1991-2000, owing largely to the crude petroleum and gas production during the decades. The contribution contracted to 44.4 per cent in the 1990s and further to 29.4 per cent during 2001-2016. The agricultural sector even though its contribution to total GDP has risen during the decades by 6.2 percent, its contribution to GDP has fallen over the years, [9].

One of the major reasons for the failure of Nigeria to reduce poverty and

eradicate hunger is her inability to diversify the economy, thereby achieving sustainable economic growth. The majority of the labour force in Nigeria is engaged in agriculture, which is characterized by low productivity, [10]. But given the strong linkages of industry and agricultural sector and other sectors, increases in the share of sectoral contributions to aggregate gross domestic product have the greatest potential to contribute to sustainable growth and structural change. Nigeria needs economic sectoral transformation in order to achieve sustainable growth and this process require persistent allocation of credit from less productive sectors to more productive ones; and diversification of the economy away from primary commodity sectors (agriculture, oil and minerals) into industry and services [11].

Nevertheless, it was argued in literature that there may be the possibility of a differential response between sectoral outputs and aggregate output to credit allocations, [12]. Previous studies on subject matter have concentrated more on the impact of aggregate private sector credit on economic growth. Hence, this paper tends to address a broad research objective by empirically comparing the impact of sectoral credit allocation on the agricultural and manufacturing sector in Nigeria. Hence, this study hypothesized that commercial bank sectoral credit has no significant impact on manufacturing and agricultural outputs in Nigeria. Alternately, commercial bank sectoral credit has a significant impact on manufacturing and agricultural outputs in Nigeria. The scope of the study is from 1986 to 2018 and data for this study was sourced from the Central Bank of Nigeria Statistical Bulletin. The paper is presented in five sections. After this introduction, a review of literature on the relationship between credit allocation and sectoral output is presented. Section three presents the research methodology. In section four, we present the results of the data analysis and discuss them. Section five concludes the paper and proffers some recommendations.

## LITERATURE REVIEW

### **Theoretical Framework of the Study**

The theoretical base of this paper is from the intellectual works of [13], [14] and [15]. [16] in his theoretical link between financial development and economic growth opines that the services provided by financial intermediaries are the essential drivers for innovation and growth. His argument was later formalized by [17] and [18], The McKinnon-Shaw paradigm postulates that government restrictions on the operations of the financial system, such as interest rate ceiling, direct credit programs and high reserve requirements may hinder financial deepening, and this may in turn affect the quality and quantity of investments and, hence, have a significant negative impact on economic growth, [19].

The endogenous growth literature also supports this argument that financial development has a positive impact on the steady-state growth [20]. Well-functioning financial systems are able to mobilize household savings, allocate resources efficiently, diversify risks, induce liquidity, reduce information and transaction costs and provide an alternative to raising funds through individual savings and retained earnings. These functions suggest that financial development has a positive impact on growth. [6] and [8] are the most influential works that underpin this hypothesis and suggest that better functioning financial systems lead to more robust economic growth. [10] considered an outside money model in which all firms are confined to self-finance. [2] on his own contribution stressed that with more supply of credit, financial intermediaries promote investment and raise output growth through borrowing and lending.

### **Empirical Review**

There are a lot of studies that have made empirical findings on the relationship between bank credit allocation and output growth. [3] empirically studied the impact of credit to private sector on the real sector of Nigeria with a view to assess the significant contribution of the credit to real sector growth in Nigeria. The study

was analysed using multiple regression and based on the coefficient of determination (R square), the study reveals a 96.1% variation between the credit and real sector growth in Nigeria and concludes that there is a statistically significant impact of credit to private sector on the real sector of Nigeria. [1] carried out an empirical investigation on the influence of Banks Credits on Business growth in America. His result found that bank credit to business sector has both positive and significant influence on the growth of businesses in the United State of America.

[4] empirically investigated the impact of private sector credit on private domestic investment in Nigeria using the error correction model technique. He found out that increase in private sector credit though not statistically significant leads to increase in private domestic investment as typified by 10% increase in private sector credit which led to 6% increase in total domestic investment in Nigeria. However, the non statistical significance of private sector credit showed that there is need for increase in private sector credit in the Nigerian economy. [9] assess the impact of the sectoral distribution of commercial bank credit on economic growth and development in Trinidad and Tobago. They employed a vector error correction model to firstly assess the relationship between credit and investment, and secondly to determine the casual directionality of the relationship. The model found that overall credit and growth tend to demonstrate a demand casual relationship. However, further findings revealed a 'supply leading' relationship between credit and growth within key sectors of the nonoil economy.

[10] empirically investigated the impact of access to bank credit on the economic performance of key selected sectors using sectoral panel data for Kenya. They found that a positive and significant impact of credit on sectoral gross domestic product measured as real value added. However, the magnitude of the impact is smaller once

factors such as the labour employed and past economic performance of the sectors are taken into account. They also noted that the overall, provision of private sector credit to key economic sectors of the economy holds great potential to promoting sectoral economic growth. [8] empirically investigated the effect of bank lending and economic growth on the manufacturing output in Nigeria. Times series data covering a period of 36 years were employed and tested with the co-integration and vector error correction model (VECM) techniques. The findings of the study show that manufacturing capacity utilization and bank lending rates significantly affect manufacturing output in Nigeria. They noted that concerted effort by the government, manufacturers and the lending institutions need to reviewing the lending and growth policies and provide appropriate macroeconomic environment, in order to encourage investment friendly lending and borrowing by the financial institutions. [2] empirically examined the long run relationship between financial development indicators and economic growth in Nigeria over the period 1980-2014. The Johansen and Juselius approach to cointegration and Vector Error Correction Modelling (VECM) were employed. The findings of the study revealed that in the long-run, liquid liabilities of commercial banks and trade openness exert significant positive influence on economic growth, conversely, credit to the private sector, interest rate spread and government expenditure exert significant negative

#### METHODOLOGY

Data were sourced from various issues of Central Bank of Nigeria (CBN). Since the study is interested in the sectorial analysis, separate models are formulated for the output equations for agricultural and manufacturing sectors. To address the objective of the study; it adopts the Static Error Correction Model for each sector. The equations for each sector reflect the peculiar characteristic of each and this is reflected in equations below.

#### **Agricultural output equation**

The Co-integration Test Equation

Onyia influence. The findings implied that, credit to the private sector is marred by the identified problems and government borrowing and high interest rate are crowding out investment and growth.

Akpansun and Babalola (2016) examine the relationship between banking sector credit and economic growth in Nigeria over the period 1900-2018. The causal links between the pairs of variables of interest were established using Granger causality test while a Two-Stage Least Squares (TSLS) estimation technique was used for the regression models. The results of Granger causality test show evidence of unidirectional causal relationship from GDP to private sector credit (PSC) and from industrial production index (IND) to GDP. Estimated regression models indicate that private sector credit impacts positively on economic growth over the period of coverage of the study. However, lending (interest) rate impedes economic growth. The study recommends the need for more financial market development that favours more credit to the private sector with minimal interest rate to stimulate economic growth. In these studies, the focus is on the long-run relationship between financial sector development and real sector growth, using frameworks of bivariate and multivariate vector autoregressive (VAR) models for different country samples. The outcome was that the causality pattern varies across countries according to the success of financial liberalization policies implemented in each country and the level of development of the financial sector.

The co-integration test for both the agricultural and manufacturing sectors equations is based on the following co-integration test equation according to Johansen and Juselius (1990) and Johansen (1991).

$$\Delta Y_t = \delta_0 + \sum_{i=1}^p \delta_i \Delta Y_{t-i} + \alpha \beta' Y_{t-p} + U_t \dots\dots 1$$

**Where:**  $\Delta$  is the first difference operator,  $Y_t$  represents (credit to the agricultural sector, agricultural output, inflation and prime lending rate),  $\delta_0$  represent the intercept, and  $\mu$  represent the vector of

the white noise process. The matrix  $\beta$  consist of  $r$  ( $r \leq n-1$ ) co-integrating vectors. Matrix  $\alpha$  contains the error parameters. The null hypothesis will be rejected if the matrix  $(\Pi = \alpha \beta')$  has a reduced rank of  $r \leq n-1$ . However, the alternative hypothesis is that the matrix  $(\Pi = \alpha \beta')$  has full rank.

**Unit root Test**

The study also tested the stationarity of the variables using the Augmented Dickey Fuller (ADF) test. For all time series data ADF test is a utilized to test for unit root. The following equation

checks the stationarity of time series data used in the study.

$$\Delta y_t = \beta_1 + \beta_2 t + \delta y_{t-1} + \alpha_1 \sum_{t=1}^m \Delta y_{t-1} + \epsilon_t \dots\dots\dots 2$$

**Where:** 't' is the white noise error term. The stationarity test determines if the estimates of  $\delta$  are equal to zero or not. Fuller (1976) provided cumulative distribution of the ADF statistics by showing that if the calculate-ratio (value) of the coefficient  $\delta$  is less  $\tau$  critical value from Fuller table, then y is said to be stationary.

**Vector Error Correction Model (VECM)**

The long run and short run dynamics between agricultural sector credit and output is tested using the VECM model.

$$\Delta \text{Log}(\text{GDP}_A)_t = \alpha + \sum_{t=1}^a \phi_i \Delta \text{log}(\text{GDP}_A)_{t-1} + \sum_{t=1}^b \phi_i \Delta(\text{INFL})_{t-1} + \sum_{t=1}^b \phi_i \Delta(\text{PLR})_{t-1} + \sum_{t=1}^b \phi_i \Delta \text{Log}(\text{BC}_A)_{t-1} + \phi_i \text{EC}_{t-1} \dots\dots\dots 3$$

$$\Delta \text{Log}(\text{INFL})_t = \alpha + \sum_{t=1}^a \phi_i \Delta(\text{INFL})_{t-1} + \sum_{t=1}^b \phi_i \Delta(\text{GDP}_A)_{t-1} + \sum_{t=1}^b \phi_i \Delta(\text{PLR})_{t-1} + \sum_{t=1}^b \phi_i \Delta \text{Log}(\text{BC}_A)_{t-1} + \phi_i \text{EC}_{t-1} \dots\dots\dots 4$$

$$\Delta \text{Log}(\text{BC}_A)_t = \alpha + \sum_{t=1}^a \phi_i \Delta \text{log}(\text{BC}_A)_{t-1} + \sum_{t=1}^b \phi_i \Delta(\text{INFL})_{t-1} + \sum_{t=1}^b \phi_i \Delta(\text{PLR})_{t-1} + \sum_{t=1}^b \phi_i \Delta \text{Log}(\text{GDP}_A)_{t-1} + \phi_i \text{EC}_{t-1} \dots\dots\dots 5$$

**Where:**  $\Delta$  stands for difference operator,  $\text{GDP}_A$  = Agricultural sector output,  $\text{BC}_A$  = Bank credit to the agricultural sector,  $\text{INFL}$  = inflation,  $\text{EXR}$  = exchange rate,  $\text{PLR}$  = Prime lending rate and The lag length are determined automatically by the modified AIC and are represented by

a, b, c and d.  $\text{EC}_t$  is the error correction term lagged by one period, while  $\phi$  is the speed of price adjustment parameter. The error correction term assess the deviation of the variables from the long-run equilibrium association.

**Manufacturing Output Equation**

Vector Error Correction Model (VECM)  
The long run and short run dynamics between manufacturing sector credit

and output is tested using the VECM model.

$$\Delta(\text{GDP}_M)_t = \alpha + \sum_{t=1}^a \phi_i \Delta(\text{GDP}_M)_{t-1} + \sum_{t=1}^b \phi_i \Delta(\text{INFL})_{t-1} + \sum_{t=1}^b \phi_i \Delta(\text{PLR})_{t-1} + \sum_{t=1}^b \phi_i \Delta(\text{BC}_M)_{t-1} + \sum_{t=1}^b \phi_i \Delta(\text{PSC/GDP})_{t-1} + \phi_i \text{EC}_{t-1} \dots\dots\dots 6$$

$$\Delta(\text{INFL})_t = \alpha + \sum_{t=1}^a \phi_i \Delta(\text{INFL})_{t-1} + \sum_{t=1}^b \phi_i \Delta(\text{GDP}_M)_{t-1} + \sum_{t=1}^b \phi_i \Delta(\text{PLR})_{t-1} + \sum_{t=1}^b \phi_i \Delta(\text{BC}_M)_{t-1} + \sum_{t=1}^b \phi_i \Delta(\text{PSC/GDP})_{t-1} + \phi_i \text{EC}_{t-1} \dots\dots\dots 7$$

$$\Delta(\text{BC}_M)_t = \alpha + \sum_{t=1}^a \phi_i \Delta(\text{BC}_M)_{t-1} + \sum_{t=1}^b \phi_i \Delta(\text{INFL})_{t-1} + \sum_{t=1}^b \phi_i \Delta(\text{PLR})_{t-1} + \sum_{t=1}^b \phi_i \Delta(\text{GDP}_M)_{t-1} + \sum_{t=1}^b \phi_i \Delta(\text{PSC/GDP})_{t-1} + \phi_i \text{EC}_{t-1} \dots\dots\dots 8$$

$$\Delta(\text{PSC/GDP})_t = \alpha + \sum_{t=1}^a \phi_i \Delta(\text{PSC/GDP})_{t-1} + \sum_{t=1}^b \phi_i \Delta(\text{INFL})_{t-1} + \sum_{t=1}^b \phi_i \Delta(\text{PLR})_{t-1} + \sum_{t=1}^b \phi_i \Delta(\text{GDP}_M)_{t-1} + \sum_{t=1}^b \phi_i \Delta(\text{BC}_M)_{t-1} + \phi_i \text{EC}_{t-1} \dots\dots\dots 9$$

**Where:**  $\Delta$  stands for difference operator,  $GDP_M$  = Manufacturing sector output,  $BC_M$  = Bank credit to the manufacturing sector,  $PSC/GDP$  = measure of financial development, The lag length are determined automatically by the modified AIC and are represented by a,

b, c and d.  $EC_t$  is the error correction term lagged by one period, while  $\phi$  is the speed of price adjustment parameter. The error correction term assess the deviation of the variables from the long-run equilibrium association

### RESULTS

The results and analysis of the study are presented in the following section beginning with the ADF unit root test.

Table 1: ADF Unit Root Test Results

Variable	Trend, constant	ADF test statistics at level	ADF test statistics at 1 <sup>st</sup> difference	Order of integration
LOG(GDPA)	Constant	-1.864684	-6.116980	I(1)
PLR	Constant	-2.148082	-9.984889	I(1)
PSC/GDP	None	0.282175	-5.228204	I(1)
INFL	Constant	-3.418111	-	I(0)
GDPM	None	-3.246693	-	I(0)
EXCH	None	1.604363	-5.452767	I(1)
BCA	Constant	-1.500668	-9.297982	I(1)
BCM	None	3.405627	-4.693509	I(1)

ADF 5% Critical values	
With Constant	No Constant and Trend
-2.9339	-1.950

**Source:** Authors computation 2018

From the table above, it is evident that using the ADF techniques, all the variables are integrated at order one except inflation and manufacturing sector output that are integrated of order zero.

Table II: Johansen Co-integration Results for Agricultural sector

Maximum Rank	Eigen value	Trace statistics	5% Critical Value
0	-	59.9126	47.21
1	0.62047	21.1597*	29.68
2	0.20751	11.8565	15.41
3	0.15322	5.2038	3.76
4	0.12199		

\*(\*\*) denotes rejection of the hypothesis at the 5 % (1%) level

Trace test indicates 2 co-integrating equation(s) at the 5% level

The co-integration results show that, there is at least a co-integrating vector. Co-integration tests were conducted by using the recorded rank procedure developed by [5]. Johansen method detects a number of co-integrating vectors in non-stationary time series. The number of lags used in this (vector auto-regression) VAR is based on the

evidence provided by the Akaike Information Criteria. In this study, there are two models that are employed. There are two tests, the Trace statistic, which is more reliable and the max Eigen-value statistic. Both indicate at least a co-integration at the 5% level. Having established that there is co-integration, the estimation of the short-run vector error correction equation becomes necessary in order to determine the adjustment mechanism, as shown below.

**Table III: Agricultural Sector Result**

Date: 11/13/18 Time: 12:52  
 Sample(adjusted): 1982 2014  
 Included observations: 40 after adjusting endpoints  
 Standard errors & t-statistics in parentheses

Cointegrating Eq:	CointEq1			
LOG(GDPA(-1))	1.000000			
INFL(-1)	-0.078273 (0.01921) (-4.07483)			
PLR(-1)	0.104278 (0.05068) (2.05747)			
LOG(BCA(-1))	-0.636450 (0.08630) (-7.37485)			
C	-5.875627			
Error Correction:	D(LOG(GDPA))	D(INFL)	D(PLR)	D(LOG(BCA))
CointEq1	-0.061921 (0.06791) (-0.91185)	10.84675 (1.87634) (5.78079)	0.683129 (0.51749) (1.32008)	-0.089477 (0.07539) (-1.18691)
D(LOG(GDPA(-1)))	0.033672 (0.17346) (0.19411)	-9.198608 (4.79291) (-1.91921)	-0.089565 (1.32188) (-0.06776)	0.068396 (0.19257) (0.35518)
D(INFL(-1))	-0.002704 (0.00506) (-0.53434)	0.414694 (0.13982) (2.96588)	0.100245 (0.03856) (2.59954)	-0.004054 (0.00562) (-0.72161)
D(PLR(-1))	0.005446 (0.02070) (0.26311)	-1.419512 (0.57192) (-2.48203)	-0.570177 (0.15773) (-3.61482)	-0.064394 (0.02298) (-2.80239)
D(LOG(BCA(-1)))	-0.048945 (0.14170) (-0.34542)	13.10751 (3.91526) (3.34780)	1.067985 (1.07982) (0.98904)	-0.280453 (0.15730) (-1.78286)
C	0.135438 (0.08147) (1.66236)	-1.596955 (2.25118) (-0.70939)	0.092955 (0.62087) (0.14972)	0.334783 (0.09045) (3.70144)
R-squared	0.024214	0.519799	0.339807	0.377143
Adj. R-squared	-0.119284	0.449182	0.242720	0.285547

**Source:** Author's Computation 2018

The co-integration results are presented in table II and IV, and following the existence of at least one co-integrating equation, the VECM is estimated as shown in table three above. For the short-run analysis of the agricultural sector, the adjustment coefficients on

CointEq1 for the agricultural output, lending rate and bank credit to the agricultural sector are not significant. The short-run result shows that commercial bank credit allocation to the agricultural sector has no significant impact on the sector output. The reverse

is the case with the long-run period, a long-run significant negative impact bank credit to the agricultural sector has on the sector output.

**Manufacturing Sector**

Table IV: Johansen Co-integration Results for manufacturing sector

Maximum Rank	Eigen value	Trace statistics	5% Critical Value
0	-	73.1632	68.52
1	0.56521	39.8478*	42.21
2	0.37108	21.2978	29.68
3	0.27893	8.2172	15.41
4	0.17533	0.5061	3.76
5	0.01257		

\*(\*\*) denotes rejection of the hypothesis at the 5%(1%) level

Trace test indicates 2 co-integrating equation(s) at the 5% level.

The co-integration results show that, there is at least a co-integrating vector.

**Table V: Manufacturing Sector Result**

Date: 11/13/18 Time: 12:52

Sample(adjusted): 1982 2014

Standard errors & t-statistics in parentheses

Cointegrating Eq:	CointEq1				
GDPM(-1)	1.000000				
INFL(-1)	13.36114 (5.09737) (2.62118)				
PLR(-1)	7.529086 (6.19625) (1.21510)				
PSCGDP(-1)	-6.365266 (8.20726) (-0.77557)				
BCM(-1)	0.000891 (0.00041) (2.18162)				
C	-460.3829				
Error Correction:	D(GDPM)	D(INFL)	D(PLR)	D(PSCGDP)	D(BCM)
CointEq1	-0.009956 (0.05663) (-0.17580)	-0.027417 (0.01106) (-2.47848)	-0.004862 (0.00224) (-2.17502)	-0.004334 (0.00241) (-1.80167)	54.66864 (51.5717) (1.06005)
D(GDPM(-1))	-0.172232 (0.18280) (-0.94220)	-0.024422 (0.03571) (-0.68397)	0.006106 (0.00721) (0.84637)	-0.001506 (0.00777) (-0.19393)	-37.17015 (166.464) (-0.22329)
D(INFL(-1))	0.246846 (0.87953) (0.28066)	0.128225 (0.17180) (0.74636)	0.103069 (0.03471) (2.96905)	-0.013028 (0.03736) (-0.34867)	-530.3925 (800.947) (-0.66221)



D(PLR(-1))	0.556926 (3.59024) (0.15512)	-0.122260 (0.70129) (-0.17433)	-0.446944 (0.14171) (-3.15404)	0.023654 (0.15252) (0.15509)	139.4057 (3269.46) (0.04264)
D(PSCGDP(-1))	1.594845 (4.79485) (0.33262)	0.183215 (0.93659) (0.19562)	0.087928 (0.18925) (0.46461)	-0.106946 (0.20369) (-0.52503)	3993.328 (4366.44) (0.91455)
D(BCM(-1))	2.52E-05 (0.00024) (0.10390)	2.91E-05 (4.7E-05) (0.61433)	6.75E-06 (9.6E-06) (0.70412)	2.68E-05 (1.0E-05) (2.59925)	0.002781 (0.22116) (0.01257)
C	-9.835677 (14.0792) (-0.69860)	-0.772066 (2.75013) (-0.28074)	0.140102 (0.55570) (0.25212)	-0.106534 (0.59811) (-0.17812)	23803.06 (12821.3) (1.85653)
R-squared	0.038515	0.221020	0.425139	0.236007	0.073487
Adj. R-squared	-0.136300	0.079388	0.320619	0.097100	-0.094970

### VECM Result Interpretation

The result of the short-run test indicates that bank credit to the manufacturing sector has no impact on the manufacturing sector output. However, in the long-run, bank credit to the manufacturing sector has a significant positive impact on the sector output. An

important finding from the paper indicates that inflation and lending have significant impacts on sectoral outputs in Nigeria both in the short-run and long-run. This is an indication that macroeconomic variables affect sectoral output in Nigeria.

### CONCLUSION

The study investigated the impact of sectoral commercial bank credit allocation and sectorial output performance in Nigerian economy for the period 1986 and 2018. A vector error correction model (VECM) was estimated via the Ordinary Least Square (OLS) techniques to ascertain the relationship between various commercial bank credits and the sectorial output growth. The variables were tested for stationarity using the Augmented Dickey-Fuller method and Johansen co-integration analysis was also carried out. The study found that the various commercial bank credit allocations to sectors used as case study (manufacturing and agricultural) has a long run positive and significant relationship with sectorial output performance. The study also reveals that commercial bank credit has an

insignificant impact on sectorial output performance in the short-run. Generally, the lesson that emerges from this study is that continuous credit allocation to the sectors has the capacity to induced the nation sectoral output performance which will promote economic growth and development when adequate monetary and fiscal policy are put in place to encourage the demand and supply of commercial bank credit to the sectors of the economy. Based on this, the study recommends that Commercial banks should improve upon their loan procedures, so as to facilitate more by farmers and manufacturer access to their credit facilities. The paper equally recommended that the commercial banks credit allocation to the real sector should be encouraged by both monetary and fiscal policy authorities since the outcomes are favourable.

REFERENCES

1. Abubakar, A. and Gani, I. M. (2017) Impact of Banking Sector Development on Economic Growth: Evidence from Nigeria. *Journal of Business Management & Social Sciences Research*, 2 (4), 47-59.
2. Akpansung, A.O and Babalola, S.J. (2016). Banking Sector Credit and Economic Growth in Nigeria: An Empirical Investigation. *CBN Journal of Applied Statistics* 2 (2), 51-63.
3. Andrew, A. Piatt (1907). The Influence of Banks Credits on Business Growth in America. *Quarterly Journal of Economics* 20(25), 323-353.
4. Anyanwu, C.A. (2015). An Overview of Current Banking Sector Reforms and the Real Sector of the Nigerian Economy, *CBN Economic and Financial Review* 48 (4), 31-57.
5. Avinash R. and Mitchell-Ryan, T. (2015). Impact of Sectoral Distribution of Commercial Bank Credit on Economic Growth and Development in Trinidad and Tobago, *International Journal of Development Economics*, 24(22), 78-84
6. Bencivenga, V. R. and Smith, B. D. (1999). Financial Intermediation and Endogenous Growth, *Quarterly Review of Economic Studies*, 12(58), 195-209.
7. Berger Allen N. and Gregory, Udell (1995). Relationship Lending and Lines of Credit in Small Firm Finance. *Journal of Business* 68(33),351-382.
8. Chan, Y. (1989). On the Positive Role of Financial Intermediation in Allocation of Venture Capital in a Market with Imperfect Information. *Journal of Finance* 38, 1543-1568.
9. Diamond, Douglas (1997). Liquidity, Banks, and Markets. *Journal of Political Economy* 44(105), 928-956.
10. Furfine, Craig (2001). Bank Portfolio Allocation: The Impact of Capital Requirements and Regulatory Monitoring on Economic Growth. *Journal of Financial Services Research* 8, (20), 33-56.
11. Greenwood, J. And B. Jovanovic, (1990). Financial Development, Growth and the Distribution of Income, *Journal of Political Economy*, 12 (8), 1076-1107.
12. Mamman, A and Hashim, Y. A (2013). Impact of private sector credit on the real sector of Nigeria. *International Journal of Business and Social Research*, 3(5), 120-124
13. Mckinnon, R. I. (1973). Money and Capital in Economic Development, Washington D.C: Brookings Institution.
14. Morgan, Donald (1988), "The Credit Effects of Monetary Policy: Evidence Using Loan Commitments," *Journal of Money, Credit, and Banking* 30, 102-18.
15. Obilor, S. I. (2013). The Impact of Commercial Banks' Credit to Agriculture on Agricultural Development in Nigeria: An Econometric Analysis. *International Journal of Business, Humanities and Technology*. 3 (1):85 -95.
16. Okereke, P.G. (2014). Poverty Alleviation and Sustainable Economic Growth in emerging Market Economy, *Journal of Development Economic*, 12(24), 88-110
17. Okorie, G. C. (2013). Impact of Private Sector Credit on Private Domestic Investment in Nigeria. *Journal of Economics and Sustainable Development*, 4(11), 100-118
18. Schumpeter, J. (1912). The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest and Business Cycle, Cambridge Mass: Harvard University Press.
19. Shaw, E. S. (1973). Financial Deepening in Economic Development, London and New York: Oxford University Press.
20. Tomola, M.O., Adebisi, t. E and Olawale, F.K. (2010). Bank

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(8), 120-122