Quest Journals
Journal of Research in Business and Management
Volume 10 ~ Issue 6 (2022) pp: 37-45
ISSN(Online):2347-3002
www.questjournals.org

Research Paper

Impact of Distribution of Banks' Credit on Sectoral Output in Nigeria

John Akintayo OMIMAKINDE and Michael Onome OTITE
National Centre for Technology Management, Obafemi Awolowo University, Ile-Ife, Nigeria

Abstract
The study investigates the effect of the distribution of banks' credit on sectoral output in Nigeri abetween 1979 and 2020usingAutoregressive Distributive Lag (ARDL) technique and Error Correction Mechanism (ECM).The results reveale that banks' credit to the manufacturing and mining sectors appeared to be more sensitive to aggregate output growth than credits allocated to the agricultural and real estate and construction sectors. It is recommended that channel of sectoral distribution of banks' credit within the economy should be digitalised in line with the world best practices.

Keywords: *Sectoral distribution, Banks' credit, Sectoral output, Production loan, ARDL*

***R**eceived 02 June, 2022; **R**evised 13 June, 2022; **A**ccepted 15 June, 2022 © The author(s) 2022.*
P**ublished with open access at **www.questjournals.org

I. INTRODUCTION

Nigerian economy at the moment faces myriads of enormous economic challenges and a bleak future if fundamentally proactive steps are not taken to address the ugly situation. The requirements, among others, for revamping this moribund economy are rapid and broad-based growth in the nation's domestic production. Ogege and Boloupremo(2014) showed an exponentially increasing trend of agricultural credit supply in the economy while Ebi and Emmanuel (2014) found out that an increased bank credit to industrial sector is significant in determining industrial sector growth in Nigeria. Thus, creating the enabling environment for such growth requires a renewed motivation from the government, not minding what the failed efforts of past administrations.

The agitation for the improved financialstatus of domestic industries in Nigeria has not only been topical but has also attracted much attention in recent literature. This is as a result of the destabilizing effects of the continuous fall of the naira against the dollar. Domestic manufacturing companies are operating below capacity because of their inability to obtain sufficient foreign exchange to meet up with import. The policy thrust of government in this respect, is the effort to stop further devaluation of naira, encourage local manufacturing and place embargo on the products that can be produced sufficiently locally (Ibrahim, 2017).

The challenge of enhancing financial autonomy of domestic firmsin developing economies, Nigeria inclusive, is indeed a source of concern. For instance, despite the fact that Nigeria with its geographical relevance in Africa and the potential of economic growth and development, the domestic output of this giant of Africaneeds to be enhancedthrough the provision of sufficient fund by relevant government. This is as a result of the fact that natural resources of the country as well as trade routes with other African countries, America, Europe, and Asian countries have not been optimally utilized.

Empirical studies such as Nurudeen and Usman (2010), Ogunmuyiwa (2018), Oseni and Onakoya (2017), among other studies, investigated the relationship between fiscal policy and real output growth, but only concentrated on the aggregate output growth neglecting sector-specific analysis. The neglect of this important issue has not been given adequate attention in literature in recent time.

Though, the empirical studies of Ebi and Emmanuel (2014) and Toby and Peterside (2014) examined the relationship between distribution of banks' credit and level of output and found out that banks' credit has significant positive impact on the economic growth in Nigeria. The findings of these studies showed that several interventions have been undertaken bysuccessive governments to promote domestic output in Nigeria but not much progress seems to have been achieved. It was also revealed that much attention has not been aid to sector-specific analysis of distribution of banks' credit on output in Nigeria, hence this study.

II. LITERATURE REVIEW

There are many empirical studies on the relationship between credit and aggregate economic output in literature both in developed and developingnations, Nigeria inclusive. Nwaeze, Michael and Nwabekee (2014) explored the extent to which financial intermediation impact on the economic growth in Nigeria during 1992 to 2011. The findings of the study revealedthat both total bank deposit and total bank credit exert a positive and significant impact on the economic growth in Nigeria for the period. Also, the values of GDP per capital, financial deepening, interest rate spread) and inflation rate have positive influence on the size of private domestic savings while the lagged values of total private savings, private sector credit, public sector credit, interest rate spread and exchange rates relate positively with economic growth. Orji (2012) andEkpenyong and Acha (2011) examined the contribution of banks to economic growth While Nigerian banks are not contributing significantly to economic growth, there is positive and significant impact of private sector credit on growth.

Toby and Peterside (2014) appraised the role of Banks in financing Agricultureand Manufacturing sectors in Nigeriaand the results show that Nigeria's commercial and merchant banks are more active in financing manufacturing than agriculture even though the later contribute more to GDP. Investigating intermediation role of banks on economic growth in Nigeria, Ogege and Boloupremo (2014) concluded that only credit allocated to production sector is having a significant positive effect on growth is not significant but credits to other sector is. Akujuobi and Chimaijemr (2012) examined the effect of commercial bank credit to the sub sectors of the production on growth in Nigeria. The study confirmed long run relationship and while credits to agriculture, forestry and fishery, manufacturing, mining and quarrying and real estate and construction are negative and insignificant, credit through the mining and quarrying sub-sector have significant positive contribution on growth. From the inferential results, it is evident that a significantly weak and strong correlation exists between commercial bank and merchant bank lending respectively and agricultural sector's contribution to GDP.

In the same vein, Marshal, Solomon and Onyekachi(2015) examined the impact of bank domestic credits on the economic growth of Nigeria using annual data for 1980 – 2013. Relative statistics of the estimated model showed that CPS and CGS positively and significantly correlate with GDP in the short run. Analysis revealed the existence of poor long run relationship between bank domestic credit indicators and gross domestic product in Nigeria.

Olasunkanmi (2015) reviewed the impact of commercial bank lending on Nigeria's aggregate economic growth. It specifically reviewed the impact of bank credit on the growth of Services and 'Other' sectors of the economy. The results showed that both previous and current year's credit to 'Other' sector had negative relationship with economic growth. In terms of the subsectors, the previous year's credit to public utilities and transport/telecommunications sub-sectors showed positive contributions to economic growth while the impact of that of current year was negativerelationship with economic growth. In terms of the subsectors, the previous year's credit to public utilities and transport/telecommunications sub-sectors showed positive contributions to economic growth while the impact of that of current year was negative.

The empirical study of Uzomba, Chukwu, Jumbo and Nwankwo (2014) investigated the impact and the determinants of Deposit Money Banks' loans and advances granted to agricultural sector in Nigeria. The study found out that there is positive impact of deposit money banks' loans and advances on the agricultural sector. Ebi and Emmanuel (2014) investigate the impact of commercial bank credit on Nigeria industrial subsectors. It was revealed that an increased bank credit to industrial sector is significant in determining industrial sector growth in Nigeria. Yushau (2011) compare accessibility to financing by small entrepreneurs before and after the bank reform using primary and secondary sources. The study concludes that informal institutions are better able to meet the financial need of entrepreneurs than formal whose conditions are stiff.

Udoka,Mbatand Duke(2016) examined the effect of commercial banks' credit on agricultural output in Nigeria. Estimated results showed that there was a positive and significant relationship between agricultural credit guarantee scheme fund and agricultural production. This means that an increase in agricultural credit guarantee scheme fund could lead to an increase in agricultural production in Nigeria; there was also a positive and significant relationship between commercial banks credit to the agricultural sector and agricultural production in Nigeria. In addition, the study also confirmed a positive and significant relationship between government expenditure on agriculture and agricultural production. However, the study also showed negative relationship between interest rate and agricultural output in line with theoretical postulations. This is because an increase in interest rate discourages farmers and other investors from borrowing and thus less agricultural investment and output.

Nwaru and Okorontah (2016) investigated banks credit versus output and conclude that credit to the private sector is positive but insignificant and that real output causes financial development, but not vice versa. Mamman and Hashim (2014) examine the impact of bank lending on economic growth in Nigeria for the period 1987 to 2012. The study employs multiple regression models and concludes that bank lending is significant in determining growth. In a similar study, Yakubu and Affoi (2014) conclude that the commercial bank credit has

significant positive impact on the economic growth in Nigeria. It was discovered tha there was a significant difference between the credit supply function during the pre-reform and post reform periods.

III. METHODOLOGY

The study is anchored on Finance-growth theory for its theoretical underpinning of the link between the financial sector and the real sector.The theory provides evidence that better developed financial systems ease external financing constraints facing the productive units of the economy. Also, the growth benefits of the credit to the real sector were enhanced by the development of the financial sector, hence

$$Y = f(PDL) \quad ----------(1)$$

Where, Y is the domestic industrial output (the output of the real sector) and
$PDL$is the total production loans (the output of the financial sector)
Following the theoretical framework above, the study adopted the modification of the works of Adeleye, Adeteye and Adewuyi(2015). The theoretical relationship between domestic industrial output (DIN) and the total production loans (PDL) made available to productive sector of the economy and is specified as

$$DIN = f(PDL, X) \quad ----------(2)$$

Where, DIN is the domestic industrial output (the output of the real sector),
PDL is the total production loans (the output of the financial sector) and
X the control variables.
The model in equation (2) above justifies theoreticalunderpinning of the link between the financial sector and the real sector.

Similarly, following the modification of the work ofOburota and Ifere(2017), Domestic industrial output (DIN) in the equation (2) above depends on the total production loans (PDL) made available to productive sector of the economy, currency in circulation (CIC) and the money supply (M_1) in the economy. These three independent variables are the monetary instruments of interest to the study which government can employ to promote domestic industial production in Nigeria.

Therefore, the linear relationship between DIN and PDL via investible funds can be expressed as:

$$DIN_t = \delta_0 + \delta_1 PDL_t + \delta_2 CIC_t + \delta_3 M_{1t} + \varepsilon_t ----------(3)$$

In the same vein, with reference to CBN statistical bulletin (2020), sectoral distribution of Commercial Banks' Loans and Advances can be portrayed as financial interventions to augment domestic production in Nigeria. The real sectors in the economy which include Agricultural, Manufacturing, Mining and Real Estate & Construction sectors have attracted government attention in recent times as more funds are being injected into them to encourage domestic production in Nigeria (CBN, 2018). Thus, the effect of the interventions can be empirically examined using the equation:

$$PDL_t = \beta_0 + \beta_1 AGRIC_t + \beta_2 MANF_t + \beta_3 MINING_t + \beta_4 REC_t + v_t ------(4)$$

Where,

AGRIC =	Agriculture, Forestry and Fishery loan
MANF =	Manufacturing Sector loan
MINING =	Mining Sector loan
REC =	Real Estate and Construction Sector loan

In order to examine the relative effects of sectoral distribution of Commercial Banks' Loans and Advances on domestic output in Nigeria, the equation (4) is therefore substituted in equation (3) and transformed as

$$DIN_t = \partial_0 + \partial_1 AGRIC_t + \partial_2 MANF_t + \partial_3 MINING_t + \partial_4 REC_t + \partial_5 CIC_t + \partial_6 M_{2t} + \epsilon_t ----------(5)$$

The research hypothesis was analysed within the Autoregressive Distributed Lag (ARDL) model framework. The choice of this econometric technique is as a result of the advantages it has over other traditional cointegration techniques. First, the ARDL does not need all the variables under study to be integrated of the same order. It is also relatively more efficient in the case of small and finite sample data sizes.

Therefore, following the works by Pesaranand Shin (1998) and Pesaran et al. (2001), theARDL model of equation (5) above can be specified as:

$$\Delta DIN_t = \partial_0 + \sum_{i=1}^{q} \tau_i \, \Delta DIN_{t-1} + \sum_{i=1}^{q} \vartheta_i \, \Delta AGRIC_{t-1} + \sum_{i=1}^{q} \pi_i \, \Delta MANF_{t-1} + \sum_{i=1}^{q} \alpha_i \, \Delta MINING_{t-1} + \sum_{i=1}^{q} \psi_i \, REC_{t-1} + \sum_{i=1}^{q} \eta_i \, \Delta CIC_{t-1} + \sum_{i=1}^{q} \Phi_i \, \Delta M_{2t-1} + \lambda_1 DIN_{t-1} + \lambda_2 AGRIC_{t-1} + \lambda_3 MANF_{t-1} + \lambda_4 MINING_{t-1} + \lambda_5 REC_{t-1} + \lambda_6 CIC_{t-1} + \lambda_7 M_{2t-1} + \epsilon_t \; ------(6)$$

Where $\partial_0$is the drift component of the model; $\epsilon_t$is the stochastic error term; the terms with summation signs $\sum_{i=1}^{q}$represents the error correction dynamics while the second part of the equation with $\lambda_i$is the long run relationship of the model. In order to estimate the short-run relationship between the variables, the corresponding error correction equation was estimated as:

$$\Delta DIN_t = \partial_0 + \sum_{i=1}^{q} \tau_i \, \Delta DIN_{t-1} + \sum_{i=1}^{q} \vartheta_i \, \Delta AGRIC_{t-1} + \sum_{i=1}^{q} \pi_i \, \Delta MANF_{t-1} + \sum_{i=1}^{q} \alpha_i \, \Delta MINING_{t-1} + \sum_{i=1}^{q} \psi_i \, REC_{t-1} + \sum_{i=1}^{q} \eta_i \, \Delta CIC_{t-1} + \sum_{i=1}^{q} \Phi_i \, \Delta M_{2t-1} + \lambda_i ECM_{t-1} + \epsilon_t \; --(7)$$

Similarly, the ECM_{t-1} is the Error Correction Model for the equation (7) above.
Thus, the ECM version of ARDL was applied to determine the speed of adjustment to equilibrium. The purpose here is to estimate the coefficients of the long run relationship, followed by the estimation of the short run elasticity of the variables.

IV. ANALYSIS AND INTERPRETATION OF RESULTS

4.1 Descriptive Statistic Analysis

The descriptive characteristics of all the variables in the model are presented in the Table 4.1 below. It was observed that there were shifts in the mean and standard deviation values of the variables.

Table 1: Descriptive Analysis of Variables

Variable	Mean	Std. Deviation	Min.	Max.	Skewness
DIN	23793.29	34411.50	134.1112	121499.9	1.416536
CIC	2135.097	2627.468	8.700000	7469.100	0.919913
M_2	4593.054	7357.304	10.10667	28907.17	1.693245
MANF	251.2195	363.5355	2.159800	1179.691	1.520744
MINING	1045.786	2385.656	0.058000	9324.300	2.540861
REC	388.2489	798.2870	1.570500	3619.100	2.647827
AGRIC	259.1213	620.6523	0.486600	2622.100	2.735248

Source: Author's computation from the data extracted from CBN statistical bulletin

Table 1 above shows that the mean values of all the variables are positive. The results indicated that the mean value of DIN over the sampled period was 23793.29which was necessitated by the mean values of CIC, M_2, MANF, MINING, REC and AGRIC with their respective values of 2135.097, 4593.054, 251.2195, 1045.786, 388.2489 and 259.1213.

The results of the standard deviation showed that the money supply (M_2) in the economy has the highest level of certainty among the other the other dependent variables in the model with a variation of 7357.304. There are also reasonable levels of certainty peculiar to other variables as Domestic industrial output (DIN) has a variation of 34411.50, currency in circulation (CIC)2627.468and Mining Sector loan(MINING) 2385.656. The standard deviation values of 798.2870, 620.6523and 363.5355for Real Estate & Construction Sector loan (REC), Agriculture, Forestry & Fishery loan (AGRIC) and Manufacturing sector loan (MANF) respectively imply that sufficient funds have not been accruing from these sources to enhance the desired level of sustainable domestic industrial output growth in Nigeria. The results of the standard deviation further revealed that money supply (M_2)is the most volatile variable with a standard deviation of 7357.304while Manufacturing sector loan (MANF) with a standard deviation of 363.5355 is the least volatile. Also, the descriptive statistics revealed that all the variables are positively skewed. Meanwhile, all the variables have their mean values fall within their respective minimum and maximum values.

4.2 Unit Root Tests

The results of unit root tests are reported in Table 4.3. The study employed two unit root tests in order to have robust analysis. From the results of Augmented Dickey-Fuller (ADF) test, it was revealed that Domestic Industrial Output (DIN), Money Supply (M_2),Mining Sector loan (MINING) and Real Estate and Construction Sector loan (REC) were stationary at levels and at 1% level of significance. Currency in Circulation (CIC) was equally stationary at levels but at 5% level of significance. It was only Manufacturing Sector loan (MANF) and Agriculture, Forestry & Fishery loan (AGRIC) that werestationary at first difference and at 10% level of significance.

Similarly, the results of Philips-Perron (PP) Test showed that Domestic Industrial Output (DIN), Money Supply (M_2),Mining Sector loan (MINING) and Real Estate and Construction Sector loan (REC) were stationary at levels and at 1% level of significance. Also, Currency in Circulation (CIC), Sector loan (MANF) and Agriculture, Forestry &Fishery loan (AGRIC) werestationary at first difference but at 1% level of significance.

Since the results revealed that all the variables are stationary either at levels or at first difference but at different levels of significance, it becomes econometrically reasonable to conduct the cointegration test.

Table 2:Unit Root Tests Results

Augmented Dickey-Fuller (ADF) Test				Philips-Perron (PP) Test		
Variables	**Level**	**1stDifference**	**Status**	**Level**	**1stDifference**	**Status**
DIN	10.66304***	0.563200	I(0)	10.66304***	2.900534	I(0)
CIC	3.142208**	-2.903868*	I(0)	2.029218	-7.313776***	I(1)
M_2	8.430418***	1.297577	I(0)	7.997548***	2.252605	I(0)
MANF	-1.750543	-7.158345***	I(1)	-1.758107	-7.095074***	I(1)
MINING	3.823333***	-3.325396	I(0)	4.502256***	-3.347156	I(0)
REC	4.421848***	3.865725	I(0)	13.66400***	-3.166933	I(0)
AGRIC	2.995244	-4.359524***	I(1)	3.409454	-4.717622***	I(1)
Critical values	**Level**	**1stDifference**		**Critical values**	**Level**	**1stDifference**
1%	-3.615588	-3.621023		**1%**	-3.615588	-3.621023
5%	-2.941145	-2.943427		**5%**	-2.941145	-2.943427
10%	-2.609066	-2.610263		**10%**	-2.609066	-2.610263

Source: Author's computation from the data extracted from CBN statistical bulletin

Note:*** = 1%, ** = 5% and * = 10% levels of significance*
ADF: automatic maximum lag length is based on Akaike Information Criterion(AIC)
PP: automatic maximum lag length is based on Newey-West Bandwidth

4.3 Johansen Cointegration Test

Following the results in the Table 4.2 which revealed that all the variables are stationary either at levels or at first difference and at different levels of significance, there is the need to determine the long-run relationship among the variables. To achieve this, Johansen cointegration test was employed to determine the existence of long-run relationship among domestic industrial output; money supply; currency in circulation; agriculture, forestry & fishery loan; mining sector loan; manufacturing sector loan and real estate & construction sector loan in Nigeria between 1979 and 2017. It was evidenced from the Johansen cointegration test results in the Tables 3a and 3b that the null hypothesis of no cointegration among the variables at 5% level of significance for the model specification was rejected.

The truce statistics revealed that there are cointegrating relationships among the variables. Similarly, the unrestricted cointegrationMax-Eigenvalue statistic reports that there exist seven cointegration equations at 5% level of significance. This implies that the variables have long-run relationship.

Table 3a: Johansen Cointegration Test Results: Unrestricted Cointegration Rank Test(Trace)

Hypothesised No of CE(s)	Eigenvalue	Trace statistic	5% critical value	Prob**
None *	0.999229	743.6676	111.7805	0.0001
At most 1 *	0.986891	478.4619	83.93712	0.0001
At most 2 *	0.977704	318.0869	60.06141	0.0001
At most 3 *	0.861636	177.3638	40.17493	0.0001
At most 4 *	0.810604	104.1827	24.27596	0.0000
At most 5 *	0.622292	42.61785	12.32090	0.0000
At most 6 *	0.163224	6.593357	4.129906	0.0121

Source: Author's computation from the data extracted from CBN statistical bulletin

Note:

Trace test indicates 7 cointegratingeqn(s) at 5% level of significance
** denotes rejection of the hypothesis at 5% level of significance*
***MacKinnon-Haug-Michelis (1999) p-values*

Table 3b: Johansen Cointegration Test Results: Unrestricted Cointegration Rank Test (MaximumEigenvalue)

Hypothesised No of CE(s)	Eigenvalue	Max-Eigen statistic	5% critical value	Prob**
None *	0.999229	265.2056	42.77219	0.0001
At most 1 *	0.986891	160.3750	36.63019	0.0000
At most 2 *	0.977704	140.7231	30.43961	0.0001
At most 3 *	0.861636	73.18113	24.15921	0.0000
At most 4 *	0.810604	61.56486	17.79730	0.0000
At most 5 *	0.622292	36.02449	11.22480	0.0000
At most 6 *	0.163224	6.593357	4.129906	0.0121

Source: Author's computation from the data extracted from CBN statistical bulletin

Note:

Max-eigenvalue test indicates 7 cointegratingeqn(s) at the 5% level of significance
** denotes rejection of the hypothesis at the 5% level of significance*
***MacKinnon-Haug-Michelis (1999) p-values*

4.4 Bounds Test

Since the basic tests of the model passed all the required diagnostics tests, then the next level of analysis which is Bounds test for cointegration following Pesaran, Shin and Smith (2001)was conducted. Here, the author developed the critical values of the F-statistic for the asymptotic distribution.

Table: 4.5 Bounds Test for Cointegration Results

F- Statistics	57.91594	
Number of independent variables - *k*	6	
Critical values	**Lower bound**	**Upper bound**
1%	3.15	4.43
5%	2.45	3.61
	2.12	3.23

Source: Author's computation from the data extracted from CBN statistical bulletin

The result of ARDL bounds test revealed that F-test is 57.91594. The value of the estimated F-statistic of the model has exceeded the upper bound at the 1% level of significance. It is apparent from the results that there exists long-run relationship among the variables. This implies that the series are related and can be combined in a linear fashion, even if there are shocks in the short-run, which may affect the movement in the individual series, they would converge with time (in the long-run). Therefore, both the long-run and short-run models were estimated.

4.5 Long Run Dynamics

The long-run equilibrium relationship between the variables using the ARDL model (1, 0, 1, 0, 1, 0,0) was estimated. The result of the long run estimation is summarized in the Table 4.6 below.

Table 5:Estimated long-run coefficients in ARDL

Dependent Variable: DIN				
Method: Autoregressive Distributed Lags (ARDL)				
Variables	**Coefficient**	**Std. Error**	**t-Statistics**	**Prob.**
AGRIC	-6.526654	11.687115	-0.558449	0.5810
CIC	14.772587	2.591508	5.700382	0.0000
M2	7.275866	1.300291	5.595568	0.0000
MANF	-62.183434	17.251046	-3.604618	0.0012
MINING	-17.468789	5.485246	-3.184686	0.0035
REC	10.177316	6.395222	1.591394	0.1227
C	392.728521	553.548959	0.709474	0.4839

Source: Author's computation from the data extracted from CBN statistical bulletin (2018)

The results revealed that the coefficients of currency in circulation (CIC), money supply (M_2), manufacturing sector loan (MANF) and mining sector loan (MINING) were statistically significant while agriculture, forestry & fishery loan (AGRIC) and loan from real estate & construction sector (REC) appeared to have insignificant relationship with the dependent variable. It was also indicated from the results that currency in circulation (CIC), money supply (M_2) and real estate & construction sector (REC) appeared to have insignificant relationship with domestic industrial output (DIN) and these are confirmed by the signs and statistical significance of their coefficients. On the contrary, agriculture, forestry & fishery loan (AGRIC), manufacturing sector loan (MANF) and mining sector loan (MINING) have negative impacts on the domestic industrial output (DIN) in the long run.

The two control variables used in the study, currency in circulation (CIC) and money supply (M_2) are not only significant but also contribute positively to the growth of domestic industrial output in the economy. The findings revealed that a respective unit increase in currency in circulation as well as money supply results in 14.8% and 7.3% increase in domestic industrial output respectively. This implies successive governments over the years have been proactive in making sufficient funds available for aggregate output growth in the economy. It is an indication that government has been able to mobilise funds from those with abundant financial resources to those who lack but have productive capacities. Thus, the aggregate output growth has been given considerable attention due to an expansionary monetary policy of government in Nigeria. The findings are in line with the study of Ilegbinosa (2013) which revealed that increase in government expenditure and decrease in taxes have significant positive effect on economic growth. The effectiveness of government involvement in the distribution of banks' credit was not only necessitated by the quantum of currency in circulation but also by the volume of money available in the economy.

Results from Table 5 revealed that one percent increase in agriculture, forestry & fishery loan (AGRIC) leads to 6.53% decrease in domestic industrial output. The relationship is not only negative but also statistically insignificant in the long-run. This implies that agricultural sector has not been given adequate attention in terms of distribution of banks' credit to enhance improved output in the sector. The findings are contrary to the study of Imoisi,Sogules and Ekpeyoung (2012) which revealed a significant positive relationship between deposit money banks loans and advances and agricultural output in Nigeria. The negative coefficient of agriculture, forestry & fishery loan might not be unconnected with the share of government budgetary allocation to Agriculture sector in Nigerian economy, which is abysmally low. This was evident by CBN (2009) report that between 1978 and 2008, the average share of government agricultural spending in the total government fiscal expenditure in the economy was 3.11%.This only corroborated the findings of Yakubu and Affoi (2014) which concluded that there is need to earmark sufficient funds towards the development of agriculture sector in the economy.

In terms of sectoral output response, the manufacturing and mining sectors were more sensitive and inversely related to aggregate industrial output growth. Though, the two variables were statistically significant and have long-run relationship with the dependent variable as revealed by the results of the study but

characterised by negative coefficients of -62.2 and -17.5 respectively. This implies that a unit increase in manufacturing sector loan (MANF) and mining sector loan (MINING) leads to 62.2% and 17.5 decrease in domestic industrial output. Despite significant positive impact of commercial bank loans on the manufacturing sector in Nigeria over the years as revealed by the findings of Oburota and Ifere (2017),the sector seems not have been fared. This is as result of the fact that manufacturing sector was oriented towards the adoption of import-substitution strategy in which Light industry and assembly related manufacturing firms came to a halt in the late 1970s so as to pave way for the Liberal Import Policy inearly1980s which expanded the imports of finished goods at the detriment of domestic production (Olasunkanmi, 2015).

The relationship between the Real estate & construction sector (REC) and industrial domestic output (DIN) in the economy was positive in the long-run. The results showed that a unit increase in real estate & construction sector (REC) leads to 10.18% increase in industrial domestic output. The implication of the results is that physical infrastructure in the economy has been attracting lump sum of money over the years but have no noticeable feedback effects on the citizenry. The sector is indeed one of the prominent sectors in the real sector of the economy. The results supported the findings of Ebi and Emmanuel (2014) which indicated that infrastructure has a positive impact on the industrial growth in the long run in Bangladesh.

4.6 Short Run Analysis

After explaining the long run relationship of the variables, the short-run causality in the ARDL model (1, 0, 1, 0, 1, 0, 0) was estimated in the Table 4.7 below.

Table 6: Short-Run estimation from ECM

Dependent Variable: DIN				
Method: Autoregressive Distributed Lags (ARDL)				
Variables	**Coefficient**	**Std. Error**	**t-Statistics**	**Prob.**
D(AGRIC)	-1.826291	3.272920	-0.558000	0.5813
D(CIC)	1.292901	0.371571	3.479550	0.0017
D(M2)	2.035936	0.202287	10.064595	0.0000
D(MANF)	-13.772349	2.481625	-5.549729	0.0000
D(MINING)	-4.888124	0.633906	-7.711116	0.0000
D(REC)	2.847821	1.372279	2.075249	0.0473
CointEq(-1)	-0.279820	0.061401	-4.557296	0.0001

Source: Author's computation from the data extracted from CBN statistical bulletin (2018)

Similar to the long-run analysis of the model, Table 6 also revealed that the coefficients of currency in circulation (CIC), money supply (M_2), manufacturing sector loan (MANF) and mining sector loan (MINING) are statistically significant while agriculture, forestry & fishery loan (AGRIC) and real estate & construction sector loan (REC) appeared to have insignificant relationship with the dependent variable. It was also indicated from the results that the variableshave positive impacts on domestic industrial output (DIN) in the short run which were confirmed by the signs and statistical significance of their coefficients. On the contrary, agriculture, forestry & fishery loan (AGRIC), manufacturing sector loan (MANF) and mining sector loan (MINING) were found to have negative impacts on the domestic industrial output (DIN) in the short run. The results of the short-run analysis revealed similar behaviour of the variables with that long-run dynamics during the study period.

The sign of lagged error correction term {CointEq (-1)} was negative and statistically significant at 1% level. Also, the value of ECM coefficient is -0.279820 which signifies the extent to which any disequilibrium in the lagged error correction term affects any resulting adjustment in domestic industrial output. It is the feedback or adjustment effect which shows that 27.9% of the disequilibrium converges back to the long-term equilibrium. This implies that there is long run stability of the aggregate output growth after the initial shock due to short run fluctuation. Thus, confirming the adequacy and statistically efficiency of the model.

V. Conclusion

The findings of this study revealed the existence of both short-run and long-run relationships between sectoral banks' credit and aggregate output in Nigeria. This exposes the relative financial strengths of the real sectors of Nigerian economy as some of them did not either have access to sufficient funds to harness their potentials or the available credits from the commercial banks in the economy have not been judiciously utilized to achieve desired economic growth.

The higher commercial banks' credit to real estate & construction sector raises the aggregate domestic output performance while the impacts of the agriculture, forestry & fishery loan; manufacturing sector loanand mining sector loan on the domestic industrial output both in the short run and log run periods indicated that Nigerian economy is predominantly a consuming nation.

The dynamic adjustment showed that the cumulative aggregateoutput growth was attracted by the impact of the positive changes in banks' credit to real estate & construction sector, velocity of currency in circulation and quantum of money supply in the economy. However, the study concluded that there was no even sectoraldistribution of banks' credit on domestic output to enhance uniform growth among the Nigerian real sectors.

VI. Recommendations

Based on the findings emanated from this study, some policy issues naturally arise. Hence, the following recommendations will be useful for policy consideration.

i. The government should always makesufficient banks' credit available to the agricultural, mining and manufacturing sectors in Nigeria with reasonable or affordable lending rates. This will enable them to operate on their optimum production possibility frontier.

ii. The growth potentials of the credit allocated to the agricultural and manufacturing sectors by commercial banks should be enhanced to actualize the age-long government import- substitution strategy in no distant time.

iii. The channel of sectoral distribution of banks' credit within the economy should be digitalised in line with the world best practices.

References

[1]. Adeleye, J. O., Adeteye, O. S. and Adewuyi M. O. (2015). Impact of International Trade onEconomic Growth in Nigeria (1988-2012). *International Journal of Financial Research*.6(3):4 – 9.

[2]. Akujuobi A. B. C. and Chimaijemr, C. C. (2012). The Production Sector Credit and EconomicDevelopment of Nigeria, a Cointegration Analysis. *IJEMR*, 2(11), 1-17.

[3]. CBN (2020). Central Bank of Nigeria Statistical Bulletin. Vol. 13(6).

[4]. Ebi, B. O. and Emmanuel, N. (2014). Commercial Bank Credits and Industrial Subsector's Growth inNigeria. *Journal of Economics and Sustainable Developmen*t, 5(10), 1-11.

[5]. Ekpenyong, D. B., and Acha, I. A. (2011). Banks and Economic Growth in Nigeria. *EuropeanJournal of Business and Management*, 3(4), 155-166.

[6]. Ibrahim, B. G. (2017). Conceptual Models on the Economic Benefits of Made-In- Nigeria Products Procurement and the Impact of Regulatory Agencies: Analysis of Literatures. *Public Procurement Journal,* Bureau of Public Procurement (BPP), Issue No 5: 9 – 15.

[7]. Mamman, A., and Hashim, Y. A. (2014). Impact of Bank Lending on Economic Growth in Nigeria.*Research Journal of Finance and Accounting*, 5(18), 174-182.

[8]. Nurudeen A. and Usman A. (2010). Government Expenditure And Economic Growth In Nigeria,: A Disaggregated Analysis. *Business and Economics Journal*, 20(10): BEJ-4.

[9]. Nwaeze, C., Michael, O., and Nwabekee, C. E. (2014). Financial Intermediation and EconomicGrowth in Nigeria (1992 – 2011). *The Macrotheme Review*, 3(6), 124-142.

[10]. Nwaru, N. M. and Okorontah, C. F. (2016). Banks' Credit as an Instrument of Economic Growth inNigeria. *International Journal of Business & Law Research*, 2(2), 25-33.

[11]. Oburota, C. S. and Ifere, E. O. (2017). Manufacturing Subsector and Economic Growth inNigeria. *British Journal of Economics, Management & Trade*,17(3): 1-9.

[12]. Ogege, S. and Boloupremo, T. (2014). Deposit Money Banks and Economic Growth in Nigeria.*Financial Asset and Investing*, (1), 41-50.

[13]. Ogunmuyiwa M. S. (2018). Fiscal Deficit-Inflation- Nexus in Nigeria, *Indian Journal Econo*mics, 89(2): 167-175.

[14]. Olasunkanmi, O. (2015). Fiscal Policy and Sectoral Output in Nigeria: A multivariate Cointegration Approach. *Journal of Economics and Development Studies*, 1 (2), 26–34.

[15]. Orji, A. (2012). Bank Savings and Bank Credits in Nigeria: Determinants and Impact on EconomicGrowth. *International Journal of Economics and Financial Issues*, 2(3), 357-372.

[16]. Oseni I. O. and Onakoya A. B. (2017). Fiscal Policy Variables-Growth Effect: Hypothesis Testing. *American Journal of Business and Management*,1(3):100 - 107.

[17]. Pesaran, M. H. and Shin, Y. (1998). "An Autoregressive Distributed Lag Modelling Approach to Cointegration Analysis". *Econometric Society Monographs*, 31: 371 - 413.

[18]. Pesaran, M. H., Shin, Y. and Smith, R. J. (2001). Bounds Testing Approaches to the Analysis of Level Relationships. *Journal of Applied Econometrics*, 16(3): 289 - 326.

[19]. Toby, A. J., and Peterside, D. B. (2014). Analysis of the Role of Banks in Financing the Agricultureand Manufacturing Sectors in Nigeria. *International Journal of Research in Business Management*, 2(2), 9-22.

[20]. Uzomba, P. C., Chukwu, S. N., Jumbo, G. A. and Nwankwo, N. U. (2014). An Inquiring into theImpact of Deposit Money Banks' Loans/Advances on Agricultural Sector in Nigeria; 1980 -- 2011. *International Review of Social Sciences and Humanities*, 7(2), 130-139.

[21]. Yakubu, Z. and Affoi, A. Y. (2014). An Analysis of Commercial Banks' Credit on Economic Growthin Nigeria. *Current Research Journal of Economic Theory*, 6(2), 11-15.

[22]. Yushau, I. A. (2011). The Impact of Banking Sector Reforms on Growth and Development onEntrepreneurs in Nigeria. 10th International Entrepreneurship Forum, Tamkeen, Bahrain, 1-13.