

## Commercial bank credits and industrial development in Nigeria

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**Abstract** - The aim of this study is to determine how credit from commercial banks affects Industrial Growth in Nigeria. The study spans the years 1983 through 2020. For this reason, Commercial Bank Credits was divided into Commercial Banks Credit to the Manufacturing Sector (CBMF), Commercial Banks Credit to the Mining Sector (CBMN), and Commercial Banks Credit to the Real Estate and Construction Sector (CBRC), and their various effects on Industrial Development (Industrial Gross domestic product - IGDP) were taken into account. It was discovered that all the variables attained stationarity at the first and second difference and then freed themselves from the unit root tangle. The Johansen co-integration test results demonstrated that there is no co-integration equation between the variables listed in the model. The Granger Causality test, which was conducted, showed that there was only one causal relationship between Commercial Banks' contribution to the mining sector (CBMN) and Industrial Development (IGDP). According to the regression analysis's findings, there is a positive and significant relationship between commercial banks' lending to the manufacturing sector (CBMF) and industrial development (IGDP), as well as a negative and significant relationship between commercial banks' lending to the real estate and construction sector (CBRC) and industrial development. This suggests that there is a significant connection between Industrial Development and the credit offered by commercial banks. This research on the effect of Commercial Bank Credits on Industrial Development studied only the Nigerian case. So, the research recommends that this study be extended to other Sub Saharan African Countries. In order to enhance industrial growth and development in the long run, it is recommended that, the commercial banks should grant medium and long term loans to the major players in the industrial sector and avoid under-lending or over-lending. There is disagreement regarding whether there is a long-term or short-term relationship between commercial bank credits and industrial development, as well as the direction of causality. The majority of researchers on this subject did not examine the nature and direction of the relationship between Commercial Bank Credits and Industrial Development in Nigeria using the Cointegration Test and Granger Causality Test. This study closes the knowledge gap.

**Keywords:** industrial development, bank credits, commercial bank, economic growth

### Introduction

A commercial bank, a particular kind of financial institution, handles any transaction involving the deposit and withdrawal of public funds, lending money for investments, and other comparable

activities. The commercial banking sector is a sizable subsector of every economy in the world. Today's economy would not be possible without the commercial banking industry. As the main source of credit, it provides funds for people to purchase homes and automobiles as well as for companies and investors to purchase machinery and other fixed assets, expand their operations, and pay their employees (Chete et al, 2014).

The two main functions of a commercial bank are lending and borrowing. In order to earn interest (profit), the bank accepts deposits and distributes money to various projects. A commercial bank's two main objectives of profitability and liquidity must always be balanced. They must maintain high liquidity because they have obligations that are approaching due dates. Onwuteaka et al (2019) contend that commercial bank credit reduces banks' liquidity while increasing their profitability.

Commercial banks, as it is widely known, play a significant role in the economy. They contribute to the market's capitalization and liquidity in addition to giving consumers a crucial service. Commercial banks maintain liquidity in the economy by lending out the money that customers deposit in their accounts. According to Fiaz and Muhammed (2018), commercial banks take part in credit creation, which increases output, employment, and consumer spending. The creation of credit also stimulates the economy. Every economy's industrial sector benefits from increased short- and long-term investment thanks to commercial bank credit, which also boosts banking sector profitability and fosters economic growth. According to Usman and Yusuf (2019), the industrial sector benefits from commercial credit because it helps it create productive assets and increase the amount of money in circulation. Therefore, as the industrial sector increases production, more products will be available on the market, which will in turn generate more revenue that will be deposited back into the commercial banks.

It is currently practically impossible to distinguish between the growth of the industrial sector and the development of the country's industrial base. Every modern economy is primarily driven by the development of the industrial sector. A country is more likely to be able to meet its citizens' needs and improve their standard of living if it succeeds in doing this. Nigeria as a country has frequently had a good opportunity to expand its industrial base. This is because the production of crude oil significantly boosts our GDP. However, the commercial-scale discovery of crude oil in Nigeria by Shell Petroleum Development Company in 1956 at Oloibiri in the Niger Delta region led to an over-reliance on the resource. Nigeria has since failed to diversify its economy despite the significant economic benefits that crude oil had brought. The justification for this was provided by Okafor (2013), who said: "In a situation where this (industrial and technological development) is distorted by the state officials through corrupt practices, the consequences can be disastrous for the masses and the nation at large.

The results are typically the same: poor socioeconomic development and living conditions for the majority of people". It is impossible to overstate the significance of government actions for the development of industry. However, the private sector also plays a significant role in the industrial development of any economy. The inability of investors to make bigger investments in the industrial sector has been hampered by the lack of necessary financial resources. Financial institutions are essential when it comes to giving financial support to the real sector of an economy like Nigeria's. In their capacity as financial institutions, banks perform a variety of intermediation functions, typically by directing resources from the surplus units to the deficit units for use in the productive sectors of an economy. Deposit Money Banks foster economic growth in a number of different economic sectors while concentrating on the most crucial ones through their credit policies (Tokunbo, 2017).

The Nigerian government has always been interested in providing financing to investors in the industrial sector. This was demonstrated by the creation of the Nigerian Industrial Development Bank (NIDB) to speed up the country's industrialization. Industrialization in Nigeria was primarily financed by the Central Bank of Nigeria, with the NICB eventually acting as a backup source of funding. The Nigerian Agricultural Corporative Bank (NACB) was established to finance the expansion of agriculture. This could be seen as a conscious effort to promote the development of business and agriculture in order to raise per-capital investment and societal standards of living.

A country's economy is greatly influenced by the industrial sector. For instance, about 10% of Nigeria's GDP is accounted for by manufacturing each year (Tokunbo, 2017).

However, the availability of resources like raw materials and funding to meet demand is crucial to the effectiveness of manufacturing businesses. Due to this, it is essential to fund the expansion of the economy's subsector while also attending to the needs of Nigeria's financial industry. The Nigerian commercial banks have a lot of liquid assets, but they try to avoid lending to the manufacturing and agricultural sectors because they think it will interfere with their profit-driven operations. When they apply for loans, the results are bad credit and high interest rates. As a result, the sectors' effectiveness is constrained. The primary goal of this study is to determine how commercial bank credit has impacted Nigeria's industrial development.

It is impossible to overstate the impact of industrialization on economic growth. It has already been stated that the manufacturing sector contributes 10% of Nigeria's annual GDP. About 12% of the total labour force in the country's formal economy is employed in manufacturing, which accounts for a significant portion of the jobs created in that sector. The activities of the manufacturing sector are very diverse, ranging from modest agro-based businesses to sizable iron and steel businesses. A developed economy's most significant industry from a variety of perspectives is manufacturing. It generates per-capita income and foreign exchange earnings, influences various consumption patterns, and provides a way to increase productivity in relation to the expansion and replacement of imports (Ajayi, 2000; Olutuase, 2013; Udofia et al, 2014). To what extent the industrial sector can meet the demands of industrialization, however, will depend on the accessibility of necessary financial resources.

Unfortunately, the industrial sector – which includes mining, utilities, and manufacturing – only accounts for less than 6% of economic activity in Nigeria; manufacturing's share of GDP in 2011 was only 4% (Chete et al, 2014; Ayodeji, 2010; Egbe et al, 2015; Ehikioya et al, 2013); Evbodaghe, 2018). The Central Bank of Nigeria (CBN), the Bank of Industry (BOI), and the entire government have not been able to change this. There has been a conscious effort to support the growth of agriculture and industry by encouraging commercial banks to offer enough loans at low interest rates. This is done in order to increase the per-capita involved and the standard of living of the population. Commercial banks in Nigeria, which have high liquidity, try to avoid lending to the manufacturing and agricultural sectors because they think it will harm their profit-driven businesses. The loans they receive have low credit limits and high interest rates as a result. The various reforms the government has implemented to encourage industrialization as a result, have less of an effect. In the graph below, the general decline in Nigeria's industrial development is shown.

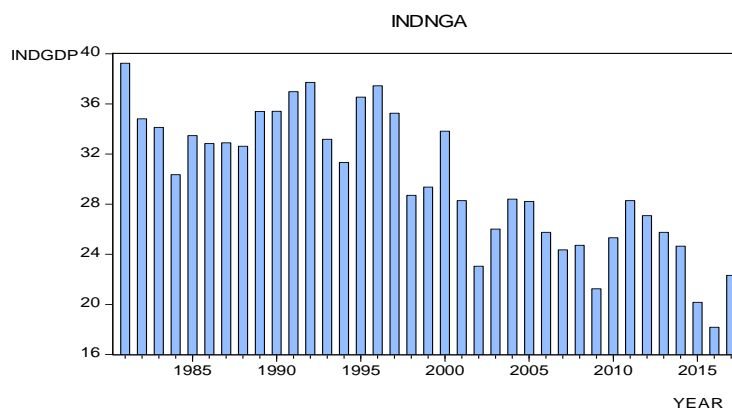


Figure 1 Industrial Development Growth

The graph above illustrates the significant decline in industrial GDP in 2015. This might be attributed to the national economic crisis of the time. However, things did start to get a little better in 2017 as Nigeria started to come out of its economic crisis. Looking closely at the graph above, we only see a slow but consistent decline in the country's industrial development.

This study will attempt to determine whether commercial bank credit has any positive impact on the industrial development of Nigeria in order to find the answers to these questions and come to reasonable conclusions. What percentage of other factors account for the low level of industrial development? Could this be the cause of the industrial sector's subsequent failure?

The main objective of this study is to evaluate the overall impact of commercial bank credits on Nigerian industrial growth.

Ajayi (2011) examined the challenges of Nigeria's industrialization in the new millennium in a study. This essay examined Nigeria's manufacturing and industrial growth in the new millennium, as well as the degree to which inter-industry linkages, particularly production subcontracting, have impacted Nigeria's production. The study also discovered that, as opposed to its labour-intensive counterpart, Nigeria's economy has been dominated by import substitution and capital-intensive raw material value addition. Another obstacle to effective technology transfer and, consequently, significant production investment has been the absence of significant industries and automotive production. An overall low level of inter-industry linkages is caused by industries' failure to utilize the products and by products of other industries, especially during the production process. Studies on production in African countries have mainly concentrated on small-scale industries and a few regionally specific behavioural aspects of production. Imuoghele (2015) examined the association between sectoral output performance and the availability of commercial bank credit in the Nigerian economy between 1986 and 2010.

Co-integration analysis and the stationarity of the variables were both assessed using the Augmented Dickey-Fuller test. Additionally, it was used to test error correction. Among other things, the study found a long-term correlation between sectoral output performance and the accessibility of commercial bank credit. The majority of the demand for credit facilities in Africa is generated by the production sector, which includes the manufacturing, service, and agricultural sectors. The study also shows that, while the expansion of the agricultural, manufacturing, and service sectors' output has a direct and significant impact on the supply and demand of credit over the preceding period, commercial bank credit has a direct and minimal impact on sectoral output performance. The finding is in agreement with the theory.

Okafor (2013) conducted a critical analysis of the role that corruption and other pertinent factors played in the demise of two state-owned institutions (the steel and automobile industries), which could have aided the nation in developing into an industrial powerhouse in Africa and beyond. Finding corruption in Nigeria within the theoretical framework of neo-colonial political economy resulted in state wastefulness, nepotism, and ethnicity in the hiring and promotion of public officers and personnel to run those industries, as well as the unchecked accumulation of material wealth by the officers and personnel themselves at the expense of the public institutions. Any African country currently has no chance of becoming industrialized. The paper concludes that unless the government, other relevant stakeholders, and individuals work together to combat systemic corruption, Nigeria's hopes and dreams of industrial development will remain a mirage.

Dogogo (2014) investigated the benefits and drawbacks of Nigeria's industrial growth over the previous 70 years. In his research, he came to the conclusion that the fact that the industrial sector only makes up 4% of the country's GDP demonstrates the failure of the planning and implementation agencies of the presidency and that any policies that were adopted from other countries or suggested by development agencies should only be adopted after taking Nigeria's unique circumstances into account.

In a study that was released in 2014 (Ogar et al, 2014; Olutuase, 2013; Okoye et al, 2016) it looked at the impacts of commercial bank credit and its contributions to the manufacturing sector. Finding out how bank credit would affect an African nation's producing sector was the main goal of this study. The study illustrates how properly allocating bank credit to deserving clients or industries can boost the economy of an African nation. The goal of the study was to establish a link between interest rates and the efficiency of the sector and to ascertain whether business bank loans have an effect on the production industry. The relationship between the dependent variable and the independent variables was investigated using an ordinary least squares multiple regression model. The analysis's finding highlighted the significance of the connection between bank credit and credit

extended to the manufacturing sector. Nigeria will need to rely on goods and services produced within her borders to achieve her millennium goals, so it was suggested that the government work to ensure that there is enough credit available to the manufacturing sector in Nigeria with reasonable or affordable interest rates. It is claimed that both challenges and important lessons have been presented by Nigeria's industrial development.

According to the study, Nigeria's economic structure is typical of developing nations. In particular, over 85% of the government's revenue between 2011 and 2012 came from the oil and gas sector, which accounts for over 95% of export earnings. Despite the fact that the value of the sector's output made up only 4% of total value in 2011, the industrial sector accounted for 6% of economic activity.

Ibi, Joshua, Eja, and Olatunbosun (2015) used annual time series data spanning the years 1980 to 2012 to examine the relationship between Nigeria's capital market and the development of the industrial sector. The investigation's methodology combined descriptive and analytical techniques. The trend performances of the variables that were tracked throughout the study could be examined using descriptive methods. To estimate the pertinent relationships, the analytical methodology used contemporary econometric techniques like the unit root test, co-integration test, granger causality test, and error correction mechanism (ECM). The co-integration test's findings demonstrated that the variables had an equilibrium relationship over the long term. The results of the Granger causality test indicate that there is a unidirectional causality relationship that runs from the development of the industrial sector to transaction value, but a bidirectional relationship between industrial output and market capitalization and between industrial output and the quantity of deals. The short run dynamics results showed that the capital market has a positive and significant impact on industrial output in Nigeria through market capitalization and deal volume.

On the other hand, over the course of the evaluation period, the transaction's value has a significant and unfavorable impact on Nigeria's industrial output. The results also demonstrated that, while real gross domestic product and gross domestic investment have no significant or positive effects on industrial output in Nigeria, respectively, exchange rates do. The study made the recommendation that the government put suitable reform measures into place in order to ensure the effectiveness of the operations of the Nigerian stock market. Additionally, there is a need to lower the cost of capital raising for publicly traded companies because high fees and other bureaucratic delays may restrict the use of the capital market as a dependable source of raising money for investments.

To investigate the effects of industrialization in Nigeria, Isiksal & Chimezie (2016) looked at the connections between GDP, Nigerian agriculture (AR), industry (ID), and the services sector (SV). These three variables exhibit a significant long-term relationship, as shown by the Johansen co-integration testing technique. According to the findings, there is a strong positive correlation between GDP and industry, services, and agriculture. The results of the causality test show a two-way causal relationship between GDP, AR, ID, and SV. In order to give the industrial and service sectors the support they require, it is suggested that the agricultural sector must expand. It makes sense to assume that such a strategy will contribute to the growth and development of a developing nation. In his research from 2017, Tokunbo looked at how bank credit affected the manufacturing and agricultural outputs of the Nigerian economy. It covers a total of 31 years from 1984 to 2014. The study uses annual time series data spanning the years 1984 through 2014. The results of the analysis showed that factors such as interest rates, prime lending rates, money supply, exchange rates, and the fund for the agriculture credit guarantee scheme all have an impact on the production of manufactured goods and agricultural goods.

The study's data were compiled using information from the Central Bank of Nigeria's (CBN) Annual Report, the Nigeria Bureau of Statistics (NBS), and the CBN Statistical Bulletin. Vector autoregressive models were used to analyze the data that had been collected. The unit root test, co-integration test, vector error correction test, and causality test were all used to analyze the relationship between the dependent variables of agricultural and manufacturing output as a percentage of GDP. E-Views 8 was used to analyse the data, and the desired results were attained. On



Nigeria's manufacturing and agricultural sectors, bank credits were found to have a significant negative effect (Yahaya, 2003; Williams et al, 1914).

### Method

The study's data were compiled using secondary sources from the published Statistical Bulletin of the Central Bank of Nigeria (CBN), International Monetary Fund, and International Financial Statistics. The secondary sources were used in this study because it provides a basis for focused research efforts and also gives those efforts direction.

The data collected were tested for stationarity of the variables to avoid spurious regression results using the Augmented Dickey Fuller model. Thereafter, the Johansen Co-Integration Test was conducted to investigate if the relationship in the model exists in either the short run or in the long run. Then, the estimation of the model equation was measured in the short run. This is because, the Johansen Co-Integration Test confirms that the relationship in the model exists only in the short run. Finally, a Granger Causality test was conducted to check the direction of the causality between commercial bank credits and Industrial development.

The model specification in this study could be illustrated as follows.

The functional form of the model is described as follows:

$$IGDP: F (CBMF, CBMN, CBPS, INTR) \dots\dots\dots 3.1$$

The mathematical form of the model can be specified as:

$$IGDP = B_0 + B_1 CBFM + B_2 CBMN + B_3 CBPS + B_4 INTR \dots\dots\dots 3.2$$

The econometric form of the model can be specified as:

$$IGDP_t = B_0 + B_1 CBFM + B_2 CBMN + B_3 CBRC + U_t \dots\dots 3.3$$

Where:

IGDP: INDUSTRIAL GROSS DOMESTIC PRODUCT

CBMF: COMMERCIAL BANK CREDITS TO MANUFACTURING

CBMN: COMMERCIAL BANK CREDITS TO MINING AND QUARRYING

CBRC: COMMERCIAL BANK CREDITS TO REAL ESTATE AND CONSTRUCTION

U: WHITE NOISE ERROR TERM

t: time period

B<sub>0</sub> = constant or intercept term

B<sub>1</sub>, B<sub>2</sub>, B<sub>3</sub>, B<sub>4</sub>, are the partial slope coefficients or parameters.

The dependent variable is IGDP while the explanatory variables are CBFM, CBMN, CBRC.

### Results and Discussions

#### 3.1. ADF Unit Roots Test Result

H<sub>0</sub>: There is unit root. If the ADF test statistic exceeds the ADF critical value at a 5% level of significance in absolute terms, the decision rule is to reject H<sub>0</sub>. The outcomes of the ADF unit root tests are shown in the table below.

| Table 1 Result of the ADF unit root Tests |                  |                          |                               |                     |                      |
|---|------------------|--------------------------|-------------------------------|---------------------|----------------------|
| Variables                                 | ADF<br>Statistic | 5%<br>Critical<br>Values | Prob.<br>second<br>difference | At STATIONARY       |                      |
| LIGDP                                     | 5.547051         | 2.954842                 | 0.0000                        | At First Difference |                      |
| LCBMF                                     | 3.301967         | 2.963972                 | 0.0238                        | At                  | Second<br>Difference |
| LCBMN                                     | 3.907935         | 2.945842                 | 0.0048                        | At First Difference |                      |
| LCBRC                                     | 7.919935         | 2.948404                 | 0.0000                        | At                  | Second<br>Difference |

Source: Researcher's Computation Using E-views

Table 1 above shows the results of the ADF tests which revealed the following: None of the variables are stationary at levels LIGDP and LCBMF are stationary at first difference. At second difference, LCBMN and LCBRC, are stationary. This is because at second difference, it is observed that the ADF

statistic became greater than the 5% critical values in all the variables and the probability values were less than 0.05. Thus, all the variables were stationary at second difference.

### 3.2. Johansen Co-Integration Test

RULE OF THUMB: If the result of the Johansen co-integration test has a probability value that is less than 0.05, then there is a long run relationship existing in the model.

Ho: there is no long run relationship existing in the model.

Table 2 Johansen Co-integration Test

| Unrestricted Cointegration Rank Test (Trace) |            |           |                |         |
|--|------------|-----------|----------------|---------|
| Hypothesized                                 | Trace      |           | 0.05           |         |
| No. of CE(s)                                 | Eigenvalue | Statistic | Critical Value | Prob.** |
| None   | 0.385058   | 34.31759  | 47.85613       | 0.4845  |
| At most 1                                    | 0.261020   | 16.81339  | 29.79707       | 0.6538  |
| At most 2                                    | 0.096741   | 5.923977  | 15.49471       | 0.7045  |
| At most 3                                    | 0.060877   | 2.261130  | 3.841466       | 0.1327  |

Trace test indicates no cointegration at the 0.05 level  
 \* denotes rejection of the hypothesis at the 0.05 level  
 \*\*MacKinnon-Haug-Michelis (1999) p-values

The Johansen co-integration analysis's empirical findings were displayed in Table 2 above. The goal of the Johansen's test is to determine whether or not there is a long-term relationship within the series, starting with the null hypothesis that there is no co-integrating relationship. We check to see if at least one relation is co-integrating. We then test whether there are zero, one, or two co-integrating equations in the model since there are two variables in it. According to the co-integration analysis results in table 2 above, the significance level of the trace statistics in the two equations is less than 5%. This demonstrates that there is no co-integrating relationship between the variables used to model commercial bank credit and industrial development in Nigeria during the study's time frame. As a result, the model includes a short run relationship.

### 3.3. Presentation Of Ordinary Least Square (Ols) Regression Results

The Model:  $IGDP_t = B_0 + B_1 CBMF_t + B_2 CBMN_t + B_3 CBRC_t + B_4 INTR_t + U_t$

The regression result for the model is shown as follows.

Table 3 Regression Results

| DEPENDENT VARIABLE: LAGDP          |             |                        |           |                               |
|------------------------------------|-------------|------------------------|-----------|-------------------------------|
| VARIABLE                           | COEFFICIENT | STANDARD ERROR         | t-value   | PROBABILITY                   |
| CONSTANT                           | 9.053967    | 0.068699               | 131.7915  | 0.0000                        |
| CBMF                               | 0.002010    | 0.010395               | 0.193331  | 0.8478                        |
| CBMN                               | 0.120912    | 0.019376               | 6.240343  | 0.0000                        |
| CBRC                               | -0.075130   | 0.028505               | -2.635668 | 0.0126                        |
| R <sup>2</sup> = 0.919041          |             | F-Statistic = 128.6554 |           | Durbin-Watson stat = 0.813906 |
| ADJUSTED R <sup>2</sup> = 0.911898 |             | Probability = 0.000000 |           |                               |

Source: Researcher's Computation Using E-views

The equation of the model is presented as follows:

$$IGDP=9.054+0.002CBMF+0.1209CBMN-0.075CBRC$$

### 3.4. Granger Causality Test

This test will examine the relationship between industrial growth (LIGDP) and commercial banks' contributions to the manufacturing (LCBMF) and real estate and construction (LCBRC) sectors of the economy. Below is a presentation of the test's findings for Granger causality.

Table 4 Causality results

| Pairwise Granger Causality Tests    |     |             |        |
|-------------------------------------|-----|-------------|--------|
| Null Hypothesis:                    | Obs | F-Statistic | Prob.  |
| LCBMF does not Granger Cause LIGDP  | 36  | 2.51976     | 0.0968 |
| LIGDP does not Granger Cause LCBMF  |     | 1.61568     | 0.2150 |
| LCBMN does not Granger Cause LIGDP  | 36  | 3.36529     | 0.0476 |
| LIGDP does not Granger Cause LCBMN  |     | 2.01130     | 0.1509 |
| LICBRC does not Granger Cause LIGDP | 36  | 1.95470     | 0.1587 |
| LIGDP does not Granger Cause LICBRC |     | 1.60443     | 0.2172 |
| LCBMN does not Granger Cause LCBMF  | 36  | 2.67539     | 0.0848 |
| LCBMF does not Granger Cause LCBMN  |     | 0.61246     | 0.5484 |
| LICBRC does not Granger Cause LCBMF | 36  | 0.66513     | 0.5214 |
| LCBMF does not Granger Cause LICBRC |     | 0.93833     | 0.4021 |
| LICBRC does not Granger Cause LCBMN | 36  | 0.37824     | 0.6882 |
| LCBMN does not Granger Cause LICBRC |     | 2.79831     | 0.0763 |

Source: Researcher's Computation Using The E-Views 8

From the Granger causality test in table 4.4 above, it is evident that there is only one scenario where there is a granger causality. That exists in the case that the commercial banks contribution to the mining sector (LCBMN) slightly Granger causes the Industrial Growth (IGDP). In all the other cases there is no causal relationship between the commercial banks contribution to the real estate and construction sector (LCBRC), the manufacturing sector (LCBMF); and Industrial growth (IGDP). The results are the same in the reverse situations i.e. IGDP does not granger cause LCBRC and LCBMF.

### 3.5. Discussion of Findings

Here, the above results would be evaluated to verify if they conform to the principles of economic theory or a priori expectation. The model has a constant coefficient of 9.053967. This implies that when all the explanatory variables are held constant, Industrial growth (LIGDP) on the average increases by 9.053967 units.

Going by the results above, the coefficient of LCBMF is 0.002010 in the model. This positive relationship implies that as LCBMF increases, IGDP increases by 0.2%. Also as LCBMF decreases, IGDP decreases by 0.2%. This implies that if other variables are held constant, a unit increase in LCBMF will on the average lead to a 0.02% increase in industrial output. This conforms with the a priori expectation which suggests that an increase in Commercial Banks Contribution to the Manufacturing sector should lead to an increase in industrial growth and development (IGDP). However, the result of our analysis shows that this result is statistically not significant since LCBMF has probability that is greater than 0.05, i.e. 5%.

Going by the results above, the coefficient of LCBMN is 0.120912 in the model. This positive relationship implies that as LCBMN increases, IGDP increases by 12.09%. Also as LCBMN decreases, IGDP decreases by 12.09%. This implies that if other variables are held constant, a unit increase in LCBMN will on the average lead to a 12.09% increase in industrial output. This conforms with the a priori expectation which suggests that an increase in Commercial Banks Contribution to the Mining



sector should lead to an increase in industrial growth and development (IGDP). However, the result of our analysis shows that this result is statistically significant since LCBMF has probability that is less than 0.05, i.e. 5%.

Going by the results above, the coefficient of LCBRC is -0.075130 in the model. This negative relationship implies that as LCBPS increases, IGDP decreases by 7.5%. Also as LCBRC decreases, IGDP increases by 7.5%. This implies that if other variables are held constant, a unit increase in LCBRC will on the average lead to a 7.5% increase in industrial output. This conforms with the a priori expectation which suggests that an increase in Commercial Banks Contribution to the Real Estate and Construction should lead to an increase in industrial growth and development (IGDP). However, the result of our analysis shows that this result is statistically significant since LCBPS has probability that is less than 0.05, i.e. 5%.

The coefficient of determination ( $R^2$ ) measures the proportion of the variation in the dependent variable (LIGDP) that is explained by the explanatory variables, LCBMF, LCBMN, LCBRC. As a measure of goodness of fit, the  $R^2$  of this study is 0.919041, meaning that the explanatory variables explain about 92% of the total variations in dependent variable (LIGDP). The  $R^2$  value also show that the model is a good fit.

The results of the co-integration in the table 4.2 above indicated that the trace statistics is less than 5% level of significance in the two equations. This shows that there is no co-integrating relationship among the variables used to model commercial banks credit and industrial development in Nigeria for the period of the study. Therefore, there is a short run relationship in the model.

From the Granger causality test, there is only one scenario where there is a granger causality. That exists in the case that the commercial banks contribution to the mining sector (LCBMN) slightly Granger causes the Industrial Growth (IGDP). In all the other cases there is no causal relationship between the commercial banks contribution to the real estate and construction sector (LCBRC), the manufacturing sector (LCBMF); and Industrial growth (IGDP). The results are the same in the reverse situations i.e. IGDP does not granger cause LCBRC and LCBMF.

## Conclusions

Determine the degree to which commercial banks' lending to important sectors has an impact on Nigeria's industrial development is the main goal of this work. According to the analysis' findings, which are shown above and discussed further, the study comes to the conclusion that commercial bank credit has a positive and significant impact on industrial development.

The findings of this research led to the following policy recommendations. Although there is a significant positive relationship between commercial banks' credit and the manufacturing sector, the impact on industrial development is still minimal. Therefore, it is advised that the government should encourage commercial banks to offer low-interest loans to the manufacturing sector. This will accelerate industrial development, which in turn will accelerate economic development.

The contribution of commercial banks to the mining industry and industrial development are positively and significantly related. The outcome, however, comes as a bit of a shock, particularly in light of Nigeria's mining industry's recent, almost complete collapse, which was brought on by the country's discovery of crude oil. With this research, it is suggested that the government support those working in the mining industry by using the regulatory bodies to convince commercial banks to grant loans with low interest rates. The government should place more of an emphasis on advancing the mining industry with the money it receives from the oil industry.

The study's findings showed a link between industrial development and the amount of credit given to the real estate and construction industries that is unfavourable. This may be due to subparly managed construction projects receiving credit from the sector, which resulted in subparly managed loans that are bad and non-performing. This may be a result of the subpar management and control found in the majority of newly formed construction firms. Therefore, it is advised that commercial banks implement strict credit control procedures whenever they extend loans to real estate and

construction firms. This is done to make sure the construction company's suggested use of the credit facilities is followed.

To promote industrial development, the government should direct revenue from the oil industry to important industrial sectors.

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