Bank lending to industrial sector and economic development of Nigeria

Kelechukwu Stanley Oghbonna a, Hart Chigozie Anaemena b, Pius Akwam Okechukwu c and Ekene Kingsley Ibenyenwa d

aNnamdi Azikiwe University, Awka, Nigeria.
bFirst Bank PLC, Nigeria.
cUBA PLC, Nigeria.
dEvent Beverages Ltd, Nnewi, Nigeria.
Corresponding Email: kelechukwugothona@gmail.com

A B S T R A C T

This study examined bank credit to the different segments of the industrial sector in the economic development of Nigeria. The specific objectives are to examine the impact of bank credit on agriculture, mining, quarrying, and government on economic development (HDI) in Nigeria. The study was anchored on the pecking order theory and Central Bank of Nigeria (CBN) statistical bulletin and World Bank Data Atlas report of various years from the data source which were subjected to the Auto Regressive Distributed Lag (ARDL) technique to test the interaction between independent variables and the dependent components in human development index at 5% level of significance. The findings revealed a short and long-run relationship. However, the individual short-run impact showed bank lending to the agriculture and government segment of the industrial sector showed a negative insignificant relationship with HDI. While bank credit to the manufacturing segment of the industrial sector significantly impacted HDI, bank credit to the mining and quarrying segment of the industrial sector showed an insignificant impact on HDI. Conclusively, bank lending to the different segments of the industrial sector has a short and long-run relationship but could not exact the necessary significant impact on the economic development of Nigeria. Hence, the study recommends single-digit interest rates on loans and advances (credit) to segments of the industrial sector in agriculture, manufacturing, mining, quarrying, and government as applicable to developed economies of the world.

ARTICLE INFO

Keywords: Bank Lending, Manufacturing, Industrial sector, and Economic Development

1. INTRODUCTION

The Nigerian economy is a highly volatile economy with varying economic structures like the mixed-income economy that is majorly middle-income and emerging market economy whose manufacturing, service, financial, communication, technology, and entertainment sectors have the potential to compete in the global market. Competing in the global economy requires prompt and efficient funding which can be granted on a short, medium, or long-term basis by commercial banks to their customers. In other words, banks grant loans and advances to individuals, business organizations as well as governments to enable them to embark on investment and development activities as a means of aiding their growth in particular or contributing toward the economic development of a country in general which enhances global competitiveness. Credit facilities have proven to facilitate developed economies of the world and the inherent possible roles in developing African economies cannot be overemphasized to instigate the desired economic development and direction. However, there has been a lot of debate on the role of intermediation of banks in the economic development of a country, and there seem to be varying degrees of roles played by banks to help in boosting economic development. The production sector is key for every economy and more recently, it is the agenda of every administration since the Goodluck Jonathan administration. The 2023 elective manifestations of all intended economic policies are geared toward improving and enhancing the capitalization distribution of funds by the financial institutions towards improving the production sector in Nigeria.

The differences in the impact of bank lending, however, depend on key economic factors of the economy at different intervals. For instance, Mamman and Hashim (2014) stated that the poor performance of the banking sector has been attributed to numerous problems that faced the sector like inadequate capital, high non-performing assets, insecurities, and inflationary pressures that have led to frequent distress in the banking sector and collapse of banking credits (investments) (Sanust, 2012). Most importantly is the importation nature of the Nigerian business environment which has prompted most credit facilities to be diverted to importation activities as against growing industrial activities whose potential can improve the development indices of Nigeria. However, the banking sector has not fully fulfilled its potential and contributed significantly to the growth and development of the Nigerian economy as expected. Okereke (2003) asserts that lending activities of banks are the granting of credit (monetary resources) to the needy economic unit with the hope that repayment will be made at a specific or determined future date. These activities have been existing since 1894 when the then British Bank of West Africa (BBWA) now First Bank of Nigeria plc was established to boost general trading activities of British agencies before the evolution of other banks to date. The lending activities of banks have however
changed over time due to the regulatory changes that occur after every change in government administration and compliance with global requirements like the Structural Adjustment Programme of 1986 and technological enhancement of the 21st century.

Economic development is programs, policies, or activities that seek to improve the economic well-being and quality of life of a community. The terminology can be viewed differently however, for this study, the human development index (HDI) will form the yardstick for development in this study. The human development index measure and ranks countries’ levels of social and economic development. This study deviates a bit from finance-growth nexus to finance-development nexus basically to identify the overall impact of lending on development within Nigeria.

This study is premised on the total credit/lending facilities to the different sectors of the Nigerian economy and how they have improved economic development which differs from previous studies that aggregate bank lending and economic growth proxied by gross domestic growth (Mamman & Hashim, 2014), bank lending, economic growth on manufacturing output (Obamuyi, Edun & Kayode, 2012), bank lending rate, money supply, interest rate and economic growth (Akinwale, 2018), bank lending to small and medium scale enterprises and economic growth (Ikpob, Nnabu & Obaji, 2017) and more recently Oyebowola (2019) looked at sectoral lending on economic growth. Hence, this study aims at determining the impact of bank lending to different sectors on the economic development of Nigeria.

2. LITERATURE REVIEW

The Nigerian economy is highly volatile, as policy introduction exerts immediate impact which reflects on economic output and development. The abundance of mineral resources, the manufacturing sector, the communication sector, and the bubbling entertainment industry has not culminated in achieving the potential inherent in the Nigerian economy. The growing unavailability of credit to finance business ideas with collateral has frustrated the evolution of businesses which has affected economic development in every way. The lending activities of commercial banks in Nigeria have however spread across rural and urban areas via different key sectors within the Nigerian economy. The different sectors of credit facilities of banks are broken into credit to the private sector and the public sector (government).

The credit to the private sector is further decomposed into the agriculture sector, manufacturing sector, and solid minerals sector. Agriculture: The agricultural sector is important in the Nigerian economy. It was the key to the Nigerian economy until the oil boom and presently it is a major sector in the face of falling oil revenue in Nigeria. This sector provides employment opportunities for the teeming population by eradicating poverty and contributes to the overall development of the economy. In essence, the agricultural revolution is an important precondition for economic growth (Cervantes-Godoy & Dewbre, 2010). Ukeji (2003) revealed that agriculture contributed 64% of the total GDP in the 1960s but it declined to 48% in the 1970s. Due to the oil glut in the 1980s, its contribution to GDP further declined to 20% and then 19% in 1985. Presently, the agricultural sector contributed 23.7% of the total nominal GDP of Nigeria in 2021. The gross value of agricultural sector contribution was #4.1 trillion to the country’s gross domestic product (GDP).

Manufacturing: The manufacturing sector produces a range of goods that includes milled grain, vegetable oil, meat products, dairy products, refined sugar, soft drinks, beer, cigarettes, textiles, footwear, wood paper products, soap, paint, pharmaceutical goods, Ceramics, bricks, tiles, metal goods, agricultural machinery, household electrical appliances, radios, motor vehicle, and jewelry. The sector’s contribution to GDP was 9.4% in 1970, during the oil boom; it declined to 7% in 1973, later increasing to 1.4% in 1981 it declined to 2.2% in 2010. However, more recently the real contribution of the manufacturing sector to GDP in 2019 was #6.47 trillion; #6.29 trillion in 2020; and #6.50 trillion in 2021, representing 9.06 percent; 8.99 percent, and 8.98 percent, respectively.

This trend showed what the manufacturing sector received as bank credit in Nigeria between 1981 to 2021. The highest of its credit receipt was in 2021 when it received over #1.457.82 Billion.

This trend showed that agriculture received low bank credit facilities in the industrial sector of Nigeria between 1981 to 2010 before it starts surging upward from 2011 till the last year of the study period in 2021. The highest of its credit receipt was in 2021 when it received over #1.457.82 Billion.
oil-price recovery. The world's sixth largest oil exporter and the leader in oil exports in sub-Saharan Africa, Nigeria nonetheless experienced an external trade surplus only from 1973 to 1975 and 1979 to 1980, during two oil price peaks, and in the late 1980s, when debt servicing burdens forced import reductions, especially in services. This sector has contributed enormously to GDP: it was ₦465 million in 1970, ₦66,884 billion in 1984, and ₦115,040 billion in 2009. Also, this sector received 15.3% of the total credit from Deposit Money Banks to the core private sector in 2010. About 0.42% of Nigeria’s GDP in 2020 is generated by the mining and quarrying sector. The largest contribution was given by crude oil and natural gas, which generated 6.7 percent of the country’s GDP in 2020.

**Fig 3. Credit to the Mining and Quarrying segment of the Industrial Sector**

This trend showed what mining and quarrying received as bank credit in the industrial sector of Nigeria between 1981 to 2021. The highest of its credit receipt was in 2013 when it received over #2,155.86 Billion. However, the credit facilities nosedived in 2014 and 2015 till 2021. Government: The public sector (government) gets credit facilities that aid the achievement of both short and long-term objectives. Banks provide the government with funds as advances and as loans; depending on the time specification of their demands. Bencivenga and Smith (1991) show that without banks, households are forced to hold unproductive liquid assets to protect against unpredictable future liquidity needs (self-insurance) which will eventually affect government objectives. The quantity of investments then is lower and the number of liquidated investments is higher (since households need self-finance to a larger extent). The government’s direct borrowing from commercial banks can also be instrumental for funds control but other better means exist in interest rate control of lending, recapitalization of banks, and so on.

**Fig 4. Credit to Government**

This trend showed what the government received as bank credit in Nigeria between 1981 to 2021. The highest of its credit receipt was in 2021 when it received over #2,348.89 Billion. However, total credit to the government between 1981 to 2007 was insignificantly low and the surge commenced in 2008 with a sharp fall in 2009 before picking up in 2010 and continued till the end of the study period in 2021.

### 2.1 Theoretical framework and Empirical Review

Credit facilities of banks play a crucial role in enhancing the economic development of any nation provided there is the availability of bank lending. Different theories exist on factors that determine bank lending to the different sectors of the economy. However, this study will be anchored on pecking order theory, which holds that considering information asymmetry, firms fund themselves from retained earnings first before procuring loans rather than raising funds through equity. This theory assumes firms prefer debt to equity holdings. The theory is supported by Hanger (2005), who holds that a firm faced with an increasing cost of borrowing will source alternatives for funding. Ibenyenwa, Nwakoby, Okaro, and Ogbonna (2020) examined the relationship between interest rate components and DMBs’ credit to the domestic economy in Nigeria and South Africa. Their Nigerian result indicated that interest rate components showed the absence of a significant long-run and short-run relationship with the credit ratio of DMBs to the domestic economy while the South African interest rates components showed a significant presence of long-run and Short run relationship with domestic credit provided by the DMBs. Another confirmatory study was shown by Araoje, Aruwaji, and Obafemi (2020) who investigated the effect of bank lending management on economic growth in Nigeria and sourcing data from the Central Bank of Nigeria statistical Bulletin, World Development Indicator, and National Bureau of Statistics. The regression analysis result revealed short and long-run negative impacts of bank lending management on economic growth. The F-statistic (6.67) with a p-value of 0.0007 tests the explanatory power of the model which is statistically significant at 5%, suggesting that the explanatory variables have a joint and significant effect on the economic growth of Nigeria. While Akinwale (2018) evaluated the relationship between bank lending and economic growth in Nigeria. Using data sourced from the Central Bank of Nigeria Statistical Bulletin, the result proved that a unit percent decrease in bank lending rate will bring about a 118% increase in economic growth. Furthermore, the findings of Greenwood and Jovanovic’s Hypothesis established that as the bank lending rate decreases, economic growth tends to increase, and it is statistically significant at a 1% level. Ikpor, Nnabu, and Obaji (2017) studied the effect of small and medium-scale enterprises lending on economic growth in Nigeria. The study using the Johansen cointegration test and vector error correction model techniques showed evidence of a long-run relationship between small and medium-scale enterprises’ lending and economic growth, while the vector error correction model results revealed that lending to small and medium-scale enterprises leads to economic growth in Nigeria. Also, the study found that the bank lending rate does not impact SME lending in Nigeria. These results imply that lending to small and medium-scale enterprises is crucial to the growth of the Nigerian economy.

The study of Akujuobi and Nwezeakatu (2015) examined the effect of bank lending activities on economic development in Nigeria. They proxy economic development with the human development index and the industrial gross domestic product. Their results revealed a significant relationship between bank lending activities and economic development in Nigeria. However, looking at the impact of interest rate reform on agricultural finance and growth in Nigeria, Onyishi and Ifiorah (2015) found that interest rate has a significant effect on the agricultural sector and economic growth. Another study by Ajibola (2015) looked at the effects of commercial bank lending on economic growth in Nigeria. The linear regression model revealed a positive correlation between economic growth and commercial bank loans for a one-year lagged
period showing some slowness in the transmission mechanism between the financial and the real sectors of the economy. Obamuyi, Edun, and Kayode (2012) investigated the effect of bank lending and economic growth on the manufacturing output in Nigeria. Using the cointegration and vector error correction model (VECM) techniques, the study shows that manufacturing capacity utilization and bank lending rates significantly affect manufacturing output in Nigeria. However, the relationship between manufacturing output and economic growth could not be established in the country. Looking at all these empirical studies, the researcher observed that limited empirical research has been carried out on bank lending to the segments of the production sector and its possible impact on economic development in Nigeria. An almost similar study is the empirical study of Akujobi and Nwezeaku (2015) who however view bank lending to general commerce, production, services, and other sectors. Thus, this study is a narrower study of bank lending to the production sector looking at key segments like credits to agriculture, Manufacturing, solid minerals, and government on economic development in Nigeria.

3. METHODOLOGY
The study employed an ex-post facto research design from the World Bank Database and CBN statistical Bulletin. The study covers the period of 35 years from 1986 to 2020 for Nigeria. The study adopted and modified the study of Akujobi and Nwezeaku (2015) on bank lending and the economic development of Nigeria. Their equation is stated thus:

\[ \text{HDI}_t = \beta_0 + \beta_1 \text{GECOMCR}_t + \beta_2 \text{OTHCR}_t + \beta_3 \text{PDNCR}_t + \beta_4 \text{SERCR}_t + \mu \] ………… 1

Rearranging equation 1, we have:

\[ \text{Ut} = \text{HDI}_t - (\beta_0 + \beta_1 \text{GECOMCR}_t + \beta_2 \text{OTHCR}_t + \beta_3 \text{PDNCR}_t + \beta_4 \text{SERCR}_t) \] ………… 2

Where
GECOMCR = bank credit to the General commerce sector
PDNCR = bank credit to the Production sector
SERCR = bank credit to the Services sector
OTHCR = bank credit to Other sectors.

HDI = Human Development Index

However, our study is modified as follows:

\[ \text{HDI} = F (\text{BLA, BLM, BLSM, GOV}) \] ………… 1

The mathematical form is stated thus:

\[ \text{HDI} = a_0 + a_1 \text{BLA} + a_2 \text{BLM} + a_3 \text{BLSM} + a_4 \text{GOV} + \mu \] ………… 3

\[ \log(\text{HDI}) = a_0 + a_1 \log(\text{BLA}) + a_2 \log(\text{BLM}) + a_3 \log(\text{BLSM}) + a_4 \log(\text{GOV}) + \mu \] ………… 4

A’ Priori Economic Expectation: \( a_1 - 4 > 0 \)

Where:
HDI = Human Development Index
GOV = Bank Lending to Government (Public Sector)
BLA = Bank Lending to Agriculture
BLM = Bank Lending to Manufacturing
BLSM = Bank Lending to Solid Minerals
\( \mu \) = Stochastic error term
\( a_0 \) = Constants that are estimated which are not explained by the independent variable.
\( a_1 - 4 \) is the estimate of the regression coefficients.

4. PRESENTATION AND ANALYSIS OF RESULTS
This study is analyzed by looking at the stationarity position of the study of the bank lending to the different sectors and economic development indices before testing for the long-run cointegration tests and conducting the ARDL regression model for the study.

4.1 Unit Root Test
Decision: If T-ADF is more than critical, we reject the null hypothesis

The summary of unit root test results using Augmented Dickey-Fuller (ADF) is shown in Table 1.

Table 1. Summary of Unit Root Test Results using Augmented Dickey-Fuller (ADF) Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>ADF Test</th>
<th>5% Level</th>
<th>F-Values</th>
<th>Order</th>
<th>Remark</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAGRIC</td>
<td>-9.087078</td>
<td>-2.941145</td>
<td>0.0000</td>
<td>1(2)</td>
<td>Stationary</td>
<td>Reject H0</td>
</tr>
<tr>
<td>CMAN</td>
<td>-3.315757</td>
<td>-2.941145</td>
<td>0.0000</td>
<td>1(2)</td>
<td>Stationary</td>
<td>Reject H0</td>
</tr>
<tr>
<td>CMQ</td>
<td>-2.012037</td>
<td>-1.949856</td>
<td>0.0436</td>
<td>1(0)</td>
<td>Stationary</td>
<td>Reject H0</td>
</tr>
<tr>
<td>CGOV</td>
<td>-3.810380</td>
<td>-3.622033</td>
<td>0.0346</td>
<td>1(2)</td>
<td>Stationary</td>
<td>Reject H0</td>
</tr>
<tr>
<td>HDI</td>
<td>-5.653644</td>
<td>-5.526069</td>
<td>0.0002</td>
<td>1(0)</td>
<td>Stationary</td>
<td>Reject H0</td>
</tr>
</tbody>
</table>

Source: Author’s Computations using E-views, 10

Table 1 showed the unit root test result and it revealed that two of the variables (CAGRC, CMAN) were stationary at order 2, while CMQ and HDI were stationary at level with only CGOV stationary at order one (1). All this showing mixed order of stationarity. FCRI, FDI, FEX, GDP, GNS, and MCA are stationary justifying the uniformity of the data. Hence, the data is free from any stationarity defect that most time series data possess.

4.2 Test of Hypotheses
The test of the hypothesis was conducted using Auto Regressive Distributed Lag Model Analysis at a 5% level of significance. In the regression analysis, the effects of bank lending on economic development in Nigeria.

4.3 Long-Run Relationship
However, the ARDL long-run relationship is detailed in Table 2. From the ARDL result, it was observed that a long-run relationship exists between bank lending to the industrial sector and economic development proxy by HDI. This is hinged on the values of the F-statistic of 4.823279 (Table 2), which is higher than the upper and lower bound test of 4.6 and 4.6 respectively.

Table 2. ARDL Bound Test for HDI → CAGRIC, CMAN, CMQ and CGOV

<table>
<thead>
<tr>
<th>Test Statistic</th>
<th>Value</th>
<th>Signif.</th>
<th>I(0)</th>
<th>I(1)</th>
<th>Asymptotic:</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-statistic</td>
<td>4.823279</td>
<td>10%</td>
<td>3.8</td>
<td>3.8</td>
<td></td>
</tr>
<tr>
<td>K</td>
<td>0</td>
<td>5%</td>
<td>4.6</td>
<td>4.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.5%</td>
<td>5.39</td>
<td>5.39</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1%</td>
<td>6.44</td>
<td>6.44</td>
<td></td>
</tr>
</tbody>
</table>

Actual Sample Size: 27

Source: Author’s Computations using E-views, 10

4.4 ARDL Short Run Relationship
4.4.1 Bank lending to the industrial sector and Economic Development

The result in Table 3 shows the adjusted R-square value to be 0.896529, an insinuation that 89.652% of changes in HDI of Nigerian economic development were due to joint variation in credits to the different segments of the industrial sector. The F-statistic which determines if the changes in the dependent variable are significant or not shows that the aforementioned magnitude of changes in HDI was significantly (less than 0.05) explained by credit to the industrial sector: Agriculture, Manufacturing, Mining and Quarrying, and government. The Durbin Watson is 2.20, which
is approximately 2.0. This show the absence of the presence of auto-correlation in the study. The result further revealed that credit to the agriculture (CAGRIC) segment of the industrial sector showed a negatively insignificant relationship with HDI, while credit to the manufacturing segment of the industrial sector showed a positive significant impact on the economic development of Nigeria. Credit to mining and quarrying also hold the same position of impact as manufacturing however, the impact is insignificant at a 0.05 significance level with a 0.1532 probability value. The credit to the government like agriculture showed a negatively insignificant impact on economic development in Nigeria. The coefficient also showed that a 1% increase in credit to agriculture and government will lead to a 0.000169 and 5.3405 percent fall in economic development in Nigeria. While a percentage increase in credit to manufacturing and mining and quarrying will lead to a 0.000121 and 1.4405 percentage increase in the economic development of Nigeria.

Table 3. ARDL Regression for HDI → CAGRIC, CMAN, CMQ and CGOV

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI(-1)</td>
<td>0.349006</td>
<td>0.216357</td>
<td>1.617700</td>
<td>0.1309</td>
</tr>
<tr>
<td>CAGRIC</td>
<td>-0.000169</td>
<td>8.37E-05</td>
<td>-2.021451</td>
<td>0.0562</td>
</tr>
<tr>
<td>CMAN</td>
<td>0.000121</td>
<td>5.05E-05</td>
<td>2.402399</td>
<td>0.0256</td>
</tr>
<tr>
<td>CMQ</td>
<td>1.44E-05</td>
<td>9.73E-06</td>
<td>1.481854</td>
<td>0.1532</td>
</tr>
<tr>
<td>CGOV</td>
<td>-5.34E-05</td>
<td>5.47E-05</td>
<td>-0.977710</td>
<td>0.3393</td>
</tr>
<tr>
<td>C</td>
<td>0.246318</td>
<td>0.082551</td>
<td>2.983821</td>
<td>0.0071</td>
</tr>
</tbody>
</table>

R-squared: 0.896529 Mean dependent var: 0.447915
Adjusted R-squared: 0.871894 S.D. dependent var: 0.074329
S.E. of regression: 0.026604 Akaike info criterion: -4.222401
Sum squared resid: 0.014863 Schwarz criterion: -3.934438
Log likelihood: 63.00242 Hannan-Quinn criterion: -4.136775
F-statistic: 3.934438 Durbin-Watson stat: 2.202987
Prob(F-statistic): 0.000000

Source: Author’s Computations using E-views, 10

5. FINDINGS

Commercial banks (bank lending) are a dominant factor in economic development. Hence, their total loans and advances are the major component of total credits to both the private sectors in Agriculture, Manufacturing, Mining sectors, and Government (Public sector). The potential for economical enhancement in Nigeria is huge due to the highly under-utilized huge human, material, and natural resources. Thus, enabling facilities should be the engine to drive economic maximization in Nigeria. Bank lending to the different segments of the industrial sector proved to have a positive impact on the human development index of Nigeria. The implication of the findings is that policy makers should ensure facilities are utilized to drive economic development in Nigeria. The result of the study is contradicted by the findings of Ibenyenwa, Nwakoby, Okaro, and Ogbonna (2020) which showed the absence of a significant long-run and short-run relationship with the credit ratio of DMBs to the domestic economy. While the result is supported by the findings of Ogbonna, Dimgha, Egininwin and Atsanan (2017) and Araoye, Aruwaji, and Obafemi

Table 4. Granger Causality Result

<table>
<thead>
<tr>
<th>Pairwise Granger Causality Tests</th>
<th>Lags: 2</th>
<th>Obs</th>
<th>F-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Null Hypothesis:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAGRIC does not Granger Cause HDI</td>
<td>39</td>
<td>0.50064</td>
<td>0.6105</td>
<td></td>
</tr>
<tr>
<td>HDI does not Granger Cause CAGRIC</td>
<td></td>
<td>0.83953</td>
<td>0.4407</td>
<td></td>
</tr>
<tr>
<td>CGOV does not Granger Cause HDI</td>
<td>23</td>
<td>0.62264</td>
<td>0.5477</td>
<td></td>
</tr>
<tr>
<td>HDI does not Granger Cause CGOV</td>
<td></td>
<td>0.09947</td>
<td>0.9058</td>
<td></td>
</tr>
<tr>
<td>CMAN does not Granger Cause HDI</td>
<td>39</td>
<td>0.66407</td>
<td>0.5213</td>
<td></td>
</tr>
<tr>
<td>HDI does not Granger Cause CMAN</td>
<td></td>
<td>0.06048</td>
<td>0.9414</td>
<td></td>
</tr>
<tr>
<td>CMQ does not Granger Cause HDI</td>
<td>36</td>
<td>0.39440</td>
<td>0.6774</td>
<td></td>
</tr>
<tr>
<td>HDI does not Granger Cause CMQ</td>
<td></td>
<td>0.11504</td>
<td>0.8917</td>
<td></td>
</tr>
</tbody>
</table>

Source: Author’s Computations using E-views, 10

4.4.2 Granger Causality Test

To determine bank lending to the industrial sector’s effect on the economic development of Nigeria, the granger causality analysis was performed. The regression output in table 4 reveals the value of automated clearing significantly effect of (bank lending) credit to agriculture, mining and quarrying, manufacturing, and government segments of the industrial sector on economic development proxy by HDI at a significant level of 5%. The result showed an absence of significant effect of credit to the industrial sector on economic development, as indicated in insignificant granger causality from credit to Agriculture, Manufacturing, Mining and Quarrying and Government on Human Development Index and without any form of effect from HDI to the credit to the different segments of the industrial sector.
(2020) which revealed short and long-run negative impacts of bank lending management on economic growth. Furthermore, the position of the study is corroborated by the position of Obamuyi, Edun, and Kayode (2012). Hence, the study recommends strict single-digit interest rates on loans and advances (credit) to key segments of the industrial sector in agriculture, manufacturing, mining, and quarrying, and government as applicable to developed economies of the world. There should overall elimination of leakages of credit facilities to the industrial sector which is mostly diverted to importation activities. Bank lending to both private and public sectors will be a mirage if the investment environment that encourages capital funds plus borrowing is not friendly. Finally, efficient government policy and institutional framework to facilitate the thriving of the sector should be enshrined in the economy.

6. REFERENCES


