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COMMERCIAL BANKS' CREDIT AND MANUFACTURING SECTOR PERFORMANCE IN NIGERIA

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ABSTRACT

This research investigates the impact of loans provided by banks on the industrial sector in Nigeria throughout the time frame of 1993 to 2023. The paper used an ex post facto research design. The dependent variable utilised to assess the viability of the manufacturing sector was the output of the industry. The explanatory factors included total capital formation, interest rate, and bank credit specifically allocated to the manufacturing industry. Data was gathered from the Central Bank of Nigeria 2022 bulletin. Hypotheses are created and assessed utilising the Ordinary Least Squares. The results indicate that overall capital investment has a substantial outcome on Nigeria's manufacturing sector production. The interest rate has a substantial implication on Nigeria's industrial production. Bank lending to the industrial sector in Nigeria has a substantial outcome on the production of the industrial sector. The r^2 suggests that around 66% of the fluctuations in the output of the manufacturing industry in Nigeria may be accounted for by alterations in the credit variables of banks. The study's findings indicate that bank lending has an important and beneficial implication on the viability of Nigeria's industrial sector. According to the paper, monetary authorities need to establish a strong supervisory framework that values caution and conforms to industry best practices, as well as adopt an active measure to bank supervision. Monetary and fiscal policy should be effectively coordinated to promote and strengthen the economy. Banks must prioritise risk management and maintain sound corporate governance to effectively and efficiently manage their resources. Banks should also prioritise the training and retraining of their personnel to ensure they possess the necessary skills and expertise to provide efficient and high-quality service to investors.

Keywords: Commercial, Banks' Credit, Manufacturing Sector, Performance, Nigeria

INTRODUCTION

In a study conducted by Akpanike and Olabisi (2020), it was found that the industrial sector in Nigeria has not met the anticipated level of contribution to the Gross Domestic Product. This is due to the sector's inability to fulfil the economy's necessary requirements. Therefore, Nigeria, similar to several other emerging nations, does not possess a robust manufacturing sector. Initially, the manufacturing sector focused on implementing an import substitution strategy, wherein formal trading businesses engaged in the establishment of the baby industry and assembly-related manufacturing operations. This approach persisted until about 1970 (Andrew & Goodnews, 2022). According to Chimma and Udoji (2021), the private sector had a significant role in driving industrial operations. They established a range of light industrial facilities in the agricultural sector, such as plants for extracting vegetable oil, woodturning workshops, tobacco processing facilities, textile factories, beverage production facilities, and petroleum product manufacturing plants.

Therefore, industrialisation serves as an effective means of achieving the noble and desirable idea and objectives of enhancing the standard of living for the population. According to Odogu and Dike (2021), in every economy, there are some sectors that play a vital role in driving the progress of the whole economy. The manufacturing sector has traditionally served as the engine of development or leading sector throughout the process of industrialisation. Industrialisation refers to the significant technological advancement and growth of the manufacturing system within an economy. A more automated and effective method for producing in large quantities goods and services is what the industrial sector is all about. It is the deliberate and continuous utilisation and integration of appropriate technology, management strategies, and other resources to move the economy away from a conventional low level of production.

Statement of the Problem

Adebisi and Olawale (2021), Asufu (2020), and Odogu and Effiong (2020) have undertaken many studies in Nigeria to examine the influence of loans provided by deposit banks on the viability of the industrial sector. These studies demonstrate a substantial and beneficial influence on the viability of the manufacturing sector. A study conducted by Achigbu and Otujo (2021) in Ghana found that the industrial sector was negatively affected. The data utilised in the research had comparable time series characteristics. Therefore, the empirical research conducted by Akubezi and Jossey in 2019 demonstrated that the financial system in Nigeria has not been successful in facilitating effective and efficient intermediation, particularly in terms of credit allocation and the amount of monetisation. There is a rising worry about the decrease in manufacturing output in Nigeria, despite the government implementing several plans to enhance industrial production and capacity utilisation in the sector (Andrew & Goodnews, 2022). Regrettably, the private sector in Nigeria continues to face significant challenges in terms of underdevelopment, especially when compared to other African countries that Nigeria used to surpass in terms of growth potential in the private sector during the 1960s. Hence, the presence of inconsistent findings and issues in this research has led to a lack of understanding; therefore, the research sought to establish the actual influence of credit provided by commercial banks on the performance of the industrial sector in Nigeria from 1993 to 2023.

Research Hypotheses

The formulated hypotheses are as follows:

1. Total capital formation does not have any substantial effect on manufacturing sector's output.
2. There is no substantial effect of bank credit to the manufacturing sector on manufacturing sector output in Nigeria.
3. There is no substantial effect of interest rate on manufacturing sector output in Nigeria

Literature Review

Bank Credit

Bank credit refers to the ability of individuals, governments, firms, or organisations to borrow money from the banking system in the form of loans. Credit refers to the sum of money that is provided to someone with the expectation that it will be repaid at a later period (Chidoka et al., 2019). The NDIC prudential rules of 1990 provide a more comprehensive definition of credit, including all loans, overdrafts, bills discounted among others (NDIC, 1990). Credit is the trust that a lender has in a borrower, which is demonstrated by extending a loan to debtors, often in the form of money, products, or securities (Ikeora, 2017). Credit may be described as a bilateral transaction where the creditor provides money, products, services, or securities to the borrower in exchange for the borrower's commitment to make future payments. Credit refers to the act of loaning money from a lender to a borrower.

Types of Bank Credit

Overdrafts: These are the most prevalent and simplest kind of credit facility. These loans are often given to cover the costs of day-to-day business operations, and the amount owed is anticipated to change over time based on the borrower's current working capital requirements. Overdrafts allow the borrower to access the necessary funds for daily expenses while avoiding excessive interest fees. As per standard banking procedures, overdrafts must be repaid immediately upon request and may be terminated by the bank without giving any previous warning to the borrower. The consumer is typically informed of the overdraft limit, which acts as the bank's benchmark for all withdrawals made by the account holder.

Advances: An advance is a temporary loan that is provided for a certain duration, often ranging from 30 to 180 days. Typically, they are provided for particular objectives such as paying off different debts, refinancing loans that are about to mature, providing temporary funding for projects, or

refinancing letters of credit for imported project equipment. The precise maturity date of an advance is often established from the beginning, allowing for a cheaper interest charge on the advance due to the decreased risk associated with money rate and credit risk.

Manufacturing Sector Output

In terms of how it contributes to the GDP, Nigeria's industrial sector has fallen short of the expectations of the public. This is because the industry is unable to fulfil the necessary requirements for the economy (Akpansung & Babalola, 2019). Nigeria, along with other emerging economies like India, Indonesia, South Africa, and Bangladesh, lacks strength in the field of manufacturing. The study contends that instead of being a prominent industry for economic growth and societal change in Nigeria, the sector has predominantly relied on imported resources and equipment, resulting in a significant drain on foreign currency reserves. Consequently, its contribution to foreign exchange earnings has been relatively insignificant.

Theoretical Review

This research is based on the financial mediation hypothesis proposed by Gurley and Shaw in 1967. The model elucidates the function of bank credit within an economy. The idea states that the purpose of financial intermediation in a contemporary economy is to facilitate the transfer of funds from surplus agents to those with a financial deficit. According to a literature analysis on credit evaluation theories, these theories are often categorised based on the nature of the relationship between the borrower and lender. These categories include portfolio theory, credit market theory, and information theory.

Empirical Review

Obamuyi et al. (2021) examined the interplay among between financing from banks and the success of Nigeria's industrial production over a 26-year period (1996-2019) using VECM. The parameters included in the study were manufacturing output, loan rate, inflation, GDP, and financial deepening rate. The study shows a substantial and favourable relationship between bank lending in Nigeria and industrial sector's output. The results shown above demonstrate how important the financial system is to the expansion and advancement of the manufacturing industry.

Ogar et al. (2015) investigated the correlation between loans provided by commercial banks and their implication on the expansion of the manufacturing industry over 21 years (1992-2019). The study was conducted using OLS. The production of the manufacturing industry and commercial bank loans have a significant positive association. Their research demonstrates the need for directing commercial bank lending towards consumers who are deemed creditworthy. Also, Amadi (2021) used time series econometrics methodologies to examine the correlation between private-sector lending and the development of the industrial sector in Nigeria from 1985 to 2011. The findings indicate a strong and meaningful correlation between lending from the private sector and the expansion of the industrial sector in Nigeria.

Nnanna et al. (2019) determine the influence of private-sector lending on the development of the sector in Nigeria from 1984 to 2018. The research used GDP, credit and lending rate as factors. The research demonstrates a substantial and beneficial influence of bank loans to the private venture on the development of the real sector in Nigeria.

Ogujobi and Chizoba (2016) examined the changing patterns of bank loans and the expansion of Nigeria's industrial sector over a 30-year period (1984-2013) using time series econometrics techniques. The three factors under investigation were credit to the private venture, the overall money supply, and the GDP. The findings demonstrate a strong and meaningful correlation between bank loans and the expansion of the industries in Nigeria. The research states that the industry continues to be a significant consumer of foreign money, relying heavily on foreign products and capital goods. As a result, it makes relatively little contribution to Nigeria's foreign exchange profits.

METHODOLOGY

Research design serves as a plan for gathering, measuring, and analysing data. Its purpose is to guarantee that the study effectively answers the research topic with clarity. The study used an ex-post-facto research approach, which utilises past data.

Model Specification

The null hypotheses that were put forth for the investigation are evaluated using a multivariate linear regression model: These hypotheses were the basis for the adaptation of this model from the work of (AChigbui, 2023).

The model is stated as: $GDP = f(TCF, BCMS, INT)$

Where: GDP = Gross Domestic Product

BCMS = Bank Credit to the Manufacturing Sector,

TCF = Total Capital Formation

INT=Interest Rate,

The modified functional model is stated as:

$$MFSO = f(TCF, BCMS, INT) \quad (1)$$

The econometric model becomes:

$$\ln MFSO = d_0 + d_1 \ln TCF + d_2 \ln BCMS + d_3 \ln INT + \mu \quad (2)$$

Where:

MFSO = Manufacturing Sector Output is proxy for GDP

BCMS = Bank Credit to Manufacturing Sector

GDP = $f(TCF, BCMS, INT)$

INT=Interest Rate

Data Presentation

The study is on the implication of banks' credit on manufacturing sector in Nigeria; for a period of 30 years, 1993-2023 as indicated on appendix 1.

Descriptive Statistics

Table 1: Descriptive statistics

According to table 1's descriptive data, the sector's mean output during the study period was 52424;

	MFSO	TCF	INT	BCMS
Mean	64435.88	45756.34	18.03546	34046.37
Median	32346.02	44.846.50	17.47380	23648.60
Maximum	53539.40	62435.45	36.33745	65123.53
Minimum	32647.23	34036.28	9.250000	39234.36
Std. Dev.	6.674802	14.86905	5.403850	9.617132
Skewness	7.684952	31.46739	1.067069	0.185586
Kurtosis	33859.32	14194.50	5.256220	2.604247
Jarque-Bera	0.3857.4	21.87151	12.83540	0.384959
Probability	0.8647895	0.000000	0.001612	0.826649
Sum	162.3475	3173.45	596.4000	1486.929
Sum Sq. Dev.	1158.846	685474.4	907.1700	2867.166
Observations	30	30	30	30

bank credit to the industry was 45375, with an interest rate of 18.03%; and total capital creation was 34076. The manufacturing sector's production and bank credit were the two variables that

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showed a normal distribution, according to the Jarque-Bera statistic; however, the interest rate and total capital creation were significantly skewed. Additionally, the total bank credit of 45373, which suggests that the manufacturing sector was highly high during the time under review, restricts the capacity of banks to provide credit and, therefore, raise the production of the manufacturing sector.

Unit Root Test

The study used the ADF Unit Root Test to define if the variables were stationary. Table 2's result demonstrates that every variable is combined at levels, namely 1(1) at the 1% or 5% level of significance.

Table 2: Unit Root Test Analysis

Variables	ADF test Statistics	Mackinnon (5%) critical value	No of the time difference	Remark
GDP	1.3546731	-3.4362763	1(I)	Stationary
TCF	-3.5364783	-1.6354726	1(I)	Stationary
BCMS	-4.6342710	-4.5364526	1(I)	Stationary
INT	5.8354611	4.8456322	1(I)	Stationary
[i				

Test for Co-Integration

Upon discovering that every variable is stationary at the initial difference, the next step involves executing the Johansen co-integration process to determine whether the GDP, pension portfolio, inflation rate, and interest rate are co-integrated respectively. Table 3 displays the test results.

Table 3: Multivariate Johansen's Co-Integration Test Result.

Null hypotheses	Alternative hypotheses	Eigen value	Likelihood ratio	Critical vales 5%	Critical value 1%	Hypothesized No. of CE(s)
r=0	r=1	0.6354722	56.23545	64.12	46.12	None **
rd<1	r=2	0.6233578	53.13241	52.03	36.23	At most 1
rd<2	r=3	0.4647214	48.87463	46.23	24.12	At most 2
rd<3	r=4	0.3254762	43.32461	43.12	20.13	At most 3

Data Analysis

Table 2: Ordinary Least Square (OLS) Estimation Results

Dependent Variable: MF50

Method: Least Squares, Time: 04:44

Sample: 1993-2023

Included observations: 30

Date:23/05/2024	Coefficient	Std. Error	t-Statistic	Prob.
C	3338.223	0.004325	12.52346	0.000011
Ln(TCF)	153.8946	0.003143	0.725362	0.000018
Ln(BCMS)	253.6986	0.047868	2.437002	0.000027
(INT)	153.7457	0.060083	1.763423	0.000034
R-squared	0.664356	Mean dependent var		764.9540
Adjusted R-squared	0.593542	S.D. dependent var		67.33896
Log likelihood	-10.52341	F-statistic		8.975873
Durbin-Watson stat	1.968753	Prob(F-statistic)		0.000000

Table 4's coefficient of determination (R² = 0.664356) shows that fluctuations in Nigeria's commercial bank credit variables (TCF, BCMS, and INT) can account for around 66% of the

variations in the output of the industrial sector. This suggests that factors related to bank loans account for a significant amount of the increase in the manufacturing sector. The significance of the F-Statistics of 8.975873, at 5%, attests to the influence of commercial bank credit on the expansion of Nigeria's industrial sector. The Prob (F-stat) = 0.000, further supports the statistical significance of the explanatory factors' effect on the dependent variable.

Test of Hypotheses

Ho₁: There is no substantial effect of total capital formation on manufacturing sector's output in Nigeria.

The data on table 4.2 reveal that total bank deposit has a t-stat. = 0.725362, p-value = 0.000018 < 0.05 alpha, which means there is a substantial impact of total capital formation on manufacturing sector's output in Nigeria

Ho₂: There is no substantial effect of bank credit to the manufacturing sector on manufacturing sector's output in Nigeria.

The results on table 4.2 show that bank credit to the sector has a t-stat. = 2.437002, p-value = 0.00027 < 0.05 alpha, which means, there is a substantial effect of bank credit to the industrial sector's output in Nigeria

Ho₃: There is no substantial effect of interest rate on manufacturing sector's output in Nigeria. The results on table 4.2 show that interest rate has a t-stat. = 1.763423, p-value = 0.00034 < 0.05 alpha, which means interest rate has a substantial implication on the industry's output in Nigeria.

CONCLUSION

The research comes to the conclusion that financing from commercial banks has greatly aided Nigeria's industrial sector's expansion and development. Since the manufacturing sector is unable to offer the necessities for the economy, it seems that it has fallen short of the prospects of Nigerian society with regard to its influences on GDP (Adanike & Josiah, 2021). Therefore, Nigeria's economy is weak in the manufacturing sector, similar to that of many other developing nations. As a result, the industry has not led Nigeria's socioeconomic development but has instead remained a significant consumer of foreign cash. Thus, the research comes to the conclusion that bank lending significantly and favourably influences the expansion of Nigeria's manufacturing sector.

RECOMMENDATIONS

The report makes the following recommendations for regulatory authorities: they should adopt a dynamic supervisory framework based on caution and best practices; they should also be more aggressive in their supervision of banks. It is important to correctly match fiscal and monetary policy with the goal of boosting and strengthening the economy. It is imperative that the CBN and policymakers prioritise effective and efficient resource management, with a particular emphasis on risk management and sound corporate governance.

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Appendix 1:
Commercial Banks' Credit and Manufacturing Sector in Nigeria (1993-2023)

Years	Manufacturing Sector Output (N' Billion)	Bank Credit to Manufacturing Sector (N' Billions)	Interest Rate (%)	Total Capital Formation (N' Billions)
1993	122.1	131.96	3.67	1,67.4
1994	245.5	158.17	4.12	2,23.5
1995	312.8	253.96	7.67	2,34.8
1996	353.8	352.17	8.12	2,76.0
1997	378.0	430.37	9.69	3,02.6
1998	382.6	481.96	8.67	4,14.4
1999	412.2	491.17	8.12	4,76.4
2000	426.2	530.37	7.69	7,02.1
2001	468.0	764.96	9.40	9,47.2
2002	535.6	930.49	8.21	1,157.1
2003	507.8	1,096.54	8.24	1,337.3
2004	465.5	1,421.66	8.21	1,661.5
2005	549.3	1,838.39	8.26	2,036.1
2006	508.4	2,290.62	7.99	3,245.2
2007	578.5	3,668.66	11.12	5,001.5
2008	590.9	6,920.50	17.67	7,960.1

2009	585.6	9,110.86	20.55	9,150.5
2010	612.3	10,157.02	18.60	9,784.6
2011	643.1	10,660.07	16.93	11,452.8
2012	694.8	14,649.28	20.43	13,132.1
2013	761.5	15,778.31	19.67	13,623.4
2014	823.9	17,128.98	19.24	17,158.2
2015	8,685.4	17,086.20	19.84	17,237.4
2016	8,942.8	16,117.20	20.77	17,424.81
2017	9,432.2	63,101.76	19.43	17,837.65
2018	9,6350.6	61,669.92	17.63	17,465.57
2019	9,7382.6	73,621.92	17.28	16,745.57
2020	10,745.98	74,876.98	17.95	17,635.94
2021	10,986.65	75,867.97	17.95	17,746.98
2022	12,933.63	83,745.23	17.95	18,346.21
2022	12,933.6 3	83,745.23	17.95	18,346.21

Source: Central Bank of Nigeria Statistical Bulletin, 2023.