Innovations

Financial development and manufacturing capacity utilization in Nigeria

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Abstract

This study examined the effect of credit to private sector on the variation in manufacturing capacity utilization in Nigeria. Data for the study were extracted from the Central Bank of Nigeria (CBN) annual reports and statistical bulletin of 2020. The data as published in the statistical bulletin are on annual basis except otherwise stated. Descriptive statistics and inferential statistics generated from E-Views 9.0 statistical software. Based on the empirical evidence on hypothesis, this study upholds that credit to private sector show a negative relationship with manufacturing capacity utilization in Nigeria. The study conclude that there was inadequate credit to finance public sector as it concerns industrial production and capacity utilization in Nigeria and this needed urgent attention to abate the effect on our economy. Based on the findings, it was recommended that the Central Bank of Nigeria (CBN) continue to strengthen and regulate the process of financial procedures on areas of industrial sector and ensure commercial banks give adequate priority to industrial production due to its extensive benefits to our economy.

Keywords: 1.Financial development, 2.Credit to private sector and Manufacturing capacity utilization

Introduction

Private sector credit is the sum of financial resources made available to the private sector in the form of loans and advances. Credit to the private sector is posited as a critical economic propeller and pathway to economic growth as a measure of financial system depth among a constellation of complex financial system development indicators (Ukpabi, Eleje & Onu, 2021). The size and penetration of the financial sector relative to the Nigerian economy, particularly the real sector, show geometric progressions in credit extended to the private sector via the monetary policy instrument of sectorial credit allocation. According to Begum and Aziz (2019), private sector credit is the most important for economic development. It is critical for increasing investment, employment, efficiency, and productivity. In today's economy, the development of industries (industrialization) is heavily reliant on technological advancements in productive strategies (Olamade, Oyebisi & Olabode, 2014). This simply means transforming an economy from a traditional low-production system to a modern mass-production system that is more efficient and automated as a result of sustained and deliberate combination and application management techniques, appropriate technology, and other resources that promote high-tech production techniques (Gehringer, 2013). It has been argued that the fastest way for any economy to achieve rapid, sustainable growth and development is through industrial capacity, technological innovation, and enterprise development.

However, the financial sector is viewed as the conduit of growth in every economy, through which other sectors' development is achieved. This is due to the financial conduit roles that have been assigned to it. The financial sector, via financial institutions, seeks funds from surplus sectors in the form of savings and idle funds and distributes them to entrepreneurs in need of funding for their ideas and business ventures in exchange for a return in the form of interest on loans (Ademu, Dabwor & Ezie, 2019). Financial institutions provide structures for monetary administration as well as the foundation for system liquidity management. As a result, banks must be extremely effective in their roles as intermediaries for deposit mobilization and channeling to the productive sector of the economy. In order to boost savers' confidence in the financial system, the monetary authorities established the Nigerian Deposit Insurance Corporation (NDIC) to cover deposit insurance in financial institutions. Again, the CBN embarked on several banking reforms, one of which was the 2004 banking consolidation, which saw banks' paid-up capital base increased from 2 billion Naira to 25 billion Naira, forcing the merger and acquisition of weak banks, leaving only 25 strong banks in operation (Soludo, 2004). Commercial bank credit to the manufacturing sector was less than 10 billion naira between 1981 and 1990. However, the volume increased to slightly more than 10 billion naira in 1991 and has since maintained a steady rise until 2019, when it peaked at 2.6 trillion naira (CBN, 2020).

Several studies have been conducted to determine whether there is a link between financial development and industrial growth in Nigeria from 1970 to 2009, and their findings show that the explanatory variables have a significant co-integration relationship between financial sector development and industrial production, and that both the long run and short run dynamic coefficients of financial sector development variables have a negative and statistically significant impact on in (Udoh & Ogbuagu 2012). Other similar studies that sought to determine whether the financial sector had a significant impact on the macroeconomic performance of the Nigerian economy from 1970 to 2015 found that financial depth and stability measures had a positive effect on economic growth, whereas private sector credit and lending - deposit spread had a negative effect on economic growth (Okonji, Nnadi & Igbanugo, 2018). While studies have been conducted to determine the relationship between financial development and economic growth in Nigeria, the findings show that financial development has a significant positive effect on economic growth in Nigeria. The Granger causality test revealed that financial development promotes economic growth, but there is evidence of causality from economic growth to financial intermediary development (Adelakun, 2010; Oladele & Makwe, 2018). Although studies have been conducted both in and outside of Nigeria, the majority of previous studies were limited in scope and used variables from only one dimension, particularly financial deepening. In some cases, the studies were limited in scope because they only looked at financial institutions, the financial market, or the industrial sector. This study therefore seeks to ascertain how credit to private sector affected the variation in manufacturing capacity utilization in Nigeria.

Literature Review

There are three types of financial development: I financial deepening, (ii) financial broadening, and (iii) financial liberalization (Muhammad, Adeel & Muhammad, 2017). Acquiring information, enforcing contracts, and conducting transactions all create incentives for the emergence of specific types of financial contracts, markets, and intermediaries (Mahmood, 2013). Throughout history, various types and combinations of information, enforcement, and transaction costs, in conjunction with various legal, regulatory, and tax systems, have motivated distinct financial contracts, markets, and intermediaries across countries (Udoh & Ogbuagu 2012).

Financial development has emerged as a major determinant of macroeconomic performance, such as economic growth, stability, and savings, while empirical evidence of its impact has sparked more debate and controversy (Hiroyuki & Masahiro, 2018). Simultaneously, different measures of financial development may have contributed to the mixed findings regarding the impact of financial development on relevant macroeconomic variables. Financial development is frequently captured by a quantity measure that gauges

the depth of financial markets, such as the stock of private credit created as a share of GDP, owing to the availability of this type of data series by country and over time (private credit data go back to as early as the 1960s for many countries). According to Beck (2015, 2013), high levels of private credit as a share of GDP do not necessarily imply high levels of financial development. According to his argument, what is captured by private credit varies across countries and income levels because banks' roles differ. Bank balance sheets in high-income countries are more diversified toward risky private lending, such as mortgages for households. As a result, the meaning of private credit varies depending on a country's income level. Financial development is a broad concept.

The capacity utilization rate is critical in assessing the economic performance of manufacturing firms. When it comes to increasing productivity and expanding a company's production, capacity utilization is an important factor to consider. Furthermore, considering capacity utilization is critical in many developing countries, particularly Nigeria, where capital is scarce and mostly underutilized (Adeyemi & Olufemi, 2016). As important as capacity utilization is as an economic indicator, it has received insufficient attention from development economists, particularly in most developing countries, including Nigeria. Though it is rarely discussed, capacity utilization explains not only the relationship between actual output and maximum or potential output, but also the level of market demand. Plant capacity over- or under-utilization can reduce plant competitiveness by increasing operating costs (Seguin & Sweet land, 2014).

According to the theory of economies of scale, a cost-cutting firm will tend to increase capital utilization if the returns to scale decrease as production increases (Afroz and Roy, 1976). In other words, the rate of capacity utilization could be calculated endogenously. Furthermore, the level of capacity utilization not only determines how much more output is obtained by greater utilization of existing capital, but it also defines a firm's capacity expansion for a specific level of output (Afroz and Roy, 1976). As a result, the rate of capacity utilization is proportional to the level of employment but inversely proportional to the per unit capital service cost. As a result, increased capacity utilization implies lower average production costs.

Among the important economic goals of nations around the world are full employment and price stability. To achieve these goals, the economic drivers strategize through the financial system in order to explore opportunities in her economic hub. In Nigeria, the regulatory authority, specifically the Central Bank (CBN), steers the macroeconomy toward economic goals through monetary policy instruments. As the depth of the financial system influences economic performance, the monetary authority constantly employs indirect control measures such as sectorial credit allocation to achieve economic growth and sustainability. Ganiyu (2017) emphasizes the economic importance of credit, particularly in the context of developing countries trapped in a web of poverty known as the vicious circle of poverty. As the two variables recorded divergent growth paradigms, the CPS and RGDP move in an uncorrelated form, growing and shrinking indiscriminately. According to Emecheta and Ibe (2014), the possible positive link between credit markets and economic growth is fairly obvious because credit markets in developed countries are more developed. Martin and Douglas (2013) in Idowu, Ochei and Isibor (2019) posit that the booster of economic activities is credit, as it allows businesses to obtain loans for expansion of production and households to purchase homes and other assets then pay back at agreed installments.

Review of Empirical Studies

Several empirical studies have been published over the years on the relationship or granger cause between financial development, economic growth, and industrial development. Ukpabi, Eleje, and Onu (2021) examined the impact of credit to the private sector on Nigerian economic growth from 1990 to 2020. Exogenous variables are credit to the private sector (CPS) and real gross domestic product (RGDP), respectively. In an analysis aided by the E-views12 statistical package, the autoregressive distribution lag (ARDL) bounds test was used. The findings revealed that credit to the private sector had a positive and significant impact on Nigeria's real GDP, with both short-run and long-run relationships. Using an error

correction model, Aigbomian and Mamudu (2020) investigate the impact of bank credit on the growth of Nigeria's manufacturing sector. They discover a significant cointegration relationship; short-run estimates show that oil revenue and manufacturing credit from deposit money banks have a positive significant impact on manufacturing sector growth, whereas corruption in the banking sector significantly retards manufacturing sector growth. Furthermore, interest rates and exchange rates are found to have a negligible impact on manufacturing sector output. In their study of the role of commercial bank credit on real sector performance in Nigeria from 1990 to 2017, Emmanuel, Olupeeka, and Adeyinka (2020) used ordinary least squares and discovered that commercial bank credit and bank lending rates had no significant impact on manufacturing sector output. Furthermore, Aminu, Raifu, and Oloyede (2019) used a cointegration and causality model to analyze data from 1984 to 2016 in their study on the relationship between manufacturing sector output and financial development. Granger causality results revealed a bidirectional causality between credit to the private sector and output in the manufacturing sector. The authors also discovered a long-run relationship between the variables. Again, short-run estimates show an insignificant relationship between credit to the private sector and manufacturing sector output, whereas long-run estimates show a significant relationship. Meanwhile, interest rates were found to have a negative significant impact on manufacturing sector output in both the long and short run. Adeusi and Aluko (2015) conducted a study to assess the impact of financial sector development on real sector productivity in Nigeria, with a particular focus on the industrial sector in the twenty-first century. Annual time series data were used. The model adapts the depth, bank, private, and privy financial sector development measures used by King and Levine (1993) as predictors of industrial sector production output. The value of industrial sector production output is a proxy for industrial sector productivity (IPO). The study reveals that there is a strong linear relationship between the financial sector and the real sector because the coefficient of multiple determinations is relatively high, implying that financial sector development is critical for real sector productivity. Aliyu and Yusuf (2013) investigated the impact of private sector credit on Nigeria's real sector and the impact of financial development on real sector growth in Nigeria. The study found that financial sector development has a significant impact on real sector growth in Nigeria using the Ordinary Least Square (OLS) technique. The study's findings also show that credit allocated to the private sector has a significant impact, while liquid liabilities and the size of financial intermediaries have a significant positive impact on real sector growth. Asaleye, Adama, and Ogunjobi (2018) used the Granger Non-Causality, Vector Error Correction Model, and Dynamic Ordinary Least Square method to investigate the causal effects, shock effect, and long-run impact. Except for market capitalization and output in the manufacturing sector, where independence was observed, the results showed unidirectional causality, confirming the hypothesis of the'supply-leading view' and 'demand-following view'. According to the variance decomposition, the forecast error shock of credit to the private sector and the prime interest rate show more variations in manufacturing sector performance than other financial indicators. Except for broad money stock and deposit liability, the long-run result using output in the manufacturing sector as the dependent variable shows a positive significant relationship with other financial sector indicators. This study recommended a credit channel for transmission of monetary policy using interest rates, among other things, to improve the performance of the manufacturing sector. Ogunsakin (2014) investigated the effect of financial sector reforms on the performance of Nigeria's manufacturing sector. The data series used were obtained from a variety of sources, including the Central Bank of Nigeria statistical bulletin, the Economic and Financial Review, monthly and annual reports, and statements of account for various years. The multivariate co-integration method was also used in the study. The time series property of quarterly data was initially investigated. The test for co-integrated variables is then performed. The results clearly indicated that there was one co-integrating vector based on the time series property of the data used. The study's findings revealed that financial sector reforms in Nigeria had no significant impact on the growth of manufacturing output in Nigeria during the study period. Korhan, Nesrin, and Baris (2015) investigate the relationship between industrial production, Financial Development, and Carbon Emissions: The Case of Turkey. Previous

research on the effects of financial development on air pollution has yielded mixed results. It is argued that Turkey's lack of proper energy policies has become a more serious problem as the country's industrial activities have increased. The current study uses the Granger causality test to investigate the long run relationship between industrialization, financial development, and carbon emissions in Turkey. The current study's findings show a one-way relationship between financial development and carbon emissions. Campbell and Asaleye (2016) investigated the impact of financial reforms on the manufacturing sector's output growth in Nigeria. . The paper is justified by the need to provide empirical evidence on the effectiveness of financial reforms in promoting output growth in Nigeria's manufacturing sector before and after reform. The statistical and econometric analysis results show that the financial sector performed better in the post-reform era than in the pre-reform era. Surprisingly, manufacturing output growth was low in the post-reform era. The correlation coefficient of the financial indicators was also low, indicating that the development of the manufacturing sector in Nigeria under financial reforms has not been impressive. The Vector Error Correction Model (VECM) results show that variables diverge in the short run. The paper concludes that Nigeria's Gross Domestic Product increased. This is to say that the increase in GDP has not resulted in the development of the manufacturing sector, which could have helped to alleviate the country's unemployment problem. Effiom and Udah's (2014) study on industrialisation and economic development in a multicultural environment using OLS and data from 1975-1987 was convincing that the multicultural structure of the Nigerian economy is a strength to boast industrialisation on the basis of indigenisation of technology, which must progress from the comparative industrial strengths of the country's various multicultural groups. It must be developed in regions before spreading to other parts of the country. For example, the Igbos' technological ingenuity during the civil war should not be wasted as a result of the civil war. In Nigeria, Obioma and Ozugahalu (2015) used the ordinary least square method to examine the relationship between GDP as the dependent variable and foreign direct investment, industrial output, total saving, and inflation rate as the independent variables for 1999 data. The study discovered, among other things, that industrial output had a statistically insignificant impact on GDP. Zhang, Wang, and Wang (2012) used data from 286 Chinese cities from 2001 to 2006 to investigate the relationship between financial intermediation and economic growth in China. After controlling for many growth-related factors, their findings suggest that traditionally used indicators of financial development are generally positively associated with economic growth. Emmanuel and Adegboyega (2014) examined the relationship between banks and economic growth in Nigeria. The study adopts linear regression function and specifies that the level of real Gross Domestic Product, which is a measure of economic activity, is a function of banks credit to the economy which is a measure of the contribution of banks. The results of the models estimated show that banks have positive impacts on economic growth in Nigeria. Osuji and Chigbu (2012) investigated the influence of financial development variables on Nigerian economic growth. To achieve the study's goal, data was collected from secondary sources, and various econometric analyses such as Augmented Dickey Fuller (ADF) test, Granger Causality test, Co-integration, and Error Correction Method (ECM) were used on time series data from 1960 to 2008. The results revealed that Money Supply (MS) and Credit to Private Sector (CPS) are positively related to Nigeria's economic growth. The Johnsen and Granger tests show that Money Supply and Credit to the Private Sector (CPS) are cointegrated with GDP in Nigeria over the study period, and the Granger tests show that all exogenous variables Granger cause GDP and GDP Granger cause other variables in Nigeria. The paper concludes that the government should ensure strong financial sector supervision in order for financial institutions to provide the necessary funds for the Nigerian economy's growth and development. Mert and Serap (2017) used regression analysis to determine the effect of financial development on firm growth in the Turkish manufacturing industry: evidence from a heterogeneous panel-based non-causality test. The study tested for granger non-causality in heterogeneous panels, taking into account heterogeneity and cross-sectional dependence, and found that the supply-leading hypothesis holds for the majority of subsectors. The study found that the result was consistent across subsectors, regardless of the financial development proxy.

Furthermore, the study revealed that firm growth is not uniform across subsectors. Oluwole (2014) examined the impact of the money and capital markets on Nigeria's financial development and economic growth. The secondary data is analyzed using an Ordinary Least Squares (OLS) method from 1981 to 2010. The findings show that Banking System Credit to the Domestic Economy, CDMB, and Money Supply, M2 (money market variables) have a significant impact on GDP (Economic Growth), whereas Value of Deals, VOD, and Market Capitalization, MCAP (capital market variables) do not. Pradhan, Arvin, Bahmani, Hall, and Norman (2017) used regression and four different proxies of financial development (banking sector development, bond market development, stock market development, and insurance sector development) to examine the finance-growth relationships in the ASEAN region from 1991 to 2011. Their findings show that in the long run, banking sector development, stock market development, bond market development, insurance market development, and per capita economic growth all cointegrated. In the case of causality, however, their findings are sensitive to the use of a financial development proxy. They accounted for a one-way causality from banking sector development to economic growth, as well as a two-way causality between stock market development and economic growth and insurance sector development and economic growth. Iheanacho (2016) investigated the relationship between financial intermediary development and economic growth in Nigeria from 1981 to 2011 using annual data. Economic growth is measured in terms of real GDP per capita. To capture various aspects of the financial sector intermediary activities in Nigeria, four widely used measures of financial sector intermediary development are used: domestic bank credit to the private sector divided by GDP, liquid liabilities to GDP, deposit money bank assets to GDP, and bank deposits to GDP. Using the auto-regressive distributed lag (ARDL) approach to co-integration analysis, four control variables are included to capture other components of the Nigerian macroeconomic environment that could influence the growth of the. The findings show that the relationship between financial development and economic growth in Nigeria is similar to what has been observed in other oil-dependent economies. The long-run relationship between financial intermediary development and economic growth in Nigeria is found to be insignificantly negative, while the short-run relationship is found to be significantly negative. Demetriades and Rousseau (2016) used regression analysis in Italy to examine the changing face of financial development and the non-monotonic relationship between financial development and economic growth in 2012. According to the study, financial depth is no longer a significant predictor of long-run growth. They also claimed that bank regulation and supervision have an impact on the finance-growth nexus. To that end, it is important to note that increased financial sector development may not always be beneficial to economic growth. One issue that these papers on the non-monotonic relationship between financial development and economic growth all have in common is that they are conducted on highly heterogeneous panels (including higher, lower, middle or low-income countries). Similarly, the current study shows that financial sector development is very poor in selected low-income countries (i.e., average credit flow to the private sector is only about 13.524% of GDP). Rezwanul and Suborna (2015) used panel data to investigate the relationship between financial development and economic growth in five emerging South Asian countries: Bangladesh, India, Nepal, Pakistan, and Sri Lanka. The World Bank provided the heterogeneous panel data for the period 1974 to 2012. Economic growth is represented by the GDP growth rate, and financial development is represented by five major variables: I Domestic Credit Provided by Financial Sector, (ii) Total Debt Services, (iii) Gross Domestic Savings, (iv) Broad Money, and (v) Trade Balance. For model fitness, the Fixed Effect Panel regression model was used, and Time Fixed Effect, Cross Sectional Dependence, Heteroskedasticity, Serial Correlation, and Cointegration were tested. The findings indicate that increases in total debt service and domestic savings have a significant impact on these countries' economic development. Surprisingly, broad money, trade balance, and domestic credit have little influence on promoting economic growth, which is generally unanticipated. Aiyetan and Aremo (2015) examined the impact of financial sector development on Nigerian manufacturing output growth from 1986 to 2012: A vector auto regression approach was used to investigate the impact of financial sector reform development on manufacturing output growth in Nigeria from 1986 to

2012. The research looked at the effects of financial sector development on Nigeria's disaggregated manufacturing output growth. Using the Vector Autoregression (VAR) approach, the study investigates whether or not financial sector variables stimulate output growth in the Nigerian manufacturing sector, with reference to some key macroeconomic variables. The findings indicated that a liberal financial system and a deeper financial sector would boost manufacturing output growth in Nigeria. Uchenna, Belmondo, Simplice, and Ibukun (2016) used regression analysis to investigate multidimensional financial inclusion and manufacturing firm performance in a developing country: the case of Nigeria in 2012. The matching technique was used in the study to investigate the impact of financial inclusion on the performance of Nigerian manufacturing firms. The matching estimation result revealed that, while firms perform better with access to bank services, the extent varies depending on the type of access they have. According to the study, the type of financial inclusion observed determines the extent to which firms' performance improves through financial deepening.

Methodology
An Ex-Post Facto research design was used to investigate how financial development has explained and affected variation in the performance of Nigeria's industrial sector. The researcher cannot manipulate the variation in the variables in this type of research design because existing data is available and published by government agencies. The time frame is thirty-five (35) years long, spanning from 1986 to 2020. Because of the availability of thirty-five (35) observations, this allows for a large number of observations, which improves the robustness of the results.
The secondary data as applied in this study were obtained from the Central Bank of Nigeria (CBN) annual reports and statistical bulletin of 2020. The data as published in the statistical bulletin are on annual basis except otherwise stated.

Method of Data Analysis
Data were analyzed using descriptive statistics and inferential statistics generated from E-Views 9.0 statistical software, using 95% confidence interval as in Aiken and West (1991). This study employed the following statistical tools:

Panel data regression technique: was employed since the data set includes both time series and cross-sectional data that is pooled into a panel data set and estimated using panel data regression. Regression analysis predicts the value of a variable based on the value of the other variable and explains the level of significance and effect of changes in the values of   variable on the values of the other variables.

Decision Rule
The decision for the hypotheses is to accept the alternative hypotheses if the p-value of the test statistic is less or equal than the alpha and to reject the alternative hypotheses if the p-value of the test statistic is greater than alpha at 5% significance level.

Analysis and Result

Data Analysis

Table 1: Descriptive Statistics

	MCU	CPS
Mean	51.73677	10.16841
Median	53.50000	8.909485
Maximum	62.30000	19.62560
Minimum	33.90000	4.957522
Std. Dev.	7.440945	3.546446
Skewness	-0.628521	0.908566
Kurtosis	2.485268	3.522256
Jarque-Bera	2.383257	4.617349
Probability	0.303726	0.099393
Sum	1603.840	315.2206
Sum Sq. Dev.	1661.030	377.3183
Observations	31	31

Source: E-Views 9.0 Descriptive Output, 2022

Interpretation

Table 1 presents the descriptive statistics for the dependent variables, manufacturing capacity utilization (MCU) and the independent variable, credit to private sector (CPS). The mean serves as a tool for setting benchmark. The median re-ranks and takes the central tendency. While the maximum and minimum values help in detecting problem in a data. The standard deviation shows the deviation/dispersion/variation from the mean. It is a measure of risk, the higher the standard deviation, the higher the risk. The standard deviation is a measure that summarizes the amount by which every value within a dataset varies from the mean. The standard deviation in the banking sector for the period 1990-2021 is 7.440 and 3.546, MCU and CPS showing percentage of values that are less than one standard deviation (1SD) away from the mean values of these. Skewness and Kurtosis are contained in Jarque-Bera. Positively skewed is an indication of a rise in performance while positive skewed is an indication of loss or backwardness. Jarque-bera is used to test for normality; to know whether the data are normally distributed.

Test of Hypothesis

Ho5:   Credit to private sector do not significantly affects manufacturing capacity utilization (MCU) in Nigeria.

H_I1:   Credit to private sector significantly affects manufacturing capacity utilization (MCU) in Nigeria.

Table 2: Panel Least Regression analysis showing the relationship between MCU and CPS
Dependent Variable: MCU
Method: Least Squares
Date: 11/10/22   Time: 17:04
Sample: 1990 2021
Included observations: 31

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	65.55961	10.94083	5.992195	0.0000
CPS	-0.326005	0.565964	-0.576017	0.5696
R-squared	0.160826	Mean dependent var		51.73677
Adjusted R-squared	0.031722	S.D. dependent var		7.440945
S.E. of regression	7.321973	Akaike info criterion		6.966327
Sum squared resid	1393.894	Schwarz criterion		7.197615
Log likelihood	-102.9781	Hannan-Quinn criter.		7.041721
F-statistic	1.245709	Durbin-Watson stat		1.931134
Prob(F-statistic)	0.316330			

Table 2 reveals an adjusted R^2 value of 0.03. The adjusted R^2, which represents the coefficient of multiple determinations imply that 0.3% of the total variation in the dependent variable (MCU) of Nigeria economy is jointly explained by the explanatory variables, credit to private sector (CPS). The adjusted R^2 of 0.3% did not constitute a problem to the study because the F- statistics value of 1.245709 with an associated Prob.>F = 0.316330 indicates that the model is not fit to explain the relationship expressed in the study model and further suggests that the explanatory variables are properly selected, combined and used. The value of adjusted R^2 of 0.3% also shows that 99% of the variation in the dependent variable is explained by other factors not captured in the study model. This suggests that apart from CPS, there are other factors that mitigate MCU of Nigeria economy. The results in table 2 illustrated that CPS has a negative relationship with MCU measured with a beta coefficient (β_1) = -0.317314, t- value = -0.576017, p- value of 0.570 which is not statistically significant at 5%.
Holding other factors constant, the beta coefficient revealed that if CPS decrease by one unit, then the MCU of Nigerian economy would increase by 1%. In addition, Durbin-Watson test is implied to check the auto correlation among the study variables. The Durbin-Watson value is 1.931134 which is less than 2 provide an evidence of no auto-correlation among the variables.

Decision
Based on the empirical evidence, this study upholds that no significant relationship exists between credit to private sector and MCU at 5% level of significance, whereas Prob(F-statistic) value is 0.316330, hence H_1 is rejected; showing that credit to private sector do not significantly affects manufacturing capacity utilization (MCU) in Nigeria.

Conclusion
This study examined the effect of credit to private sector on the variation in manufacturing capacity utilization in Nigeria. Data for the study were extracted from the Central Bank of Nigeria (CBN) annual reports and statistical bulletin of 2020. The data as published in the statistical bulletin are on annual basis except otherwise stated. Descriptive statistics and inferential statistics generated from E-Views 9.0 statistical

software. Based on the empirical evidence on hypothesis, this study upholds that credit to private sector showed a negative relationship with manufacturing capacity utilization, whereas Prob(F-statistic) value is 0.316330, hence H_0 is accepted; showing that credit to private sector had insignificantly affected index of industrial production in Nigeria. This finding is consistent with Adeusi and Aluko (2015), who discovered that financial sector development is a viable means of increasing real sector productivity. Mounde (2017) discovered a long-run relationship between foreign direct investment and manufacturing sector output in terms of industrial production. According to the study, there was insufficient credit to finance the public sector in Nigeria in terms of industrial production and capacity utilization, and this required immediate attention to mitigate the impact on our economy. Based on the findings, it was recommended that the Central Bank of Nigeria (CBN) continue to strengthen and regulate the process of financial procedures on areas of industrial sector and ensure commercial banks give adequate priority to industrial production due to its extensive benefits to our economy.

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