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Deposit Money Bank's Credit and Manufacturing Sector Output in Nigeria

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Abstract: This study investigates the relationship between deposit money bank's credit and manufacturing sector output in Nigeria from 1980-2024. Manufacturing sector output is used as the independent variable in the model for the study. The dependent includes exchange rate, deposit money banks' credits to manufacturing sector, lending rate, liquidity ratio, interest rate spread and inflation rate. The techniques applied are the dynamic ordinary least square of multiple regression analysis, unit root test, co-integration tests and error correction techniques. The result of the study indicated that exchange rate and interest had negative relationship with manufacturing sector output while others had positive link with manufacturing sector output. The result of the R2 is 75% indicating that the speed of adjustment from the dependent variable to the independent variables is 75 per cent. The study concludes that deposit money banks credit can enhance the entire economy in Nigeria. The study recommends a favourable increase in the entire economy through the manufacturing sector output.

Keywords: Manufacturing Sector, Inflation Rate, Interest Rate, Lending Rate, Exchange Rate.

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Introduction

Deposit money banks refer to financial institutions that accept deposits from the public and provide a range of banking services such as loans, savings, and checking accounts. These banks show a critical role in the efficient allocation of capital, facilitating industrial growth viz-a viz the economy [1]. Deposit money banks and the manufacturing sector are essential to sustainable economic growth of the economy [2]. Deposit money

banks positively impact manufacturing sector growth by providing credit for investment, but the relationship is also affected by factors like interest rates and the overall economic climate. When banks lend more to the manufacturing sector, it can lead to higher output, but high lending rates can deter investment and slow growth [3]. Total bank deposits also show a significant positive relationship with manufacturing sector output, as they are a source of funds for lending. On the other hand, the manufacturing sector is a dynamic part of Nigeria's economy, contributing to employment, economic diversification, and industrial development [4]. This sector encompasses the transformation of raw materials into finished products using machinery and labour, with activities ranging from consumer goods production to heavy machinery manufacturing [2]. Arguably, the expansion of financial services and manufacturing among other sectors distinguished Nigerian economy as an emerging market.

In recent years, the federal government appropriations bills have been concentrated on sustainable growth, and the manufacturing sector is critical in accomplishing this goal [5]. The manufacturing sector is a major driver of import substitution which enhances exportations, foreign exchange earnings, employment creation, consumption patterns and standards of living. The sector plays a crucial role in promoting long-term growth. The employment, income, innovation, and "multiplier effects" generated by this particular sector have the potential to spark growth in other areas of the economy. As a result, many of the other Sustainable Development Goals (SDGs) outlined in the United Nations' Agenda 2030 depend on progress made towards SDG [6]. To accentuate the vital role of the manufacturing sector on the country's gross domestic product (GDP), both the fiscal and monetary authorities in Nigeria have over the years established intervention funds targeted at revamping the sector in terms of production [1]. The interrelationship between deposit money bank's credit and the manufacturing sector is apparent in their combined efforts to foster economic growth. Banks provide indispensable financial services such as loans and trade finance, which enable manufacturers to invest in new technologies, modernize production processes, and expand their operations [7].

For instance, between 2010 and 2020, loans to Nigeria's manufacturing sector increased by 20%, signifying the banking sector's commitment to supporting industrial expansion (Central Bank of Nigeria, 2021). This financial support is crucial for manufacturers to play a part in global supply chains and compete internationally (Afangideh, 2010). The increased integration into global markets has enhanced the manufacturing sector's ability to contribute to Nigeria's gross domestic growth and economic diversification. The manufacturing sector underwent a period of significant expansion for more than 20 years, driven by a small number of sub-sectors, until the year 2015 [8]. During the period spanning from 2005 to 2014, the industry mentioned above experienced a yearly mean growth rate of 12%, primarily driven by a surge in consumer demand. Foreign exchange restriction and exchange rate depreciation became the new normal for the country when the oil boom era ended [5]. However, manufacturing production is still impacted by structural issues, which go beyond currency fluctuations [6]. The manufacturing sector is faced with numerous economy operational imbalances such as infrastructural deficit, tariff and non-tariff barriers to trade, investment obstacle, multiple exchange rate regime and limited foreign exchange rate capacity [9].

The manufacturing sector in Nigeria has encountered a myriad of challenges and these challenges include low productivity, limited locally available resources, insufficient innovation and technical knowledge, deficient infrastructure, disorganized local supplier foundations, and inadequate coordination between suppliers and downstream purchasers [10]. Additionally, financial constraints further aggravate these challenges and thus the synergy between deposit money bank's credit and the manufacturing sector has far-reaching impacts on economic development and should be enhanced and developed. Studies shows that countries with robust banking systems, such as Singapore and South Korea, have thriving manufacturing sectors that significantly contribute to gross domestic product growth and technological advancements (Afangideh, 2010). In Nigeria, the banking sector has played a vital role in facilitating manufacturing output, which has been pivotal in driving non-oil GDP growth. For instance, in 2020, manufacturing exports accounted for approximately 14% of Nigeria's total non-oil exports, highlighting the sector's role in earning foreign exchange and stabilizing the economy (NBS, 2020).

Foreign direct investment (FDI) is another area where the banking and manufacturing sectors intersect. It is therefore imperative to note that a strong banking sector and a thriving manufacturing industry attract foreign investors, contributing to technology transfer, infrastructure development, and job creation. The investment inflows from FDI further boost economic growth and industrial capacity, positioning Nigeria as an attractive destination for global businesses [11]. US$306.92 in 2019 increased to US$358.86 in 2020.

Grotesquely, the exchange rate escalated to US$401.15 in 2021 and further up to US$425.98 in 2022. Congruently, interest rate is negatively affected due to the inability of the Naira to withstand the pressure from the dollar leading to increase in the prices of goods and services in Nigeria. Furthermore, this ugly development has resulted to upsurge in prices of goods and services (inflation). More so, in 2019 the inflation rate was about 11.4%, but increased to 13.2% in 2020. Consequently, inflation rate rise to about 17% in 2021 and 18.8% in 2022 [9][12][13].

Despite the positive contributions of deposit money banks and the manufacturing sector, certain challenges persist, particularly in the areas of exchange rate volatility and inflation. The exchange rate significantly impacts the cost of imported raw materials, machinery, and equipment, which are essential for manufacturing activities. Banks offer the necessary financial resources that enable manufacturers to invest in technology, expand production, and integrate into global markets. Given the increasing challenges such as exchange rate volatility and inflation issues which present obstacles to growth, the synergy between these sectors remains critical for Nigeria's economic diversification and sustainable development.

Statement of Problem

Economic growth is a critical indicator of a nation's development, reflecting improvements in living standards, infrastructure, and overall economic health. In Nigeria, economic growth has shown considerable volatility over the past few decades. Between 2010 and 2019, the gross domestic product growth rate ranged from a high of 7.8% in 2010 to a low of -1.6% in 2016 (NBS, 2020). This variability highlights the challenges Nigeria faces in sustaining consistent economic momentum. Factors contributing to this fluctuation include oil price volatility, political instability, and structural inefficiencies within key economic sectors. Despite various efforts to diversify the economy, Nigeria remains heavily reliant on the oil sector, making it vulnerable to global oil market fluctuations. To address this, the Nigerian government has implemented policies aimed at strengthening other sectors, particularly the manufacturing sector, which is seen as a potential driver of sustainable economic growth. Nevertheless, the effectiveness of these policies and the role of financial institutions, particularly deposit money bank's credit, in supporting the manufacturing sector remains a subject of concern. The manufacturing sector's contribution to Nigeria's gross domestic product has been relatively uncertain. In 2019, it accounted for approximately 9% of the gross domestic product (NBS, 2020), showing little improvement from previous years. This stagnation is troubling, given the sector's potential to create jobs, boost exports, and reduce poverty. The relationship between the manufacturing sector and deposit money bank's credit is crucial for economic growth, as these banks provide the necessary capital for industrial expansion.

Conversely, the performance of deposit money banks in this regard has been unreliable. In 2018, credit to the manufacturing sector by deposit money banks was about 15% of the total credit to the private sector, indicating a limited but critical role in financing industrial activities. Besides, the non-performing loan ratio for these banks has remained high, averaging around 10% in recent years, which raises concerns about the stability and efficiency of these financial institutions. The impact of these dynamics extends to employment rates, a key indicator of economic health. The manufacturing sector's growth directly influences employment opportunities. Nevertheless, despite efforts to boost the sector, unemployment in Nigeria has risen from 7.5% in 2010 to 23.1% in 2018. This increase suggests that growth in the manufacturing sector has not been sufficient to absorb the growing labour force, emphasizing a disconnect between economic policies and actual sectorial performance. High inflation rates further complicate the economic landscape in Nigeria. Between 2010 and 2019, the inflation rate ranged from 8.0% to 18.7%, affecting the cost of production and, as a result, the competitiveness of the manufacturing sector. Persistent inflation erodes consumer purchasing power and upsurges production costs, making it difficult for domestic manufacturers to compete with imported goods.

Theoretical Literature Reviewed

Credit Rationing Theory

Stiglitz and Weiss model explains how credit rationing can occur as a persistent market equilibrium (rather than a temporary disequilibrium) due to information asymmetry between lenders and borrowers [14]. It is believed that lenders cannot perfectly distinguish between borrowers of different risk levels (adverse selection) or monitor their actions after a loan is granted (moral hazard). The interest rate itself acts as a screening device. Raising the interest rate to clear excess demand for loans can have a negative impact on the

bank's expected returns. Again, higher interest rates disproportionately deter safe, low-risk borrowers (who are confident they will repay a large amount) from applying for loans, leaving a pool of riskier applicants. Higher interest rates may induce borrowers to choose riskier projects that have a lower chance of success but a higher potential payoff if successful (due to limited liability, borrowers capture all the upside gain but the bank bears the downside loss in case of default). As a result of these effects, a bank's expected profit from lending may not increase indefinitely with the interest rate. There exists an "optimal" interest rate for the bank's profit maximization, and if the market-clearing rate is above this optimal rate, the bank will not raise the rate further. Consequently, even at the prevailing, profit-maximizing interest rate, there may be an excess demand for credit, and some observationally identical, creditworthy borrowers will be denied loans, a phenomenon called pure credit rationing. Lenders may use other contract terms like collateral requirements, loan size, or equity stakes to screen applicants and manage risk, rather than relying solely on the interest rate to clear the market.

The Balance Sheet Channel

Bernanke and Gertler was primarily developed to operate as an amplification mechanism (part of the broader "credit channel") that magnifies the effects of monetary policy and other economic shocks on the real economy due to **information asymmetries** and agency costs in financial markets [15]. This channel emphasizes how monetary policy affects the net worth and financial condition of borrowers. A monetary contraction can reduce the value of a borrower's assets (e.g., real estate or securities collateral), increase their debt burden, and reduce their cash flow, thereby eroding their net worth. This deterioration in a borrower's balance sheet increases the "external finance premium" (the difference in cost between internal and external funds) due to increased problems of adverse selection and moral hazard for lenders. Facing higher borrowing costs or credit rationing, firms and consumers cut back on investment and spending, which further depresses economic activity. This mechanism is sometimes referred to as the "financial accelerator".

The Credit Channel Theory

Bernanke and Gertler propounded the credit channel theory [15]. This channel posits that monetary policy affects the supply of bank loans. When the central bank tightens policy (e.g., by increasing interest rates or raising reserve requirements), the amount of bank deposits and reserves decreases. Since banks cannot perfectly substitute these lost deposits with other sources of funds, they are forced to reduce their lending to businesses and consumers. This reduction in credit availability, particularly for firms and households that depend heavily on bank financing and lack access to public capital markets (like issuing commercial paper or bonds), curtails their investment and spending, thus reducing aggregate demand and output. The bank lending channel presumes that monetary policy changes will drain bank deposits so long as banks cannot easily replace the short-fall in deposits by issuing other uninsured liabilities. The abolition of reserve requirements on certificates of deposit in the mid-1980s made it much easier for banks facing falling retail deposits to issue new liabilities not backed by reserve requirements.

Methodology

The methodology of this study uses an econometric research framework to investigate the relationship between the impact of deposit money banks credit to manufacturing sector output in Nigeria in terms of annual time series data covering 1980 to 2024. The other macroeconomic based variables were obtained using secondary data from macroeconomic sources such as the Central Bank of Nigeria statistical bulletin and other official economic databases. The functional relationship states that manufacturing sector output is a function of monetary, financial and macroeconomic variables such as exchange rate, credit to infrastructure, lending rate, liquidity ratio, interest rate spread and inflation rate. The model is expressed mathematically and in econometric form to describe the banking sector's relationship with output in the manufacturing sector. Before estimation, the time series characteristics of the variables were checked to avoid failures of spurious regression. Pass the test unit root Augmented Dickey–Fuller (ADF) to see whether each variable is stationary or not and the order of integration. Subsequent to the stationarity analysis, co-integration tests were performed to see if there is any long-run relationship among the variables. Due to its efficiency with small samples time series, the DOLS Multiple Regression technique was employed to estimate the long-run relationship between deposit money bank credit and manufacturing sector output while accounting for the possible endogeneity and serial correlation problems inherent in the estimating equations. The DOLS regression. gives the estimated coefficients the coefficients tell us the value of the impact of each explanatory variable on manufacturing

sector output as it indicates the direction impact (positive or negative), magnitude, and statistical significance.. The fit, overall model significance, and serial correlation were evaluated by using various diagnostic indicators (coefficients of determination; F-statistics, and Durbin–Watson statistics). As a result, this methodological framework permits a strong empirical assessment of the impact of deposit money bank credit, money supply, interest rate and exchange rate on the performance of the manufacturing sector in Nigeria.

Result and discussion

Ndandra, Ibbih and Akawu study investigated the role of deposit money bank credit and lending rates in shaping the growth dynamics of Nigeria's manufacturing sector utilizing annual time-series data from 1980 to 2023, sourced from the Central Bank of Nigeria [16]. The approach employed the Autoregressive Distributed Lag (ARDL) model, which facilitated the analysis of both short- and long-term associations between the variables. The theoretical framework for the study was based on Schumpeter's Supply Leading Theory, Credit Creation Theory, and Wicksell's Theory of Lending and Economic Growth. The findings revealed that credit to the manufacturing sector (DBCM) has a significant positive impact on manufacturing sector output (MSO), both in the short and long run. In contrast, high lending rates (DBLR) negatively affect manufacturing growth, corroborating previous empirical studies. The study concluded that enhancing credit access and reducing lending rates are essential for fostering industrial growth. Therefore, the study recommended policies aimed at reducing lending rates, improving credit accessibility for small and medium enterprises (SMEs), and promoting financial inclusion to drive the competitiveness and productivity of Nigeria's manufacturing sector.

Nnabu, Igwurube, Awoke and Eze study investigated the impact of deposit money bank credit to private sector on private domestic investment from 1981 to 2023 using vector error correction model (VECM) [17]. The study specifically examined the following objectives such as to ascertain the impact of deposit money bank credit to agriculture on private domestic investment in Nigeria, examine the extent of the impact of deposit money bank credit to manufacturing on private domestic investment in Nigeria and investigate the magnitude of the impact of deposit money bank credit to mining on private domestic investment in Nigeria. The pre-test results indicated that all the variables were integrated of order 1(1) while Johansen co-integration test confirmed that the variables were co-integrated. The result indicated that deposit money bank credit to agriculture significantly result in rise in private domestic investment both in the short run and in the long run. Also, the study showed that deposit money bank credit to manufacturing significantly led to increase in private domestic investment. Finally, the study found that deposit money bank credit to mining in the short run does not impact on private domestic investment but significantly resulted in increase in private domestic investment in the long run. Based on these findings, the study recommended adoption of expansionary monetary policy to increase credit availability to agricultural development, creation of mining guarantee scheme to mitigate risk associated to lending to mining sector and lowering interest rate to 5% to encourage private sector borrowing. These measures if effectively followed will promote credit availability to private sector and will invariably result in increase in private domestic investment.

Jimoh (2024) study examines the effect of deposit money bank activities on financial sector development in Nigeria using time series data spanned over a period of eleven (11) years from 2012 to 2022. The study adopted the ex-post-facto research design and secondary data used in the study was sourced from CBN annual statistical bulletin for the relevant years. Descriptive statistics, Augmented Dickey Fuller Test (ADF), error correlation model, ordinary least square (OLS) regression techniques and post estimation test were the main statistical tools used for the analysis. The finding of this study revealed that loans and advances and deposit liability exert a positive and significant effect on financial sector development while interbank placements have negative and insignificant effect on financial sector development in Nigeria. The study recommended that deposit money banks should advocate for and enforce responsible lending practices among financial institutions, this involves ensuring that loans are extended based on sound risk assessment, with proper consideration given to the borrower's credit worthiness and ability to repay. Ojarikre, Akpan and Eziokwu examined the impact of bank rates on manufacturing sector performance in Nigeria from 1986 to 2023 focusing on banking lending rates such as, prime lending rates, maximum lending rates and savings rate [18]. Using the Dynamic Ordinary Least Squares (DOLS) regression, results revealed that two out of the three explanatory variables have statistically significant impact on manufacturing sector performance in the long

run. Specifically, over time, a one percentage increase in prime lending rates result to a decrease in manufacturing sector performance by -0.05 percent in the long run.

Nonetheless, the estimated impact of maximum lending rates on manufacturing sector performance is positive and statistically significant in the long run. Correspondingly, the estimated impact of savings rate on manufacturing sector performance is positive but statistically insignificant in the long run. Hence, the study recommended that the Federal Government through the Central Bank of Nigeria should pursue policies that moderate lending rate to increase loans and advances to the manufacturing sector to boost its production and maximize output in that sector. The study found out that prime lending rates is negatively related to manufacturing sector performance during the period under review. Also, the Central Bank of Nigeria should ensure that interest rate deregulation is frequently monitored and primarily tailored towards ensuring that the prevailing market lending rates such as the maximum lending rates and savings rate provides opportunity for improved performance of the manufacturing sector in Nigeria. Ajudua empirically evaluate the impact of deposit money banks' credit on the performance of Nigerian economic growth [19]. Data covering 1986 to 2020 were collected from secondary sources and Unit root test, Co-integration test and the ECM method used in analyzing the data. Findings from the study revealed that total bank credit and money supply both had a positive significant relationship with economic growth. Private sector credit had a positive but not significant relationship with economic growth while lending rate had a negative and significant relationship with economic growth.

The study thus recommends that the monetary authorities should implement policies favourable to deposit money banks' credit creation and intensify efforts to attract credit to the private sector in order to stimulate economic growth while policies to support the growth of the financial market and banking industry should be enacted and implemented. ThankGod and Nwikina study evaluates the effects of exchange, and interest rates on manufacturing sector performance in Nigeria [9]. The data were sourced from the Statistical Bulletin of the Central Bank of Nigeria (CBN) for the analysis. The Unit root test was performed on the formulated model using the Augmented Dickey Fuller (ADF) method. The log of manufacturing sector contribution to GDP (MUFQ), exchange rate (LEXR), inflation rate (LIFR), and bank size (LBKS) were integrated at order zero I(0) while the log of interest rate spread (LIRS) was stationary at order one I(1), as shown by the Augmented Dickey Fuller Unit root test. In order to determine whether there is a long-run relationship between interest rate, exchange rate, and inflation rate, a bound test was conducted using the Auto-regressive Distributive Lag (ARDL) model. High volatility in exchange and interest rates have a positive effect on manufacturing sector performance, as shown by the results of the Auto-regressive Distributive Lag (ARDL) bound test, and the results from Arch and Garch corroborate these findings. Auto-regressive Distributive Lag (ARDL) results indicated a positive and statistically significant relationship between the exchange rate and the performance of the manufacturing sector over time at 0.05 level.

However, bank size revealed a positive but insignificant relationship with manufacturing sector performance in the short-run, while the coefficient of interest rate spread and inflation rate were both negative and significantly impacted manufacturing sector performance in the current year period**.** The study concludes that Nigeria's manufacturing sector is strongly correlated with the country's exchange and interest rates. The study recommended amongst others that as a result of too much dependence on oil, the federal government should peg the local currency rate and mandate the deposit money banks through the Central bank of Nigeria (CBN) to maintain a single digit interest rate. This would boost investors' confidence on the Nigerian economy as well as the financial system while efforts should be taken to diversify the economy to ease the pressure from the local currency. Olurinola examined the effect of credit on the manufacturing sector and its impact on output growth in Nigeria from 1995-2020 [20]. The results show that a decline in lending rate will lead to an increase in bank credit, as economic agents take advantage of the lower cost of funds. Moreover, a reduction in the interest rate will lead to an increase in investment in the manufacturing sector, which will in turn improve manufacturing sector performance. Equally, while the study revealed that lower lending rate will lead to an increase in bank credit, the study it is limited to the three variables namely lending rate, bank credit and manufacturing output though it failed to assess the relationship between the variables in short and long term.

Model Specifications

The study adopted the approach used by Oparah et al. to examine the effects of bank lending on

Nigeria's manufacturing subsector from 1999 to 2022 [21]. The variables used are mass manufacturing sub-subsectors (MSS), Bank credit to the manufacturing sub-sectors (BNC), Bank demand deposit (BDD), Bank lending rate to MASS (BLR), Interest rate (INTR), Exchange rate (EXR), Workers incentives proxied by government expenditure on motivating MASS workers (WIN) and Employment generation (EMG) proxied by employment growth rate. The functional mathematical relationship is

$$\text{Mass} = f(bnc, bdd, blr, itr, exr, win, emg) \quad \text{.....(1)}$$

Where

MSS = Mass manufacturing sub-subsectors, BNC = Bank credit to the manufacturing sub-sectors, BDD = Bank demand deposit, BLR = Bank lending rate to MASS, INTR = Interest rate EXR - Exchange rate, WIN = Workers incentives proxied by government expenditure on motivating MASS workers, EMG = Employment generation proxied by employment growth rate.

And the econometric functional relations is stated as

$$\text{mass}_t = f(bnc_t + bdd_t + blr_t + itr_t + exr_t + win_t + emg_t) \quad \text{.....(1)}$$

Where

MSS = Mass manufacturing sub-subsectors at time 't', BNC = Bank credit to the manufacturing sub-sectors at time 't', BDD = Bank demand deposit at time 't', BLR = Bank lending rate to MASS at time 't', INTR = Interest rate at time 't', EXR - Exchange rate at time 't', WIN = Workers incentives proxied by government expenditure on motivating MASS workers at time 't', EMG = Employment generation proxied by employment growth rate at time 't'

The present study replicates the above model with some modifications. The model specification for this study is mathematically in this form below. The aim of this study is to empirically investigate the relationship between deposit money bank's credit and the manufacturing sector in Nigeria. Specifically, this study's mathematical form is

$$\text{msq} = f(excr, dmbc, lenr, \inf r, itrs, lqtr) \quad \text{.....(1)}$$

Where;

MSQ = Manufacturing Sector Output, EXCR = Exchange rate, DMBC = Deposit money banks' credits to Manufacturing Sector, LENR = Lending Rate, LQTR = liquidity ratio, ISRS = Interest Rate Spread, INFL = Inflation rate

The econometric form of the model is stated as

$$\text{msq}_t = f(excr_t + dmbc_t + lenr_t + \inf r_t + itrs_t + lqtr_t + \mu) \quad \text{.....(2)}$$

Where

MSQ = Manufacturing Sector Output at time 't', EXCR = Exchange rate at time 't', DMBC = Deposit money banks' credits to Manufacturing Sector at time 't', LENR = Lending Rate at time 't', LQR = Liquidity ratio at time 't', ISR = Interest Rate Spread at time 't' and at time 't', INFR= Inflation rate

$\sum_1 t$ = Error term

β_0 = Intercept

β_0 = constant parameter to be estimated,

μ_i =Stochastic error term

$\beta_1 - \beta_6$ Aprior expectation;

Interpretation Of Result

Table 1: The DOLS

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.040295	11.65775	0.231438	0.6792
EXCR	0.665866	0.576646	2.545744	0.1346
DMBC	0.235181	0.660240	0.173718	0.4552
LENR	-0.206267	0.445389	-0.346216	0.5562
INFR	0.091409	0.340735	0.143162	0.8898
INTR	-0.346200	0.055453	-0.456200	0.3460
LQTR	0.431456	0.580876	3.372167	0.6590

$R^2 = 0.759965$	F = 27.75436	DW. 1.786178		

Source: Author Computation from E-Views 2025* Level of significance at 5%

The R^2 was 0.759965 or 75 percent implying that the government expenditure in Nigeria included in the model accounted for 75 percent of the variation in the study while other variables not included in the model accounted for the remaining 25 percent. In nutshell, the model is remarkable since the F-statistic value was 27.75436 and is significant at the 5% level of significance. Without serial correlation, the model would not work, according to the Durbin-Watson statistics of 1.786178, which is close to 2.

Discussion of Findings

Exchange Rate and Manufacturing Sector Output in Nigeria

The coefficient value of exchange rate was 0.665866 meaning that increases in exchanges rate increases manufacturing sector in Nigeria by 0.665866. A positive relationship subsists between exchange rate and manufacturing sector output. It is statistically significant at 5 per cent level. Exchange rate should enhance manufacturing output if it is reduced. This is not in line with economic theory and aprior expectation [22][23][24][25][26].

Deposit Money Banks' Credits to Manufacturing Sector and Manufacturing Sector Output

The coefficient value of deposit money banks' credits to manufacturing sector was 0.235181 meaning that increases in deposit money banks' credits to manufacturing sector increases manufacturing sector in Nigeria by 0.235181, hence there is appositive link. It is statistically insignificant at 5 per cent level. Deposit money banks' credits to manufacturing sector are expected to enhance manufacturing output. This is not in line with economic theory and aprior expectation [27][28][29][30].

Lending Rate and Manufacturing Sector Output

The coefficient value of lending rate was -0.206267 meaning that increases in lending rate decreases manufacturing sector in Nigeria by -0.206267. It is statistically insignificant at 5 per cent level. Lending rate is expected to enhance manufacturing output but it did not give the nature of t-statistic value of -0.346216. This is not in line with economic theory and aprior expectation [31][32][33][34].

Interest Rate Spread and Manufacturing Sector Output

The coefficient value of interest rate spread was -0.346200 meaning that increases in interest rate spread by -0.346200 reduces manufacturing sector in Nigeria. It is statistically insignificant at 5 per cent level. Reduced interest rate spread is expected to enhance manufacturing output though the t-statistic value is -0.456200. This is in line with economic theory and aprior expectation [35][36].

Inflation Rate and Manufacturing Sector Output

The coefficient value of inflation rate was 0.091409 meaning that increases in inflation rate by 0.091409 increases manufacturing sector in Nigeria by 0.091409. It is statistically insignificant at 5 per cent level. Inflation rate is not expected to enhance manufacturing output given the nature of t-statistic value of 2.14316. This positive nature of the coefficients of inflation rate is in not line with economic theory and aprior expectation.

Liquidity Ratio and Manufacturing Sector Output

The coefficient value of Liquidity ratio was 0.431456 meaning that increases in liquidity ratio increases manufacturing sector in Nigeria by 0.431456. It is statistically significant at 5 per cent level. Liquidity ratio enhances manufacturing output given the nature of t-statistic value of 3.372167. This is in line with economic theory and aprior expectation.

Conclusions/Recommendations

Based on the foregoing, the followings are recommended:

An improved policy measure by Central Bank of Nigeria towards the control of inflation and, interest rate spread, increase lending rate, deposit money banks' credits to manufacturing sector and at same time reduce the inflationary pressure on manufacturing firms' profitability ability to meet contractual obligations

with the DMBs as at and when due is a sine-qua-non to growth. The Central Bank of Nigeria should immediately upsurge efforts towards increasing the quantum of intervention funds targeted exclusively to the manufacturing sector thereby boosting the sector access to credit, enhancing its productivity and boosting manufacturing output. The Central Bank of Nigeria (CBN) should as a matter of necessity increase deposit interest rate in order to inform individuals to save a greater portion of their income. This will enable financial institutions to boost their capacity to apportion more cash towards investment, thereby fostering manufacturing sector in Nigeria. Again, the Central Bank of Nigeria should ponder implementing a floating exchange rate system. This would allow the interplay of demand and supply forces to ascertain the exchange rate, while the government should provide a favourable climate that facilitates the productive operations of the real sector, hence fostering faster manufacturing output. Finally, government, Central Bank of Nigeria and policymakers should address the rising lending rate in real time by developing and implementing appropriate policies to regulate the lending rate in order to make the manufacturing sector more eye-catching for productivity and lessen the double figure inflation rate of the country.

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