## UKR Journal of Multidisciplinary Studies (UKRJMS)

Frequency: Monthly Published By UKR Publisher ISSN: XXXX-XXXX (Online) Journal Homepage: <u>https://ukrpublisher.com/ukrjms/</u> Volume- 1 Issue- 1 (March) 2025



### Bank Lending Financial Intermediation and the Performance of Manufacturing Sector BY

*Ehilegbu, Emmanuel Chidozie*<sup>1\*</sup>, Otokwala, James John<sup>2</sup>, Nsisong, Emmanuel Boniface<sup>3</sup> <sup>1,2,3</sup>MSc students in the Department of Finance and Banking, University of Port

### \*Corresponding author: Ehilegbu, Emmanuel Chidozie

# Abstract

Manufacturing output growth resulting from bank lending is of serious interest both in the literatures, the industry and the general economy. Against this backdrop our study seeks to investigate the empirical link between bank lending financial intermediation and performance of the manufacturing sector for the period running between 1980-2016. Data for the study are gathered from a secondary source in the Central Bank of Nigeria statistical bulletin. The method of ordinary least square technique is used to analyze dataset. The findings reveal that the two variables independently tested have positive effects on bank credit and manufacturing sector contribution to GDP. Bank deposits positively influenced credits disbursed to non-financial sectors of the economy which is predominantly to the advantage of real sector manufacturers. We therefore conclude that there is a positive and significant relationship between bank deposit and bank credit. There is also a positive and significant relationship between bank deposit and bank credit. There is also a positive and significant relationship between bank to domestic manufacturing industry in Nigeria. Lastly, supply-leading hypothesis is valid.

JEL Classification Numbers: G21, O4, L6

Keywords: Bank Lending, Gross Domestic Product, Manufacturing Sector.

# Introduction

Nigeria like every other sub-Saharan African country heavily relies on imports. The reason is simple and straightforwarddomestic productive capacity is very low which could be partly blamed on the weak level of industrialization. Improvements in industrial capacity requires sustained moderately risky credits capable of funding innovations and generate desired improvements in manufacturing home-made goods for sufficient internal consumption and export advantage. Since it is possible for small and medium scale business entity to grow, policymakers of past and successive governments have favoured the creation of favourable entrepreneurial climate for Micro, Small & Medium Scale Enterprises (MSMEs) to thrive. Adequate financing raises the working capital and operational efficiency of established firms and can in the long-run encourage arrival of new enterprises Uma (2001). Realizing the strategic importance of productivity, the government in Nigeria have created many options of capital formation techniques to raise volume of manufactures. Among them is establishment of development banks. Bank of industry, development bank of Nigeria and Federal mortgage bank of Nigeria as part federal efforts to use Development Finance Institutions (DFIs) as a vehicle to finance requisite capital factor for expanded outputs. DFIs consolidate with commercial banks to mobilize funding in a financial intermediation context. The corporate mandate of financial intermediation is mobilization of savings at cheapest cost for onward lending at a rate predetermined by regulatory financial institution or negotiated due to customer relationship with the banking firm. The banks are part of monetary entities with statutory duty of providing short term financing to borrowers. Money as stock in trade of finance is a commodity which could be sold at a cost and the price of a unit naira advanced by the banks to the deficit spending unit is its lending rate charged for using depositors' idle liquidity.

Manufacturing firms with growth prospects often find it difficult to raise debts from conventional commercial banks. As an alternative, Development bank of Nigeria is an institution set up to bridge the gap created due to inability of microfinance institutions, other development banks and deposit money banks being unable to satisfy the funding requirements of MSMEs in Nigeria (Development Bank of Nigeria, 2017). Highly developed level of productivity enhances job creation ability and reduces demand induced inflation on available goods and services. There are several opportunities to expand the Nigeria's manufacturing sector but the real obstacle is that investors have a problem of limited quantum of available external capital for injection into business ventures. Because of diminished level of manufacturing outlets there is little tendency to absorb the large size of the Nigeria workforce. Improved number of industrial clusters creates wealth as income per capita expands through moderate employment chances for individuals and further boosts tax revenue to the government.

Wealth creation in Nigeria and the Sub-Saharan Africa in general remains low even in this century where Eastern Europe and Latin Americans are turning emerging market and promising economic destinations for investments. The secret of economic strength of the developed world is traceable to the number of complex banking financial institutions which provide debt and equities at market cost. Availability of external funding, especially access to long-term credit influences firms' investments level in any economy, since credit is viewed as a productive input and policymakers believe that it is possible to promote specific economic activities by delivering pre-determined amounts of loans to producers (Uma, 2001).

Opinions on agents of output growth is highly disputed as observed from varying ideological propositions. For instance, Schumpeter (1934) in a supply leading hypothesis argues on the effects of bank lending on output growth. The author's proposition asserts that efficient allocation of savings through the identification and extension of credits to entrepreneurs with most probable tendency of successfully implementing innovative products and production process accelerates outputs growth in the long-run (Agbanike, Onwuka & Michael, 2016). McKinnon (1973) and Shaw (1973) opined that banks intermediation is a facilitator of technological innovation. Muchingami, Monametsi and Paradza (2017) in reference to Zimbabwe's experience accepts that bank lending plays a fundamental role in propelling the manufacturing sector performance through purchasing machinery required to boost production. Similarly, investigations and explorations by scholars in Japan, Germany, United States of America and Nigeria shows that banks loans boost manufacturing productivity which results in quantum leap of output of goods and services, high economic growth and better living standards (Anyanwu, 2000; Alao, 2010). Improvement on the level of investment in the manufacturing sector has suffered serious setback not because of unavailability of loanable funds in the banks but instability in bank lending rate is discouraging. However, this is no surprise because capitalconstrained firms from the time past to present indicates low output growth rate, have limited workforce and make few productive investments than firms utilizing debt in their capital structure (Schumpeter, 1934; Gurkinger & Baucher, 2007).

However, the extent to which supply leading hypothesis is valid in Nigeria is evidently controversial and remains a complete failure. Strategically the Central Bank of Nigeria (CBN) in her circular 27 1993 recognizes manufacturing as a priority sector which it has demonstrated by issuing directives to commercial banks to step up credit distribution to the tune of N 800 billion naira to operators in the sector for the last eight years for capital assets acquisitions to expand declining level of commodity development. on the contrary doubts persist that despite the effort impact of these intervention funds have not manifested in the sector's contribution to GDP (Toby & Peterside, 2014; Ekezie, 2006). Nevertheless, critics rather attribute manufacturing sector's low performance to banking business methods. Anyanwu (2000) argues that banks are answerable to low level investments owing to their lack of wiliness to make credits available to manufacturers, perhaps due to the mismatch between short-term nature of commercial banks' funds and the medium to long-term type of funds needed by the industries. Deposit money banks regulation and nature of business means it mobilizes savings from other economic units to lend short to enterprises which could find it difficult executing business plans prior to credit maturity and eventual payback. The banks guided by monetary policy rate fix lending rate which covers cost required rate returns. High lending rate makes borrowing a risky undertaking, thus negatively impacting on the expected level of capital formation in the economy. In order words debt financing is less popular for its obvious deficiency as regard to quick maturity of bank credits since sufficient capital formation is a matter of huge magnitude of wealth investments and extended maturity. Theorists identify costly nature of lending as a serious deficiency in boosting output level.

There is an absence of theoretical agreements in the literature whether manufacturing sector output position is a function of lending operations of banks in the economy. This scarcity represents a knowledge gap which our study intends to fill by using current domestic data to conduct evaluation. Moreover, further evidence is needed to confirm whether customer deposits are causal driver of bank credit to Nigerian manufacturing sector. The general purpose of this study is to investigate the effects of bank lending on the level of productivity in the manufacturing sector. The following null hypotheses guides our empirical investigations:

*HO*<sub>1</sub>: There is no significant relationship between bank credit to manufacturing sector and contribution of manufacturing to gross domestic product.

 $HO_2$ : There no significant relationship between bank deposit and bank credit to manufacturing sector.

This paper is structured into 5 sections. The next is section 2 on review of literature. In section 3, the research design analytical method of the study is presented. Section 4 contains empirical results and interpretation. The paper ends in section 5 as conclusion.

# 2 Literature Review

### 2.1 Historical Evolution of Bank and Conceptual Framework of Bank Lending

The primary reason for establishment of banking institution in the economy is to advance loans to investors who intend to build and maintain service and industrial centres. Formal banking business began around 1892 with the founding of African Banking Corporation (ABC) in Lagos part of colonial economic and development legacies. Chukwu (2010) observed that pioneer indigenous banks in Nigeria during colonial decades had economic impact. The banks provided necessary credit disbursement to African business persons. As a corporate body every bank gain by lending at a profitable cost to borrowers. Central Bank of Nigeria (2003) further clarifies lending concept as the amount of loans and advances given by the banking sector to economic agents constitute bank lending. Lending is not granted as soon as request is made it extends to systematic production and processing of information about investors and investment projects to enable efficient allocation of funds; to monitor investments and exert corporate governance after those funds are allocated; and to help diversify, transform, and manage risk (World Bank, 2009). Moderate conditions which greatly influence decisions such as the prevailing interest rate, the volume of deposits, the level of their domestic and foreign investment, banks liquidity ratio, prestige and public recognition must be certified prior to confirmation (Okoye & Richard, 2013). The rigorous procedure is necessary to prevent risk of default but where it eventually occurs alternative measure is undertaken to rescue the lending financing firm. As part of basic loan requirement regulators insist on provision of collateral with value equivalent to the size of the loan contracted. This is a safety measure to cushion the effects of loan loss. In another context Agbanike, Onwuka and Eyoghasim (2016) define lending as the link through which resources are transferred for capital formation, facilitates investment which leads to output growth.

### 2.2 Theoretical Connection Between Bank lending and Manufacturing Sector

Gerschenkron (1962) suggests that in developing countries, there is need for some special institutions to supply long-term funds for industrial capital, making the banks to be the prime sources of capital and entrepreneurship for the type of industrialization. In Gerschenkron's view Development Financial Institutions (DFIs) are necessary drivers of massive long-term investment that generates vital manufacturing outputs. Non-financial firms maintain and operate accounts with banks. As a relationship business, account holders constrained by liquidity could approach banking firm of choice to borrowed agreed amount. This is reflected in balance sheet as asset to the lending corporation. However, specific banks are for development purposes unlike several deposit money banks. Nigeria bank of industry transforms the country's industrial sector (Bank of Industry, 2016). Export-Import bank finances greater international transaction of the country. Accordingly, such nature of bank carries on the business of provision of export credit guarantee and export credit insurance facilities to its clients, provision of credit in local currency to its clients in support of exports as well as maintenance of a foreign exchange revolving fund for lending to exporters (NEXIM, 2016). Cotarelli (2005) in central European countries also identified long-term relations between bank credit to the private sector flow to manufacturing sector production and a set of economic and institutional variables in a panel of non-transition developing and industrialized countries. Cappiello, Kadareja, Saensen, and Patropapa (2010) established that bank loans and credit standard have an effect on output focusing on the Euro area such as Austria, Belgium, Greece, Ireland, Italy, Netherland, Portugal, and Spain. Result in the US is contrasting for instance changes in the supply of credit, both in terms of volumes and credit standards applied on loans to enterprises, have significant effects on real economic activities.

In some parts of the world with shallow financial system, distribution of bank deposits to firms operating in the sector is uneven and highly discriminating. Profitmaking orientation of banking business propels it to most often engage in adverse selection of risk in the course of converting liability to wealth. The credit cost is calculated as lending rate which permits borrowers to remit a fixed amount representing a percentage of total volume of deposits packaged for loaning. For maximum earnings from loan contract, Nigeria banks have the options of charging prime or maximum lending rate. The prime rate is the interest rate commercial banks charge their most credit worthy -customers which are mainly corporations. Prime rate is the most assured earning rate. It is lower in value compare to maximum rate. This is the most expensive of all rates, only high- risk profile borrowers accept terms. Insisting on maximum rate stagnates producing firms by imposing liquidity constraint. This is why even though banks with good financial depth are abundant in numbers activities in the manufacturing sector will remain slow. Prime rate in 2014 was 16.69 % while maximum rate worth 25.74% (Central Bank of Nigeria, 2014). The banks prefer credit costing using

maximum lending rate for micro small and medium scale enterprises which lenders consider very risky. Maximum lending rate is potentially uneconomical to borrowers and has turned away many businesses from making gainful improvements. There is need to speed up large scale production in Nigeria as a developing country. To achieve this attitude of banks towards smaller firms should be changed and loan conditions reduced form maximum growth.

#### 2.3 Theoretical Background of Lending Rate

Multiple lending theory states that banks should be less inclined to syndicate where there is availability of welldeveloped stock markets. Both outside equity and mergers and acquisitions increase banks' lending capacities, thus reducing their need of greater diversification and monitoring through share lending (Carletti, 2006; Ongene & Smith, 2000; Karceski, 2004; Degryse, 2004). This theory has a great implication for banks in Nigeria in the light of the recent 2005 consolidation exercise in the industry.

#### **2.3.1 The Signalling Arguments**

The signalling argument states that good companies should provide more collateral so that they can signal to the banks that they are less risky type borrowers and then they are charged lower interest rates. Meanwhile, the reverse signalling argument states that banks only require collateral and or covenants for relatively risky firms that also pay higher interest rates (Chodechai, 2004; Ewert and Schenk, 1998).

#### 2.3.2 Credit Market Theory

A model of the neoclassical credit market postulates that the terms of credits clear the market. If collateral and other restrictions (covenants) remain constant, the interest rate is the only price mechanism. With an increasing demand for credit and a given customer supply, the interest rate rises, and vice versa. It is thus believed that the higher the failure risk of the borrower, the higher the interest premium (Ewert, 2000).

#### **2.4 Empirical Reviews**

Several studies on bank lending have produced varying results, hence interpretation from various sources continues to differ and disagree. Evans and Adjei (2014) study the impact of high lending rates on borrowers' ability to pay back loans in the tamale metropolis of Ghana. The authors apply a crosssectional survey applied non-probability sampling method which is basically random sampling and convenience sampling methods. Evidence indicates that lending rate that is deemed acceptable by both borrowers and lenders was 25%. On the other hand, the respondents (borrowers) are also of the view that the current lending rate was rather too high. It was also found out that high lending rates affected borrowers' ability to pay back because they cannot make enough returns from their businesses to service their loans. Okoye and Richard (2013) specifically determine the effects of lending rate and monetary policy rate on the performance of Nigerian Deposit Money Banks. The result confirms that lending rate and monetary policy rates have significant positive effects on

the performance of Nigerian deposit money banks. Toby and Peterside (2014) analyse the role of banks in financing the agriculture and manufacturing sectors in Nigeria from 1981 -2010. Data were generated from the Central Bank of Nigeria Statistical Bulletin (2010) and analysed using both descriptive and inferential techniques. Two multiple regression models were estimated using the Software Package for social Sciences (SPSS). The tolerance values are greater than zero in the estimated models. The absence of multicollinearity among the independent variables (IVs) is further supported by an Eigen value that is less than 0.5. The descriptive results show that Nigeria's commercial and merchant banks lagged behind in financing agriculture when compared to manufacturing. Average bank credit to agriculture, within the period, ranged between 9.0% and 10.1%. Average bank credit to the manufacturing sector ranged between 32.0% and 36.8%. Within the period, average contribution of agriculture to GDP was 33.5% while contribution of the manufacturing sector to GDP averaged 5.4%. The inferential results show a significantly weak correlation between commercial bank lending and the contribution of agriculture to GDP. However, there is a significantly positive correlation between merchant bank lending and agricultural contribution to GDP. The beta coefficient shows that agricultural contribution to GDP increased significantly by 48.22% with a 100% increase in merchant bank lending to agriculture. With a 100% increase in commercial bank lending, the contribution of manufacturing to GDP declined by 27.32%. Ikenna (2012) has employed time series data from 1970-2009 on an Autoregressive Distributed Lag (ARDL) – Based Test Model to test for the long and short run impact of financial deregulation and the possibility of a credit crunch in the real sector. The results suggest that deregulating the Nigerian financial system had an adverse boomerang effect on the credits allocated to the real sectors in the long run whereas in the short run financial liberalization was in all insignificant and negative. The author further concludes that Deposit Money Banks (DMBs) in Nigeria have a strong discriminatory credit behaviour towards the real sector (agriculture and manufacturing) and the SMEs as credit crunch is found to be present in these sectors both in the short and long run. Akpansung and Babalola (2012) have demonstrated statistically that private sector credit impacts positively on economic growth in Nigeria, although lending rate impedes growth. Obamuyi et al. (2012) show that manufacturing capacity utilization and bank lending rates significantly affect manufacturing output in Nigeria. Modebe, Ugwuegbe and Ugwuoke (2014) use a multiple method including co integration approach to study investigated the impact of bank credit on the growth of Nigerian economy for the period of 1986-2012. ADF was used to determine the order of integration, and all the variables were found to be integrated of same order one I(1). The Johansen and Juselius cointegration test were employed and the result showed that there is at most one co-integrating equation in the model, implying that there is a long run relationship between the variables in the model. The result of the OLS regression showed that there is a negative and significant relationship between GDP and TBCPS in the long run. M2 which was used as control variable has a positive and significant impact on GDP at the long run. The ECM showed that 24.03% of the

disequilibrium will be corrected yearly. The short run dynamics of the variables indicates that TBCPS also have a negative and insignificant impact on GDP at the short-run. The result of the granger causality test reveals causation running from GDP to TBCPS and not the other way a case of unidirectional causality. The result also shows bidirectional causality between TBCPS and M2. Mishra et al (2009) examined the direction of causality that runs between credit market development and the economic growth in India for the period 1980 to 2008. Application of Granger Causality Test provided the evidence in support of the fact that credit market development spurs economic growth. The empirical investigation indicated a positive effect of economic growth on credit market development of the country. Kayode et. al (2010) investigate the effect of bank lending and economic growth on the manufacturing output in Nigeria. Using the times series data which covered a period of 36 years (1973 to 2009). The paper analytical technique is the co- integration and vector error correction model (VECM) estimators. The empirical outcomes of the study show that production volume as proxy for manufacturing vis-à-vis bank rate for lending significantly affect manufacturing output in Nigeria.

#### **3 Research Design and Analytical Method**

Social sciences investigations typically involve utilization of partial experimental methods on social variables. Therefore, for the reason of the behaviour of study elements only the quasi-experimental design is fitting. The data in this study is extracted from printed source. The printed data source refers to statistically documented economic activities over the years of study period. Due to their secondary nature, they are found in the Central Bank of Nigeria (CBN) statistical bulletin. Several factors influence bank lending decisions. The quantitative data are: manufacturing sector contribution to GDP, bank credit to manufacturing sector, bank deposits wherein each series covers period of 1980 to 2016. The analytical technique of this study is the Ordinary Least Square (OLS). The reason for the preference is subject to the Gauss Markov theorem which confers the OLS its reliability and validity status as the Best Linear Unbiased Estimator (BLUE). Best linear unbiased estimator means that the result of the estimation has minimum variance. The OLS proves that a dependent variable is a linear function of selected independent variables in a model specification.

Model specification involves the establishment of a line or non-linear relationship between the dependent and explanatory variables to be included in the model. The study is multivariate with several variables to be regressed against the predicted variable. Multiple regression allows for more flexibility. It incorporates fairly general functional form relationships (Wooldridge, 2006). We create an equation to show that manufacturing sector output is influenced by magnitude of bank credits. On the other hand, bank deposit exerts influence on credit disbursed by the banking firms. The model specification is written as follows;

 $BCM = \beta_0 + \beta_1 Bankdeposit + \varepsilon_t$ (1)  $MANGDP = \beta_0 + \beta_1 BCM + \varepsilon_t$ 

Where, *BCM* represents bank credit to manufacturing. MANGDP implies Manufacturing sector contribution to GDP,  $\varepsilon_t$  depicts error term. We set the hypothesis at 0.05 significant level. Where the probability statistic is greater than 0.05 level of significance (p > 0.05) the null hypothesis will be accepted and the alternate H<sub>A</sub> rejected. However, where the probability statistic is less than 0.05 level of significance (p < 0.05), the null stands unaccepted and the alternate unrejected.

#### **4** Empirical Results and Interpretation

Table 1: Banking credits to Manufacturing and Manufacturing Contribution to GDP Regression

Panel A: Bank Credit to Manufacturing			Panel B: Manufacturing Contribution to GDP				
Dependent Variable: Bank credits Method: Least Squares Date: 11/11/20 Time: 12:54 Sample: 1980 2016 Included observations: 36			Dependent Variable: MGDP Method: Least Squares Date: 11/11/20 Time: 10:11 Sample: 1980 2016 Included observations: 36				
Variable	Coefficient Std. Error t-Statistic	Prob.	Std. Variable Coefficient Errort Statistic Prob				
C Bank Deposit	741.1672410.91781.1368870.4702560.0648266.020063	0.2664 0.0000	C 34.731892.506665 5.876894 0.0000   Bank Credits 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 <td< td=""></td<>				
R-squared	0.591778 Mean dependent var	1856.900	to Manufacturing 0.4230430.004791 2.930992 0.0071				

Copyright © 2025. UKR Publisher

Adjusted R-			Sector			
squared	0.575449 S.D. dependent var	2710 964	Beetor			
S.E. of		2/10.201	R-squared	0.754321	Mean dependent var	19.54804
regression	1766.399 Akaike info criterion	17.86246	Adjusted R-			
Sum			squared	0.625977	S.D. dependent var	11.17931
squared			S.E. of			
resid	78004103 Schwarz criterion	17.95845	regression	9.835399	Akaike info criterion	7.481040
Log	Hannan-Quinn		Sum squared			
likelihood	-239.1432criterion.	17.89100	resid	2418.377	Schwarz criterion	7.577028
F-statistic	36.24116 Durbin-Watson stat	1.661281			Hannan-Quinn	
Prob(F-			Log likelihood -98.99404criter.			7.509583
statistic)	0.000003		F-statistic	8.590713	Durbin-Watson stat	1.103643
			Prob(F-			
			statistic)	0.007123		

From the table 1 above the coefficient of bank deposit is a positive value of 0.47025. The implication is that a one percent increase in bank deposit raises the value of bank credit to manufacturing sector by approximately 47.0 per cent (table 1, panel A). This is in line with expectation. Both variables are said to move in similar direction, thus, there is a positive impact of bank deposit on bank credit to manufacturing sector. In other words, growth in the level of bank deposits translates into expansion in the size of manufacturing sector investment credits facility. The value of R-squared is 0.591778 which means that bank deposit can predict approximately 59.18 percent changes in bank credit to manufacturing sector other things being equal. However, the outstanding changes are explained by the stochastic term which captures both quantitative and qualitative factors capable of disturbing and making exerting influence on the variation observed in manufacturing sector credit. In addition, the probability statistics of bank deposit is 0.000 which is less than 0.05 level of significance. By decision rule the alternate hypothesis is accepted while the null hypothesis is rejected. There is a significant relationship between bank deposit and bank credit to manufacturing sector both at 5 and 10 per cents respectively.

The coefficient of bank credit to manufacturing sector is 0.4223043 which is positive and conforms to economic expectation. This conforms to Kayode *et. al* (2010) finding. The result implies that a unit percent increase in the level of bank credit to manufacturing sector increases manufacturing outputs and overall contribution to GDP by approximately 42.23 percent. The result shows that contribution of manufacturing to GDP depends on the value of credits. It also shows that gross domestic product contains almost half of manufacturing output.

Considering the suitability of the model, a coefficient of determination is estimated using the value of the R-squared whose estimate is 0.754321 (approximately 75.4 per cent). This means bank credit to manufacturing sector can explain approximately 75.4 per cent changes in manufacturing sector output to GDP. This underscores the importance of bank credit

intermediation in the economy. However, there are other unidentified factors capable of causing change in manufacturing sector contribution to GDP but treated as part of a stochastic disturbance term. The probability statistic of bank credit to manufacturing sector is 0.0071 which is less than 0.05 level of significance. According to decision criteria p-value of 0.0071 < 0.05 validates acceptance of alternate hypothesis. We find that bank deposits have positive effects on bank credit. This means rising bank credit is a consequence of expanding deposits. This we could observe from the steadily rising trend of the variables. The bank deposit effects on bank credit could be a consequence of improved developments in the banking industry and moderate increase in the banking culture of the public. The result further reveals a positive impact on manufacturing as a ratio to GDP through credit supply, hence, supply-leading hypothesis is valid.

#### **5** Conclusion and Suggestions

This paper investigates bank lending financial intermediation as relationship to manufacturing sector productive contribution to economic in Nigeria. Our study demonstrates that financial intermediation plays vital role in the improvement of outputs through the channel of manufacturing sector contribution to GDP. From statistical estimation, economic theoretical parameters coupled with all tested hypotheses complied significantly with plausible expectation. In fact, supply-leading hypothesis is confirmed and concluded to be existing in the financial intermediation of bank corporations in Nigeria. Specifically, there is a positive and significant effect of bank deposits on bank credits to manufacturing sector ratio to GDP. There is evidence of a positive and significant effect of bank credit vis-à-vis manufacturing sector contribution to gross domestic product.

Consequently, growth of the manufacturing sector requires large fund investment in the real sector of the economy. This study stands to assume that only the banks by their financial sector prominence are largely tasked to channel sufficient funds to finance real productivity but this depends to a large extent on the quantum of deposits mobilized by the banking firms from the public and the wiliness to lend at a giving rate. If consumers surplus wealth can be effectively mobilized the cost of money supply will decline for profitable investments. We could suggest that there should be compelling directives by the central bank to deposit money banks to step up credit lending to manufacturing sector. It is worthy of note to advise that maximum lending rate should not exceed single digit. This will make investment less risky to borrowers and to improve on credit demand of different investor class. The banks should thoroughly market and remarket the public so that more deposits will flow to the banking firms and away from individual hands. This will increase the deposits for strengthening credit making ability, thus, producing optimal benefits to manufacturers production.

# Reference

- Agbanike, T.F., Onwuka, K.O & Eyoghasim, M. (2016). Bank lending and output growth in Nigeria. *Journal of economics and sustainable development*, 7(7).
- Agbanike, T.F; Onwuka, K.O & Eyoghasim, M (2016). Bank lending and output growth in Nigeria. *Journal of economics and sustainable development*, 7(7).
- 3. Akpansung & Babalola (2009). Banking Sector credit and economic growth in Nigeria: An empirical investigation. *CBN Journal of Applied Statistics*, 2(2).
- 4. Alao, R.O. (2010). Productivity in the Nigerian Manufacturing Sub-Sector. *European Journal of Economics, Finance and Administrative Sciences 20.*
- 5. Bank of Industry (2016). Annual report and accounts.
- Anyanwu, C.M. (2000). An Overview of Current reforms and the real Sector of the Nigerian Economy. *CBN Econ. Financial journal*, 48(4), *December*, 2010.
- Cappiello, L. A. Kadareja, C.K. Saerensen & M. Protopapa, (2010). Do bank loans and credit standards have an effect on output? a panel approach for the Euro Area. *European Central Bank Working Paper Series, No 1150 / January.*
- Carletti, E., Cerasi, V. & Daltung, S. (2006). Multiple-Bank Lending: Diversification and Freeriding in Monitoring, *Working Paper*, Department of Statistics: Universita degli Studi di Milano-Bicocca. *International Journal of Financial Research* 2(2),34-54.
- 9. Central Bank of Nigeria (2014). *Statistical Bulletin*. CBN Press, Abuja.
- Chodechai, S. (2004). Determinants of Bank Lending in Thailand: An Empirical Examination for the years 1992 – 1996, Unpublished Thesis.
- 11. Chukwu, D.O. (2010). The Economic Impact of Pioneer Indigenous Banks In Colonial Nigeria, 1920

- 1960. Journal of the Historical Society of Nigeria, 19 (2010), 93-109.

- Degryse H., Masschelein, N. & Mitchell, J. (2004). SMEs and Bank Lending Relationships: the impact of mergers. *National Bank of Belgium Working Paper*, *No. 46.*
- 13. Development Bank of Nigeria (2017). Annual Reports as at 31 December.
- 14. Ekezie, E.S. (2006), *The Elements of Banking, Money, Financial Institutions and Markets*, (Owerri: Africana First Publishers).
- 15. Ewert, R. & Schenk, G. (1998). Determinants of bank lending performance. Working Paper, Center for Financial Studies, University of Frankfurt. World Bank working paper series, 500p.
- Ewert, R., Szczesmy, A. &Schenk, G. (2000). Determinants of bank lending performance in Germany. *Schmalenbach business review* (SBR), 52, 344 – 362.
- Gerschenkron A. (1962). Economic Backwardness in Historical Perspective: A Book of Essay; Cambridge, Mass; Harvard University Press.
- 18. Guirkinger, C. & Baurcher, S. (2007). Credit Constraints and Productivity in Peruvian Agriculture. University of California, Department of Agriculture and Resource Economics, Working Paper No.07-005.
- Ikenna, O.D. (2012). Financial deregulation bounding to credit mobilization in Nigeria: A case for the real sectors and SMEs. *Journal of Humanities and Social Science*, 5(5), 40-59.
- Karceski J., Ongena, S. & Smith, D.C. (2004). The impact of bank consolidation on commercial borrower welfare. *Journal of Finance*, 60(4), 2043-2082.
- Koutoyiannis, A (1977). Theory of econometrics: an introductory exposition of econometric methods 2<sup>nd</sup> ed. Palgrave Macmillan.

- Machmias, C. & Nachmias, D. (1982). Research methods in the social sciences: Alternate 2<sup>nd</sup> ed. without statistics. Edward Arnold.
- 23. McKinnon, R. (1973). Money and Capital in Economic Development. *The Brookings Institution, Washington D.C*
- 24. Modebe, N.J., Ugwuegbe, S.U., & Ugwuoke, R.O. (2014). The impact of bank credit on the growth of Nigerian economy: A Co Integration Approach. *Research journal of finance and accounting 5(10).*
- Muchingami, L., Monametsi, G.L & Paradza, I. (2017). Bank lending and manufacturing sector growth in Zimbabwe. *International journal of innovative research in science, engineering and technology* 6(4).
- 26. NEXIM (2016). Nigeria Export-Import bank report of the directors and audited financial statements for the year ended 31 December 2016.
- Obamuyi, T.M. Adebisi, T.E. & Edun, O.F. (2012). Bank lending, economic growth and the performance of the manufacturing sector in Nigeria. *European Scientific Journal*, 8 (3), 19-36.

- Okoye, V & Richard, E.O. (2013). Effect of bank lending rate on the performance of Nigerian deposit money banks. *International Journal of Business and Management Review 1(1), 34-43.*
- 29. Schumpeter. (1934). The theory of Economic Development. Repr., Cambridge, MA: Harvard University Press.
- Shaw, E. S. (1973). Financial Deepening in Economic Growth. New York, Oxford University Press
- 31. Toby, A.J., & Peterside, D.B. (2014). Analysis of the role of banks in financing the agriculture and manufacturing sectors in Nigeria. *International journal of research in business management*, 2(2).
- 32. Uma, S. (2001). Problems and prospects of priority sector lending by commercial banks: A case study of small- scale industries in Bangalore District. An Unpublished PhD Thesis, University of Mysore, Bangalore.
- Wooldridge, J.M. (2006). *Introductory Econometrics*. A Modern Approach, 3<sup>rd</sup> ed. Thomas South-Western.