

Commercial Bank Credit and Its Contributions on Manufacturing Sector In Nigeria

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ABSTRACT

The main aim of this study was to determine how commercial bank credit can influence manufacturing sector in Nigeria. The study shows that commercial bank credit if well channeled to the worthy customers or sector will enhance economic growth in Nigeria. The objective of the study was to investigate the impact of commercial bank loans on manufacturing sector and to establish the relationship between interest rate and manufacturing sector performance. Secondary source of data was employed using Central bank statistical bulletin. Ordinary least square of multiple regression model was used to establish the relationship between dependent variable and independent variables. The finding revealed that commercial bank credit had a significant relationship on manufacturing sector. It was recommended that government should endeavour to ensure that there are available and sufficient credit allocated to the manufacturing sector in Nigeria with reasonable or affordable interest rates, and for Nigeria to meet its millennium goals, she will have to depend on productive and services produced within her boundaries.

Keywords: Aggregate credit, Bank credit, Commercial bank rate, Interest rate, Lending rate

1.0 INTRODUCTION

1.1 Background of the study

Manufacturing sector plays catalytic role in a modern economy and has many dynamic *benefits crucial for economic* transformation. In a typical advanced country, the manufacturing sector is a leading sector in many respects. It is an avenue for increasing productivity related to import replacement and export expansion, creating foreign exchange earning capacity; and raising employment and per capita income which causes unique consumption patterns. Furthermore, it creates investment capital at a faster rate than any other sector of the economy while promoting wider and more effective linkages among different sectors. In terms of contribution to the Gross Domestic Product (GDP), the manufacturing sector is dominant and it has been overtaken to the services sector in a number of organization for Economic Co-operation and Development (OECD) countries (Anyanwu, 2003).

Before independence, agricultural products dominated Nigeria's economy and accounted for the major share of its foreign exchange earnings. Initially, inadequate capital investment permitted only modest expansion of manufacturing activities. Early efforts in manufacturing sector were oriented towards the adoption of an import substitution strategy in which Light Industry and assembly related manufacturing ventures were embarked upon by the formal trading companies up to about 1970, the prime mover in manufacturing activities was the private sector which established some agro-based Light manufacturing units such as vegetable oil extraction plants, turneries tobacco processing, textiles, beverages and petroleum products. The strategy of light and assemblage manufacturing shifted somewhat to heavy industries from the period of the Third National Development Plan (1975-1980) when government intervened to establish Core Industrial Plants to provide basic imports for the downstream industries. The import dependent industrialization strategy virtually came to a halt in the late 1970s and early 1980s when the Liberal Import Policy expanded the imports of finished goods to the detriment of domestic production (Ariyo, 2005)

In this regard, industrialization constitute a veritable channel of attaining the lofty and desirable conception and goals of improved quality of life for the populace. Thus, in a supportive mood, Lovis (1967), assumes that in any economy, one or more sectors serve as a prime mover moving the rest of the economy forward. The role of engine of growth or leading sector has usually been played by industrial sector under the industrialization process.

Against this background, industrialization involves extensive technology based development of the productive (manufacturing) system of an economy. Thus, the development of the industrial sector represents the deliberate and sustained application and combination of suitable technology, management techniques and other resources to move the economy from the traditional low level of production to a more automated and efficient system of mass production of goods and services. Arising from the foregoing affirmed centrality of industrialization as a pivot of economic growth and development, industrialization process seems to be the main hope of most

developing countries such as Nigeria with a large population and a larger labour force. In spite of these aspiration which ought to have favoured effective industrialization process in an economically conducive manufacturing environment, most of these results as reflected in the performance of the manufacturing sector remain socio-economically undesirable. Against this back drop, current economic planning and policy instruments are diverted of the development of the key productive sectors, particularly manufacturing and commerce for the promotion of an increasing pace of industrialization in Nigeria.

In recognitions of this potential roles of the sector, successive governments in Nigeria have continued to articulate policy measures and programmes to achieve industrial growth incentive and adequate finance. The central goal of government policy was to foster growth in the manufacturing sector. Over the years, and largely in response to some of the previous policy strategies, the main features of the Nigerian manufacturing sector in demerged.

The role of bank credits in the growth of manufacturing sector cannot be overemphasized. For instance, the Federal Government's Appropriation Bill for the year 2005 has as one of its broad policy objectives to achieve a high economic growth rate i.e. GDP of at least 5%) through a better mobilization and prudent use of economic resources. This objectives is not achievable without significant levels of resources from the financial sector being mobilized and deployed to finance business expansion and growth. Banks have to be effective intermediaries for mobilizing and channeling deposits to the productive sectors of the economy especially the manufacturing sector.

1.2 Statement of the problem

Manufacturing sector plays a catalytic role in a modern economy and has many dynamic benefits crucial for economic transformation. It is a leading sector in many respects. It is an avenue for increasing productivity related to import replacement and expansion, creating foreign exchange earning capacity; and raising employment.

In spite of it continuous policy strategies to attract credits to the manufacturing sector, most Nigerian manufacturing enterprises have remained *unattractive* for bank credits. For instance, as indicated in Central Bank of Nigeria (CBN) reports, almost throughout the regulatory era, commercial bank's loans and advances to the manufacturing sector deviated persistently from prescribed minima. Furthermore, the enhanced financial intermediation in the economy following the financial reforms of the 1990's notwithstanding, credits to manufacturing as a proportion to total banking credits has not improved significantly averaging 15.7% between 1990 and 1994, and 25.8% between 1995 and 2000. Consequently, many manufacturing firms in the country have continue to rely heavily on internally generated funds which have tended to limit their scope of operating. The major problem facing the Nigerian manufacturing sector is having inadequate finance for investment. Because of the low level of income of this, saving is very low. The broad objectives of this study is to evaluate the impact of commercial bank credit on the manufacturing sector in Nigeria. The specific objectives are:

- 1) To investigate the impact of commercial bank loans on manufacturing sector.
- 2) To establish the relationship between interest rate and manufacturing sector.

2.0 REVIEW OF RELATED LITERATURE

2.1 Theoretical Framework

2.2.1 Loan Pricing Theory

Banks cannot always set high interest rates. Banks should consider the problems of adverse selection and moral hazard since it is very difficult to forecast the borrower type at the start of the banking relationship (Stiglitz and Weiss, 1981). If banks set interest rates too high, they may induce adverse selection problems because high-risk borrowers are willing to accept these high rates. Once these borrowers receive the loans, they may develop moral hazard behavior or so called borrower moral hazard since they are likely to take on highly risky projects or investments (Chodecai, 2004). From the reasoning of Stiglitz and Weiss, it is usual that in some cases we may not find that the interest rate set by banks is commensurate with the risk of the borrowers.

2.2.2 Firm Characteristics Theories

These theories predict that the number of borrowing relationships will be decreasing for small, high-quality, informational opaque and constraint firms, all other things been equal (Godlewski and Ziane, 2008).

2.2.3 Theory of Multiple-Lending

It is found in literature that banks should be less inclined to share lending (loan syndication) in the presence of well-developed equity 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 and 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.

2.2.4 The Signaling Arguments

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

2.2.5 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).

2.2 Conceptual Clarification of Interest Rates

Interest rate is the amount of interest paid per unit of time expressed as a percentage of the amount borrowed. The cost of borrowing money, measured in naira, per year per naira, borrowed is the interest rate. Interest rates differ mainly in term/maturity. When maturity and liquidity together with other factors are considered, many different financial instruments and so many different interest rates will emerge (Anyanwu, 1997).

Interest rates can either be nominal or real. Nominal interest rate can be measured in naira terms, not in terms of goods. The nominal interest rates measures the yield in naira per year, per naira invested while the real interest rate is corrected for inflation and is calculated as the nominal interest rate minus the rate of inflation (Pandey, 1999).

2.3 Interest Rate Charged on Borrowers

There are daily reports of how Nigerian bank rip off their customers through various charges and practices. Often times, customers complain and cry out for appropriate regulatory intervention. Unfortunately, their complaints seem to fall on deaf ears, because they are unaware of any positive regulatory action in response thereto. Emboldened by regulatory inaction and indifference (which suggest tacit approval), many Nigeria banks now engage in more exploitative practices. The categories of such predatory bank practices are unfolded daily.

Normally, when a customer secures loan from a bank, the latter fixes a negotiated lending rate based on the prevailing interest rate approved by the apex bank. Any change in the interest rate should be brought to the notice of the borrower except otherwise agreed. In Nigeria, however, the lending rate is rarely negotiated and, when it is reviewed upwards by the Central Bank of Nigeria (CBN), the average bank automatically applies the new rate to the outstanding loan without notifying the borrower (Okafor, 2011). Ironically, the same bank hides the fact of any downward review of the lending rate from its mostly uninformed customer, thereby illegally subjecting the customer to a higher interest regime.

Often, what the bank staff present to a prospective borrower during loan negotiations as the total charges become hydra-headed once he swallows the bait. While processing loans, Nigerian banks impose on borrowers both "processing" and "administrative" fees which are duplicates. Again, they charge borrowers and corporate customers higher than what they pay lawyer to conduct searches at land and company registries. We believe that the interest rates Nigerian banks display at their offices and report to CBN per Section 23 of the Banks and Other Financial Institutions Act (BOFIA, Chapter B3, Laws of the Federation of Nigeria 2004) are different from what most of them impose on customers. To verify this, CBN may wish to randomly obtain and examine depositors/borrowers account statements from banks.

2.4 Credit Policy Variable Analysis

Writing on the issue of credit policy variable analysis, Pandey (2000) said that "Before a financial manager decides to grant credit to customers, he has to consider some variables that are of relevance to be put into analysis in order to achieve the objectives of the firm's credit policy". Those variables go a long way in influencing the level of receivables which will accrue to the firm. Some of the variables include:

2.4.1 Credit Analysis

In order to make sure that credit will be granted to credit worthy customers, the financial or credit manager should be able to source enough information about the customers to enable him differentiate between customers that will not pay and customers that will pay. This information can be sourced from the following:

- a. A financial statement of a customer can be demanded from him, which will be analyzed to ascertain his credit worthiness.

- b. Credit report on customer's payment history with other firms may serve as good source of credit information.
- c. Banks do provide some information or assistance to their business customers to the credit worthiness of some firms.
- d. The selling firm can also make sure upon the customers payment history in the past to determine its credit worthiness in the present.

2.4.2 Credit Scoring

After gathering all relevant information about these customers, the credit or financial manager may decide to grant or not to grant any credit. Keplan (1998) noted the use of "five C's of credit" to estimate the profitability of default in order to advert default risk which are as follows:

Character: The customer's willingness to settle his obligations when they are due to be put into consideration because it determines default rate.

Capacity: This is the ability of the customer to settle his financial obligations when they fall due. This is determined by analyzing the firms operating cash flows.

Capital: The financial reserve of a customer goes a long way to tell if he is able to meet his credit obligation when they become due.

Collateral: Most times, a firm may pledge as asset in the case of default. Such as asset has to be evaluated to know its worth in case there was a default.

Condition: A credit or financial manager should be able to assess the extent to which a customer's ability to pay is likely to be affected by the prevailing economic decisions.

2.4.3 Collection Policy and Procedures

A collection is necessary since all customers do not pay their bills the same time, while some customers pay promptly, others are slow payers. Collection efforts should be focused on accelerating collection from slow payers thereby reducing bad debts losses. Pandy (2005), asserts that, prompt collection is needed for fast turnover of working capital; keeping collection costs and bad debts within limits and maintaining collection efficiency. A collection policy should lay down a clear cut collection procedure. The procedures should be followed with tact to avoid losing some customer to other competitors by covering overdue accounts. Firms should start early enough to collect his accounts from customers and it should be known that it is the duty of the firm to remind debtors to pay their due accounts.

2.4.4 Establishing Internal Collection Procedure

Firms often have varying collection procedures for different customers or creditor. Just as they have different policies for different customers but all these depends mostly on the prevailing economic conditions and credit worthiness of each customer. Nevertheless, a carefully planned collection procedure is essential for consistent treatment of credit accounts.

Thus, according to Ibid (2005), he identified some internal collection procedures such as:

Prompt Action:

The time frame between sales and payment should not be stretched to avoid growth of accounts receivable. It also increases the risk of uncollectible accounts. So the best time to collect overdue accounts is as soon as it was overdue.

Delinquency Charges:

To hasten the payment of debts on the side of debtors, a certain percentage of the outstanding credit is charged on overdue balances.

2.5 Financing other Sectors in Nigeria

Finance is one input required for agricultural development as it represents the power to purchase all other inputs and thus, it is not the single determinant of the level of development in agriculture.

Several studies have been carried out on commercial banks and the finance of agriculture in the country. According to Elegham (1983), the availability of credits to local farmer pose a serious problem. This is because of the rate in the increase of defaulting cases among small farmers. Tims (1974) also revealed that commercial banks in Nigeria were willing to grant to large-scale farmers because it has noticed that mall farmers default. Mostly in the act of loan repayment, they also have no provision for collateral security required by banks. It is in light of this that the government has always maintained that commercial banks should not neglect agricultural and allied activities since they are the Chief agent of mobilization of savings.

Notwithstanding the unsuitability of commercial banks for financing agricultural in general and small-scale farmers in particular, studies carried out by Akinwole (1985), Osuntogu (1973) and Ijere (1975) pointed out the need for raising the volume of loan resources available to the credit constitutions? So as to permit

increase in lending to the individual borrowers. However, Ogunfowora (1972) attribute most of the shortcomings and institutional credits in Nigeria to facts such as; ineffective supervision or monitoring, insufficient funds, political interference, cumbersome and time consuming loan processing and gearing absence of financial projections.

The importance of project supervision or monitoring of facilities is to ensure that all condition attached to the approval of credits facilities are complied with. Credit Supervision is also aimed at identifying emergent problems before they got out of control. Problems detected earlier through warning signals could be easily solved to avoid total loss of the project.

Agricultural facilities granted are closely monitored. This is occasioned by the nature of the industry, especially the production aspect that is highly risky because of its precarious nature.

Agricultural facilities are also known to be specific-purpose oriented i.e. planting, fertilizing, harvesting and transporting etc. As a result of follow-up facilities, the indications of possibility of default (usually) referred to as “danger sign” of default are easily detected, a current finding in the view on bank credit management.

2.6 Determinants of interest rates in Nigeria

According to Udoka, Anyingang, & Tapang (2012), Interest rate is determined by the following factors:

- (i) The investment demand: The higher the level of investment demand the higher the level of interest rates. On the other hand, the lower the investments demand, the lower the level of interest rates.
- (ii) The level of savings (or conversely the level of consumption): The higher the level of savings the lower the interest rate while, the borrower the level of savings, the higher the level of interest rates,
- (iii) Demand for money or the liquidity preference: The higher the money demand, the lower the interest rate while the lower the money demand the higher the interest rates,
- (iv) The quantity of money or money supply: In the Keynesian parlance as we increase money supply the interest will reduced.

2.7 Commercial Bank Credit and Economic Development

Essang and Olajide (1974:21) define a commercial bank as a monetary institution owned by either government or private businessmen for the purpose of profit. In pursuit of the profit, the bank undertakes a number of functions. One of these functions is the acceptance of deposits from the public, there deposit are in turn given as credit to trade industry, agriculture etc, which lead to more production and employment (Stephen and Osagie, 1985; Ekezie, 1997; Ijaiya and Abudulraheem, 2000).

To Aryeety (1996) credit is the amount extended out with a future date of payment. The NDIC prudential guide lines of 1990 however, provides a wider of credit, and this includes aggregate of all loans, advances, overdrafts, commercial papers, Banker acceptance, bills discounted. Leases and guarantee (NDIC, 1990).

Muftau (2003), on the other hand, defines agricultural credit granted to farm and ranch operators to assist in planting and harvesting crops to support the feeding and care of livestock. Credit to agricultural sector could take the form of an overdraft, short-term, medium- term or long-term depending on the purpose and gestation period of the project. Such credits granted to framers to purchase inputs are paid directly to the suppliers who must furnish the bank with evidence of delivery. This is done to avert diversion of fund, which is common with Nigeria Farmers.

Discussing the importance of credit to agricultural sector, Nzotta (1999) posited that it reactivates, expand or modernizes all types of agricultural enterprise which are considered economically feasible and desirable to the achievement of stated economic goals of self-sufficiency in agricultural production. While Qureshi, et al (1996) reported that such credit removes financial constraints faced by farmer, as it provides incentives to adopt new technologies that would otherwise be more slowly accepted. Thus, the availability of credit enables farmers to switch quickly to new technologies which enable the achievement of a rapid productivity and growth.

According to Ijere (1996) “Credit can be considered from its ability to energize or motivate other factors of production. For example, it can make the latent, potential or under-used capacities functional. He further said that credit act as a catalyst that activates the engine of growth enabling it to mobilize its inherent potentials and to advance in the planned or expected direction. It follows, therefore, that the greater the influx of capital, the more the propensity of the economy to move in its given path. As summarized by Fosu (1992) Amin (1996), Umoh (2003) “Credit thus constitutes the power or key to unlock latent talents, abilities, vision and opportunities, which is turn act as the mover of economic development.

Contributing to the argument about Commercial bank Credit and agricultural output, wells (1970) confirms that commercial bank credit contributions to economic development by enhancing production and productivity and thus higher income and better quality life for people.

Agricultural credit in Nigeria dates back to the 1930s but organized credit to farmers did not start until 1972 when the Nigeria Agricultural and Cooperative Bank (NACB) were established (Ajakaiye, 1984). He further said that agriculture is the largest sector of Nigerian economy, though its contribution to the Gross Domestic Product (GDP) has declined from 67% in 1950 to 18% in 1980.

According to the Federal Ministry of agriculture publication (1980), 58% of farming-related borrowings was obtained from family and friends; 24% from professional private money lenders, 15% from merchant and only 3% from commercial banks and other institutional sources. As Garba (2000) noted, they are grossly, inadequate and unsatisfactory for the credit needs of the farmers. Thus, there is the need for larger credit sources.

The importance of bank credits to agricultural production is well established in many countries. In the study by Sohail (1991) on the relationship between bank credits and agricultural outputs in Pakistan, they found out that a statistical significant relationship existed between bank credit in Pakistan and the agricultural outputs.

Moreover, Yaron (1997) also argued that directed credit programmes were associated with the adoption of modern technologies such as green-houses in Morocco and tube wells in North West Bangladesh and these innovations were associated with increase in production gains in the agricultural sector.

May (1970) reported that countries that emphasized the agricultural sector ended up with faster industrial growth than those that focused on industries alone? Hence, agricultural sector may therefore be the faster road to industrialization. Emmanuel (2008) carried out a study on the impact of macroeconomics environment on agricultural sector growth in Nigeria. The macroeconomic policies included in the model are: credits to the agricultural sector, nominal interest rates on the loan, exchange rate, world prices of agricultural produce, foreign private invest-government expenditure and inflation rate. Using multiple regression analytical technique (ordinary least square), he discovered that nominal interest rate is positively related to the index of agricultural production. This implies that at higher nominal interest rate, more credit facilities are made available to the operators of the Nigerian agricultural sector, but at lower nominal interest rate, credit facilities are no more widely available. The index of agricultural output is also positively related to world prices of Nigeria major agricultural commodities. This implies that better world prices enhance agricultural output growth in Nigeria. Similarly, the index of agricultural production was positively related to government expenditure on agricultural. Moreover, it was discovered that the index of agricultural production is negatively related to the level of inflation, implying that as inflation becomes high, and the index of agricultural production declines. He thus recommends that macroeconomic policies that enhance favourable exchange rates, make agricultural credit widely available at low interest rate, reduce the rate of inflation, increase foreign private investment in agriculture, would not fortify government investment in the sector but would be invaluable in supporting agricultural output growth in Nigeria.

Johnson (1975) studied Japanese industrial development and concluded that without the prior increase in agricultural productivity, the financing of Japanese industrial development would not have been possible. He also compared USSR to Japan in terms of their decision on industry and agriculture. During the decade following 1929, the USSR concentrated its attention upon industrialization and fought its peasants instead of teaching them how to increase output per acre. This led to tremendous price inflation, but during the 30 years preceding World War 1, the Japanese were more sensible. Overall, their output increased just as rapidly as that of industry and agriculture. Thus, supply of savings from agriculture was the critical factor in Japans rapid industrialization and this is often understood as the main reason why she succeeded in her supplying herself the necessary investment funds in the early stages of industrialization (Binswanger, 1989).

The experience of Japan shows that appropriate expenditure by government (on agricultural research, extension credit and roads) can have spectacular effects on the output of peasants and that agricultural instead of acting as a brake on the rest of the economy, can be turned into a leader generating demand for other sectors (manufacturing sector), and also providing them with capital.

3.0 RESEARCH METHOD

This research work is designed to access the influence of commercial bank credit on the manufacturing sector in Nigeria. To achieve this, an ex-post-facto research design will be employed because the events that are observed in this study had taken place and nothing can be done to change the figures, but can only be observed in order to analyze it. A multiple regression analysis would be used to measure the relationship between these variables. The data used for the purpose of this research are from secondary sources. There data are obtained mainly from the Central Bank of Nigeria Statistical Bulletin, Trading Economics, journals, textbooks, etc. These was no special procedure for collection of the data as these figures were merely extracted from these sources.

In testing the validity of the already stated hypothesis, this model will be used; manufacturing output is a function of commercial banks and interest rate. Mathematically this can be expressed as:

$$Moutput = f (COML,IR)$$

Where

Moutput = manufacturing output

Coml =commercial bank loans

IR =commercial bank interest rate

The ordinary least square model is based on the following function.

$$M_{output} = b_0 + b_1 COML + b_2 IR + U$$

Moutput = Dependent variable

COML, IR = Independent variables

b_0 = Regression constant

b_1 - b_2 = Unknown parameters or coefficients

U = stochastic error

4. Data and discussion

4.1 Data Presentation

YEAR	Moutput	Coml	IR
1992	38.1	6978.9	12.5
1993	37.2	10753	14.1
1994	30.4	17757.7	11.5
1995	29.29	25278.7	12.4
1996	32.46	33264.1	13.7
1997	30.4	27939.3	14
1998	32.4	27180.7	16
1999	34.6	31045.7	18
2000	36.1	41028.9	13.5
2001	42.7	55846.1	14.31
2002	54.9	55849.7	19
2003	56.5	62102.8	15.75
2004	55.7	67738.6	15
2005	54.8	48561.5	13
2006	53.3	49393.4	12.25
2007	53.38	149578.9	8.75
2008	53.84	106353.8	9.81
2009	58.92	112368.78	6
2010	47.89	147995.68	6.25
2011	45.7	158667.87	12

Source: CBN Statistical Bulletin, 2011

4.2 Data Analysis

The result of the regression is summarized for analysis as follows:

$$M_{output} = 36.51 + 0.000576coml + 2.73lr + U$$

$$T \text{ Statistics} = (10.65) (2.62) (0.0615)$$

$$P - \text{Value} = 1.14 \quad 0.0180 \quad 0.952$$

$$\text{Standard Error} = (3.429) \quad (0.0002) \quad (4.442.64)$$

$$\text{Multiple R} = 0.87$$

$$R^2 = 0.76 = 76\%$$

$$\text{Adjusted } R^2 = 0.67$$

$$F\text{-Statistics} = 17.55$$

$$\text{Durbin} - \text{Watson Statistic} = 1.478$$

The above result shows that the overall goodness of fit measures. The result above shows that the regression intercept is 36.51. This means that without the influence of the independent variables on the dependent variable that manufacturing sector will remain at 36.51 percent.

The regression coefficient for commercial banks loans is 0.000576 and the regression coefficient for commercial bank loans to the manufacturing sector is 2.73, since the parameter estimate for both variables enters the model with a positive sign, it is consistent with a-prior theoretical criteria. This means that there is a positive relationship between commercial bank loans and the manufacturing sector. In other words, a one percent change in commercial bank loans to the manufacturing sector will influence the development of manufacturing sector in Nigeria.

The coefficient of determination (R^2) is 0.76. This means that independent variables are able to explain the changes in the dependent variable by 76%. The remaining percentage may be due to other variables not stated in the model (e.g. business cycle, inflation etc), but they are captured by the stochastic error term, thus the model has a good fit.

The adjusted R^2 is 0.67 or 67%. This means that the result we obtain is very significant and it affirms that the result of the R^2 , and the R^2 did not come by chance.

We tested for statistical reliability of each parameter estimate using the conventional t-test. The result affirmed the fact that the estimate for commercial bank loans was not statistically reliable at 5% level of significance. The calculated t-value of 2.62 is lesser than the table t-value of 2.845. The result affirmed the fact that the estimate for commercial bank loan was not statistically reliable at 5% level of significance as the calculated t-value of -0.744 is lesser than the table t-value of 2.845. The result also affirmed the fact that the estimate for the constant is statistically reliable at 5% level of significance. The calculated t-value of 10.65 is greater than the table t-value of 2.845.

The joint test of significance of the overall significance of the model was tested using the f-statistic. The test result shows that the calculated f-value is 17.54 at a significant f level of 2.59, is greater than the f-tabulated value of 2.87. The result appears with a positive sign, this is consistent with a-priori theoretical criteria.

The test for the existence of auto-correlation was performed using Durbin-Watson statistic. The test for the existence of serial autocorrelation shows there may be autocorrelation in the model. The calculated DW (1.47) lies outside the 4-df and 4-du.

Standard error of the regression or sample estimate of the standard deviation of the error u is 24.18, while the probability value for the constant is 1.14 and the probability value for the coefficient of the independent variables are equal to 0.018, 0.95 and 0.467 respectively.

4.3 Discussion of Findings

This research work examines the effect of commercial bank credit on the manufacturing sector in Nigeria using a time series data from 1992 to 2011. The study reveals that there is a significant relationship between commercial bank loans on the manufacturing sector in Nigeria. This is true in the sense that when there is an increase in commercial bank credit to the manufacturing sector, it will encourage the manufacturing sector to expand their businesses and scope of operation which will ultimately lead to increase the performance of the economy in Nigeria.

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The major conclusion of this study has been that there is a significant relationship between commercial bank loans and the manufacturing sector in Nigeria. This is possible in that when there is an increase in commercial bank credit to the manufacturing sector, it will encourage the manufacturing sector to expand their businesses and scope of operation which will ultimately lead to increase in Nigeria and vice versa. From the foregoing, this research also proves why the rate of unemployment is distressing in the country as the manufacturing sector cannot expand because of lack of sufficient credit. This means that the manufacturing sector in Nigeria are not operating on their production possibility curve. In the long run, this will contribute to low productivity.

5.2 Recommendations

Based on the finding from the study, the researcher makes the following recommendations:

- 1) The government should endeavour to ensure that there are available and sufficient credit allocated to the manufacturing sector in Nigeria with reasonable or affordable lending rates. This will enable the manufacturing sector in Nigeria to operate on their production possibility curve, which is full capacity. In the long run it will lead to development of the Nigerian economy, through employment generation, innovation, competition, economic dynamism and promotion of indigenous technology.
- 2) For Nigeria to meet its millennium developmental goals and objectives, it should be depending more on products and services produced within her boundaries; hence the need to encourage the manufacturing sector. It will afford her the privileges of enjoying favourable balance of payments, as well as favourable terms of trade, which are the fundamentals for economic growth and development in the 21st century.

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