## AN EMPIRICAL ANALYSIS OF THE IMPACT OF DEPOSIT MONEY BANK ON THE MANUFACTURING SECTOR IN NIGERIA (1980-2011)

## BY

## **UDOM CHINONSO IMMACULETAR**

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#### APPROVAL PAGE

This is to certify that this project had been duly supervised, approved and found adequate in scope and content for the reward of Bachelor Degree of science in department of Economics in the faculty of management and social science, Caritas University, Amorji-Nike, Enugu.

Mr .J.C. Odionye	DATE
(PROJECT	SUPERVISOR
ONWUDINJO P. C. (Esq.)	DATE
(HEAD OF DEPARTMENT)	
Dr.C.C. Umeh	DATE
(DEAN, FACULTY MANAGEMENT AND SOCIAL SCIENCES)	
(EXTERNAL EXAMINER)	DATE

## **DEDICATION**

The dedication of this project goes to God our most creator for his immense love for me and for his grace in my life throughout my academic endeavours. To my parents Mr and Mrs Cyracus NSjoku Udom.

#### **ACKNOWLEDGEMENT**

I thank God Almighty for his guidance and protection and for giving me the opportunity, knowledge, endurance and especially life, to pass through my academic endeavours.

I wish to express my profound gratitude to those who in one way or the other contributed directly or indirectly to the successful completion of this work.

My special appreciation goes to my parents Mr and Mrs Cyracus Njoku Udom for their moral support, spiritually, financially and otherwise, also to my lovely siblings; Chibuzor, Ijeoma, Chinedu for their encouragement.

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My sincere appreciation goes to my very dear friends and colleagues, Kelechi Charles, Eze Chioma, Henry, Bridget, Chinwe, Divine, Mary, Ella.My roommates, Course mates and final year student of economics for their different contributions.

Finally to everybody who cares about me. I love you all and pray that God Almighty will bless and reward each and every one of you for your contributions towards the success of this work.

#### **ABSTRACT**

This research study, by means of a robust statistical analysis investigates the impact of deposit money bank on the manufacturing sector in Nigeria. Data from 1980-2011 were examined. The empirical analysis carried out showed that the lag of exchange and commercial bank credit have a significant and positive impact on manufacturing sector in Nigeria within the period under review, and as such the monetary and capital market in Nigeria should be further developed to meet standards and provide the necessary capital for the manufacturing sector. Also the government and relevant authorities should see to the strengthening of the exchange rate.

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**CHAPTER ONE** 

#### **BACKGROUND OF THE STUDY**

Manufacturing is the capacity to produce goods with labour, materials and inputs produced by others. Simple forms of manufacturing have characterized all organised societies but the application of steam power to production in Britain in the late eighteenth and early nineteenth centuries significantly increased the capacity for production, and since this first industrial revolution, economic progress has in many peoples minds been linked with the capacity to produce and trade in manufactured products.

Manufactures now dominate world trade and typically are around 80 percent of world exports in any year with developing accounting for nearly one- third of this. In the bulk of developing countries, outside the LDCs and the oil rich states, manufacturers account for a majority of export revenue. In terms of regional distribution, the bulk of developing country manufactured exports come from East Asia (70 percent in 2005) with approximately 40 percent of those from china.

Export data are also available by product category gives developing country and regional shares is manufactured exports by selected types of product. It shows developing countries as a group taking more than 50 percent of world exports in the labour intensive, simple technology categories of textiles, footwear and leather

The banking sector in Nigeria in 2006 financial year was oligopolistic in structure as only ten banks 11.1% of the 90 operation accounted for 54.5% of total assets, 52.4% of total deposit liabilities and 46.1% of total deposit liabilities of deposit money bank as at 31/12/2006 amounted to #2,705 billion. Whilst aggregate credit to the domestic economy amounted to #1,302.2 billion. In 2006, sectoral allocation of deposit money banks credit continued to favour the less productive sector of the economy as only 40.9% of the total credit went to agriculture, solid minerals, exports and manufacturing down from 46.2% in 2001.

In the year 2007, the general performance of banks was not significantly different from what happened in the previous year. Ten banks out of the 89 in operations accounted for 55.3% of total credit. At 3,047.9 billion, the aggregate assets, the level as at Dec 31 2006.

The manufacturing sector or service enterprise with capital investment exceeding #950,000 in machinery and equipment. The importance of manufacturing sector in the promotion of economic development has always been at the front developing strategies. More so, Nigeria like other developing nations adopted the use of import substitution policy as a means of manufacturing. This aims of producing domestic consumer goods in those industries.

## Major functions of Nigeria deposit money banks

- 1. Acceptance and safe keeping of deposits
- 2. Granting credit facilities to consumers
- 3. Transferring funds on the instructions to customers
- 4. Management of customers investments
- 5. Acting as executors and trustees of "wills"
- 6. Providing facilities for safe-keeping of important documents and other valuables.
- 7. Providing foreign exchange facilities to travellers
- 8. Advising customers on insurance matters
- 9. Project finance
- 10. Providing financial advisory services to customers
- 11. Packaging real estate transactions.

## Statement of problem

The nation had enunciated import substitution and processing of raw materials policies in the past. These had made the sector to be dependent on the industrialised nation of the world for capital equipment and contributed in no small way to our present economic predicament. The sector is currently heavily dependent on importation of raw material and spare parts. This has put pressure on the countries foreign exchange earnings.

Manufacturing sector like any other business cannot be carried on extensively unless funds are available for maintenance and procurement of equipment and necessary inputs. on the other hand deposit money banks accused the manufacturer of loan given to them. Thereby not bringing high degree of loss in their banking activities.

Unfaithful and dishonest to them are being critized sequels to this manufacturer. moreover the small scale business can hardly be over stressed, most manufacturer in Nigeria economy have been denied of attention report assessment or could it be that the deposit money bank are not playing their role in promoting manufacturing?

Adequate funding is a requirement for running a successful business and it is certainly one of the major reasons for the poor performance of most companies in the Nigeria manufacturing sector. This is because banks are wary of investing their distressed sector that is hemmed in by a hostile business environment is not encouraging. Sad enough, the evolving scenario these days, at least before the crash in the capital market, is that the capitalists and banks prefer to advance facilities to clients to enable them invest in securities market. Such clients would in turn go to bad" and watch their investments multiply over night without doing anything rather than too invest such money in any SME (small and medium scale enterprise) or so called "risky" business. This thinking of the capitalists and the banks further weakened the real sector thereby denying the manufacturing sector the opportunity to generate employment.

#### **OBJECTIVE OF THE STUDY**

- 1. To find out if inadequate credits from the deposit money banks to the manufacturing sector has contributed to the reduction in the productivity of the manufacturing sector.
- 2. To determine how the unwillingness of the deposit money bank to give loans to the manufacturing sector has affected.
- 3. Also to look into the problems that militates against the manufacturing sector apart from finance in Nigeria and the recommendation where necessary.

#### HYPOTHESIS OF THE STUDY

The following hypothesis are tested on this study

Ho: The manufacturing sector contribution has no significant impact to lending in the deposit money bank.

Ho: Deposit money bank interest rate has no significance effect on manufacturing development in Nigeria.

#### SIGNIFICANCE OF THE STUDY

The result of the study will provide an insight into the relationship between deposit money bank credit and the manufacturing sector. It will provide the basis for which policies should be made by the government through the monetary authority (the central bank of Nigeria) towards the prioritizing of credits granted to the manufacturing sector.

Again, it will expose the important role the deposit money banks play towards the productivity of the manufacturing sector and to therefore make sure that there is a good working relationship between sectors.

The study makes clear the actual contribution and operations of deposit money banks in Nigeria. It will also sensitize the society on the importance of deposit banks in Nigeria.

The study will be important to the policy makers and the government in order that to adopt and implement policy measures that will boost the economy through the financial institution.

It will also depict the negative and positive side of the activities of the negative and positive side of the activities of the general public and bankers, for some correction and changes in order to boost the economy.

Also, it is believe that the findings of this research will lead to further on how deposit money banks and the other manufacturing sector, which will eventually lead to the development of the economy.

The usefulness of this study is that it will highlight to the nation as a whole on how best to manipulate deposit money bank loans for financing in order to improve the state of industrial product in the country.

It will also give the government an overview of constraint of industrial financing and how best to manage deposit money bank loan in order to yield output.

It will show deposit money banks how to increase industrial financing for growth in the economy.

## **RESEARCH QUESTIONS**

These are self guide question used to guide the research in the course of providing solution to the problem

The following are questions that arise when drawing references from the study.

- a. How does deposit money bank significant to influence on the manufacturing output.
- b. Does manufacturing development depend on the deposit money bank loan.
- c. Do deposit money banks give loan for manufacturing finance?
- d. If so, to what extent has the manufacturing sector growth since the assistance started.
- e. Is there any relationship between deposit money banks financing and the Nigeria industrial growth?

#### LIMITATION OF THE STUDY

The main task of the study is to given in full determine the impact of deposit money banks in fund mobilization for industrial growth and development but due to insufficient time for industrial growth and development but due to insufficient time frame for the purpose of simple and articulate analysis, the study is restricted to deposit money banks specifically. The study is limited to the period of 2005-2010 which saw the significant impact played by the financial sector in the Nigerian economy.

#### **CHAPTER TWO**

#### THEORITICAL LITERATURE

Bank credit is one of the policy option for financing the manufacturing sector. Bank credit which is the sum of loan and securities as deposit money banks, is widely viewed as providing information about the current and future state of the economy. Chizea, (2006).

The pattern of enterprise financial differs from country to country. There is a pronounced difference in prevalent corporate financial between mature and emerging firms with a certain economy finance themselves based on a firms with a certain economy finance themselves based on a firms stage in its life cycle.

Singh (1995) observed that developing countries firms finance themselves differently, mainly due to different financial environment. He examined financial patterns of 100 top cooperatives in ten developing countries in the eighties according to him, the basic differences are;

Firstly, there is an inverse "pecking order" in emerging economics; corporation rely more heavily on external financial, especially trade credits, stock issues and short term debt than their counterpart in developed economies.

Secondly, top corporations in developing countries rely more heavily on equity issues than their counterpart in developed economies.

Thirdly, most emerging market formation and development by pursing role in stock market formation and development by pursing aggressive proequity financing polices and placing limitations on debt financing of firms, especially from abroad. He state further that why developing countries have different cooperate financing patterns than developed economies is because of the fact that there are many factors determining the enterprise

capital structure and firm specific. It seems to him that the overriding factor why there is such a great difference in how emerging market firms and mature market, firms finance themselves is because the countries financial environments are at difference phase of economic life cycle.

Olorunshola, (2005) enumerated the problem that the Nigerian manufacturing sector are faced with problem of weak purchasing power among generality of the population that directly translates to depressed demand, a high cost operating environment arising form collapsed infrastructural facilities coupled with depreciating and unpredictable exchange rate. Furthermore, recently the sector has been confronted with unfriendly business demands such as the recently introduced lagos state land use change which has led to the forceful closure of some business premises, worsening security situation, absence of long term finding and high and unsustainable interest rate.

Dr Ugwu,(2005) observed that in most African countries including Nigeria, the banks have the following distinctive features in lending, firstly, the maturity structure of the loan advances is mostly short term with the bulk of loans being repaid within 12 months. Secondly, majority of loans are guaranteed to commercial sector with smaller share going to the manufacturing and agricultural sectors thirdly, the size of borrower shows a market preference for lending to large firms.

Various experts have argued on what type of credits It needed to finance the manufacturing enterprises. In Nigeria idea as in other African countries banks mostly grant short-term credits and such loan are channelled mainly to general commerce and trade.

Mayer, (1997) stresses the importance of establishing strong commitment relationships between providers and recipient of long term capital that are conducive to the provision of cheaper and more abundant long-term finance and hence faster economic growth. He argues further that banks are the most efficient than capital markets centred model and therefore governments should focus on the development of an efficient banking system.

While Pinto (1994) argues that firms in less developed countries are found to be cost minimizing, but subject to some specific government related constraints. Government controls not only limit the potential menu of instruments, but frequently circumscribe the issue and pricing of permitted instrument.

Adenikinju and Chete (2008) point out the fact that manufacturing sector in Nigeria has suffered from precipitous cuts backs in raw materials and spare parts owing to limited financing. This was translated into wide spread industrial closures, extensive retrenchment of the industrial work force and massive drop in capacity utilization. Real output fell by 25% between 1982 and 1986, contrasting sharply with the annual growth rate of 15% recorded between 2005-2010.

O.J Nnanna (2006) stressed that the SMES have been general knowledge as the bedrock of the industrial development of any country. Apart from the numerous goods produced of SMES, they are usually labour intensive. They also provide training grounds for entrepreneurs even as they generally rely more on the use of local materials. Moreover if well managed, the SMES can gradually transform into the giant corporations of tomorrow. These contribute thus explain why governments and international agencies mobilize efforts towards the realization of sustainable industrial growth and the creation of mass employment through the rapid growth and development of the small- scale enterprises.

However, the SMES, have had limited access to institution credit facilities, owning to various factors, some of the major factors include.

- a. Consideration that the SMES are very risky in view of their vulnerability in the market as well as their high mortality rate.
- b. Bank and other financial institution are operationally biased in favour of lending to large corporate borrowers, where there is assurance of security.
- c. Owning to their nature, SMES seeking loans are usually unable and unwilling to provide accounting records and other documentation required by banks, while most are unable to provide acceptable collateral for their loans.

In recognition of these constraints and in oder to ensure the realization of the potential benefit of virile SMES in the economy, the central bank of Nigeria has remained committed to the growth and development of the SMES in Nigeria. The standard had been successively reflected in the banks policies over the years. In particular, the CBN has through its credits guidelines over the years while recently, required the erstwhile deposit money banks and merchant banks to banks to allocate stipulated minimum of credits to the preffered sectors including the small and medium scale enterprise (SMES).

#### EMPIRICAL LITERATURE

Undoubted, a number of works has been published on the Nigerias manufacturing sector in particular and that of the third world countries in general sense, and its relevance to export promotion and economic growth. For instance, there are works like W.N Nicholis place of manufacturing in economic development".

H.A Oluwassanis "manufacturing and rural development" Hoftman"s "the growth of industrial economics, kalders " strategy factors in economics development" and many others.

Mayer, in his seminal contribution, has investigated on a comparable basis corporate finance structure for this period between 2009 and 2011 for 8 industrialised corporate finance in developed countries.

- a. Retention are the dominant sources of finance in all countries, especially in the US, Canada and UK.
- b. Banks are the dominant sources of external finance in all countries, particularly in continental Europe and Japan.
- c. There is a strong inverse relationship between shares of retentions and banks credit (both are mainly used for long term investment).
- d. Securities market have declined and trade credits have grown in important over the post ward period, bound market are relativelysignificant source of finance only in the US and Canada

- while equity markets contribution to finding industry has been insignificant or negative.
- e. Small and medium size firms are considerable more reliant on external finance than large firms, but obtain a lesser share of funds from securities markets and a greater share from deposit money banks. These observations can describe corporate financia pattern of a typical developed country firm

Kunt and Maksimovic, (2005) test fund support for agency theory and tax-based mode of capital structure for the sample of the same ten countries as in Sighn (1995). It is found that ten indebtedness is negatively related to the proportion of net fixed assets in total assets, which means that longer- term credits market donot function effectively as confirmed by Sighn. Largely for Nigeria as ealier said, the mode of financing the manufacturing sector by the banks has been short- term. There is need for appropriate government policy to ensure that long term financing needs of the sector are met.

According to the CBN year 2000 annual report survey of 500 manufacturing establishments countryside was undertaken with a response rate of 51.8 percent. The response established our average capacity utilization at 36.1%

Borha, (2009) in his own study observed that despite the expansion in aggregate (Net Domestic) credits over the review period (2007-2009) manufacturing capacity utilization remained flat at about 35% while growth in GDP was marginal.

According to the study carried out by morgan (2005) it was shown that banks credits prove to be highly significant in explaining output growth. However, experiences elsewhere show clearly that banks credits have positive impact on manufacturing capacity utilisation and the growth of the entire economy.

A similar study carried out by Azin (2005)in india also discovered that higher bank credits not only help the private sectors productive activity but it also improved the stocks market. To actively reverse the dwinding performance of the Nigeria manufacturing sector, must be emphasized that there is need for

appropriate policy effort to improve the credits delivery mechanism to this important sector of the Nigeria economy. there have been many empirical studies on comparative corporate financing patterns and capital structures in the last 10 years and their main findings are:

- a. Use of long term finance is strongly correlated with corporate growth and higher productivity.
- b. There is a comparative advantage of external finance in finding short-term investment in all countries observed.
- c. An efficient and powerful banking system is central to adequate provision of long- term finance and promotion of economic growth.
- d. Artificial lengthening of matures in bank lending does not further performance of financial markets and economic growth.
- e. Firms in developed and developing countries are financed differently; there is an inverse "packing order" of capital structure in 10 observed emerging markets. firms are financed mainly through equity, then retentions, then debt external finance is more important to emerging market firms than to mature market firms.
- f. Less developed countries governments have played a major role in the provision of long-term finance in establishing capital markets and greatly influenced firm financing decisions.
- g. Brooming world stock markets, debt- equity swaps and sweeping privatization campaigns in the 80-90 were the reason why equity finance played such an important role in funding industry in emerging market.

Udeh (2005) in his work on deposit money banks in industrial financing in Nigeria notes that in bank, deposit has a positive effects if encouraging more lending to manufacturing sectors.

Manufacturing loans and advances are not rightly distributed among the industries and this must have contributed to the unbalance development in manufacturing sector. He concluded that deposit money banks have not been

Achieving the central bank of Nigeria prescribed minimum allocation of creditto manufacturing sector.

Humah (2005) in his research on the role of deposit money bank in industrial development says "that the problem facing small scale enterprises in their financial institutions.

Uzomah (2005) in his research on deposit money banks contribution to industrial development in Nigeria finds that banks generally require their customs to present collateral security before extending the credit to them. He concluded that bank financing is the easiest source of financing industries because it only needs good reputation and ability to repay by the industrialist in order to secure bank loan.

Professor chukwumma soludo, the former CBN (central bank of Nigeria) governor said that the lending of credits by banks in Nigeria for small and medium enterprise has increased by US & 0.3 billion in 2003 to US & 1.73 billion in 2007, as reported by press briefly on July 2004,2008.

According to the former governor (soludo), the growth in credit in Nigeria banks as a result of consolidation of banks had a positive influence on the core private and the real sector of the economy. Deposit money banks credit to the private sector has increased from about #150.9 billion in 2003 #191.5 billion in 2004 and then to #1,955.5 billion in 2005 #2,490.4 billion in 2006 and #4,941.5 billion in 2007, recording year growth rate of 26.6% and 98.3% respectively.

Omenwa (2007), in her work on commercial bank financing of manufacturing sector found out that banks accord preferential treatment to customers, while rendering their financial services and that small scale industrialists do not consider deposit money banks loan essential. She therefore conclude that banks should instead of according preferential treatment to their customers; adhere to the banking rules and regulations.

Osondu (2005), in his research on the role of deposit money banks in granting credit to small scale enterprises found out

those deposit money banks prefers to grant loan to customers with valuable collateral. Since small scale industries provides improper feasibility studies to the project in question, the banks finds financing the business unattractive an non-lucrative because of the inability to such borrowers to repay this obligation as at when due.

Early studies by (olumogbo, 2004) discovered that the output of industries, while ojo (2006), okunaje (2007) and bond meghr (2006) studies showed that credit advances seem to carry a more predictive information about.

Thus Woodstock (2008) outlined that output ,efficiency optimality and other aggregate follow underlying trends with cycle fluctuation in an equation that

Yt= a +Byt-iter

Where t is time, B is a constant and et is the random error. Output which is an index of development also follow a random walk with the equation

Yt= at+yt-1+aet

Onyewale (2007) has it that changes in credit advances affects output which ultimately determines the rate of development in our industrial sector.

Driffield and Monday ( 20050, empirically evidence of a clear link between disbursement of credit at a very low interest rate and emergence of industries of all kinds which determines real activities that longrun uncertainties. Akabueze ( 2004) examined the absence of sufficient credit facilities as an important factor underlying the low levels of investment in the nigerian economy while it is widely recognized that credit facilities are ultimately needed for development as a whole, there is little or no consensus by the deposit money banks with respect to the most appropriate strategy for securing sustainable development in the industries in Nigeria (Akingbola 2005). This finding was also echoed by the first Nigeria economic summit report (2009) when the body observed that the overall goal of the deposit money banks which is

primary to stair the economic activities of the country has not been fulfilled over the years.

Ukeje (2002) observed that the level of industrial growth expected during the period of 2006-2010 was not realized as industrial output has elusive. Okinnege (2002) was of the finding that a major explanation for the low quantity expected growth of the manufacturing sector seems to be as a result of the very rapid increase in unemployment, cost of commodities arising mainly from supply rigidities and the depreciating naira.

FOS (2002) explained that the main effects of the economic crises on manufacturing sector came via two channels, deposit money banks inefficiencies and technical deficiency on the part of the industries. Still on the industrial output resources was restricted also by high interest rates.

Onyelege (2007) shared this view in his work "inefficient management approaches in deposit money banks the manufacturing sector experiences" where he wrote the devaluation of the exports has only made Nigerian poorer and high interest rate have been a great deterrent tp productive investment.

Onwiodwokit and nwachukwu (2011) in their "sectoral responses to deposit money bank to Nigeria . a case study of the industrial sectors showed that appropriate credit advances has explanatory effect of industrial output and takes at least one year to manifest, while other sectoral outputs have a long run effect . it is being shown that the impact of the deposit money banks on the manufacturing sector development will depend of the savings mobilization and ultimately the amount of credit channelled for products investment.

Osinubi and Akunyele (2006) in their work "deposit money bank lending rates and the real sector "using semi log model to analyze, data (1970-2003) concluded based n their analysis that the impact of deposit money bank lending rates on the real sector of the Nigerian economy has insignificant and negative implying that high lending rate have not played the expected role of increasing investment and productive

performance in the real sector of the economy as suggested by the regressionist hypothesis but rather exchange rate has exerted both negative and significant influence on real sector performance. The explanation for this being over dependence on foreign intermediate goods.

Adebiyi and obasa (2004) isolated the manufacturing sub sector (1970-2002) for their analysis, first they found out that interest rate (difference between lending rate and savings rate) had negative impact on growth in the manufacturing sector since it lead to high cost of borrowing. Second, rising index of manufacturing sector was a reflection of high rate and could not be interpreted to mean real sectoral growth.

Levine (2006) in his analysis stated that a well developed financial system promotes investment opportunities potential business, mobilizes saving enables trading, monitors the working of managers offers hedging and diversifies risk.

Ajakaiye and omole (2002), carried out empirical assessment of the contributions of inflation to rising bank lending rates in Nigeria between 2004 and 2010. They found among other things that pursuit of high interes rate policy might have significant short run structural effects in terms of changing domestic production in the real sector. Noting that neither the direction nor the magnitudes of effects can be specified on aprior grounds, they called for considerable empirical research into the macro economic impacts of bank lending rate.

Roubini and sala- i- martin (2007) stated that strong financial repression could reduce per capital GDP by one percent point a year. The government raise the inflation rate to get the effortless inflationary incomes but that lowers the amount of financial services in the economy. All these actions stimulate the individuals to store normal money.the negative effects of financial repression reduce the marginal produce of capital input and therefore reduce the economic growth.

Soyibo (2008) conducted a survey among Nigerian bankers and found that while deregulation of interest rate had enable banks to

mobilize savings, the high cost of funds associated with it had adversely affected investment.

Greenwood and jovonovio (2009) created a model where both financial intermediation and growth were charged with collecting and analyzing information to channel investable funds to those activities yielding the highest returns. they showed that there was a positive relationship between economic growth and financial development.

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- 2. Banks are the dominant sources of external finance in countries, particularly in continental Europe and japan.
- 3. There is a strong inverse relationship between shares of retentions and banks credits (both are mainly used for long term investment).
- 4. Securities market have declined and trade credits have grown in important over the past ward period, bound market are relatively significant source of finance only in the Us and Canada while equity markets contribution to finding industry has been insignificant or negative.
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observations can describe corporate financial pattern of a typical developed country firm.

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According to the CBN year 2002 annual report a survey of 500 manufacturing establishments country wide was undertaken with a response rate of 51.8 percent. The response established our average capacity utilization at 36.1%.

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A similar study carried out by Azim, (2005) in India also discovered that higher bank credits not only help the positive sectors productive activity but it also improved the stocks market. To actually reverse the dwindling performance of the Nigeria manufacturing sector, it must be emphasized that there is need for appropriate policy efforts to improve the credits delivery mechanism to this important sector of the Nigerian economy. There have been many empirical studies on comparative corporate financing patterns and capital structures in the last 10 years and their main finding are:

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- 6. Less developed countries governments have played a major impact in the provision of long term finance, in establishing capital markets and greatly influenced firms financing decisions.
- 7. Booming world stock markets, debt- equity swaps and creeping privatization campaigns in the 80-90s were the main reason why equity finance played such an important role in finding industry in emerging market

#### LIMITATION OF PREVIOUS WORK

Considering that topic is not an entirely new, however, the direction and focus of discuss would be slightly different from the previous studies. In the sense that it will build on the observed shortfalls of the previous study, some of which are:

- 1. Previous work done relating to the research were not specific, as they focused more on interest rates as opposed bank credit like Adebiyi & Obasa (2004), but efforts were made by me to carryout some research that developing countries firms finance themselves differently financial environment by sign by(1995)
- 2. The data used are not updated to the recent past as the most current of the data used ended in 2008. But efforts were made by me to update it to 2011.

3.	Wrong choice of variable of interest rate as a proxy for bank credit according to osoyibo (2008).

# CHAPTER THREE METHODOLOGY

The method chosen this research is the econometric method, the use of regression analyses. The choice of method is necessitated by the nature of the study which in this case is the analysis of relationship among variables.

The ordinary least square (OLS) technique of estimation will be used in estimating the model. The OLS technique of estimation was chosen because its parameter estimators have best linear unbiased estimators (BLUE) properties. However, OLS technique are simple to apply easy to understand and interpret.

#### MODEL SPECIFICATION

The specification of the model is based on the available data relevant to the study as embedded in standard economic theory and other major work, or else the model would be a theoretical. We postulate a model in this research work so as to captures the objective of the study. The functional form of the model can be specified as follows:

MAS= F (ER, CBC, FGE, INTRD)(1)	
The statistical form of the model is specified as	
MAS=B0 + B1ER +B2 CBC+ B3 FGE +B4 INTR	.(2)
The econometric form of the model is specified thus	
MAS=B0 +B1CBC +B3 FGE +B4 INTR +Ut	.(3)

Where MAS=manufacturing sector

ER=exchange rate

CBC=commercial bank credit

FGE=federal government expenditure

INTR=interest rate

Ut=stochastic error term

#### **TEST FOR STATIONARITY**

A Stochastic process is one with mean variance and covariance. Therefore, stationary test is carried out to verify, whether a time series is stationary or time invariant so as to avoid a spurious regression. The augmented dickey fuller ( ADF) test shall be used to test the unit root characteristics of time series.

#### **TEST FOR CO-INTEGRATION**

Economically, two (or more) variables will be co- integrated if they have a long term or equilibrium relationship between ( or among) them. The purpose of co-integration test is because individual time series in a model may be spurious but their linear combination may not .The augmented Engle-Granted (AEG) test will be employed to update this hypothesis

#### **ESTIMATION PROCEDURE**

The procedure adopted in the estimation is the OLS single equation method. The method will show whether the variable are statistically significant or not. Hence, signs and size of the parameter estimates will be compared to their apriori economic expectation This is used to estimate the model under study because it is to understand, simply in its combinational procedure and its parameter estimates, which have some optimal properties of linearity, unbiased estimators. The LOS technique is relatively simple to use and there are readily available software package for use like MS Excel, PC give E- view and SPSS that are user friendly. Data requirements are also minimal

and it is also easier to understand by non-experts in econometric methodology. The E- views econometric package was adopted for this analysis.

#### **EVALUATION PROCEDURE**

Tests will be carried out to conform apriori expectation which examine the size and sign of the parameter estimates, of which the evaluation is guided by economic theory. The purpose of evaluation is know whether the parameter estimate are theoretically meaningful and statistically satisfactory. For this reason, various test will be used which include economic growth, statistical test as well as econometric.

#### **EVALUATION BASED ON ECONOMIC CRITERIA**

Under this criteria, the apriori expectation (signs and sizes) of the parameter estimates of the variables in the model will be evaluated to check whether they conform to economic theory.

The BO is expected to be positive showing that if other variables that constituted to average manufacturing capacity utilization is zero, these are other factors that can contribute in a positive or negative to be positive implying that increase average manufacturing sector will increase average manufacturing capacity utilization b3 is expected to be negative, showing that an increase in inflation rate reduces average manufacturing capacity utilization.

## EVALUATION BASED ON STATISTICS (FIRST ORDER)

Here the test aims at determining statistical reliability of the parameter estimated and are determined by statistical theory. The confident of multiple determination (R2) and the standard error are the most widely used method of determining the statistical significant.

Three test will be carried out to determine/ verify the acceptability and robustness of the estimated regression result. These test include:

Student t- test: this is used to test the statistical significance of the individual parameter estimated in the regression models. This work will use the 2-t rule thumb to test the statistical significance of these parameter estimates.

F-test: This tests the overall significance of the explanatory variable on the dependent variable.

R2 test: this is used to measure the goodness of fit of a regression line. It measures the proportion of the total variation in the dependent variable explained by the regression in the model.

## ECONOMETRIC TEST (SECOND ORDER)

Here various tests will be carried out in order to verify whether the estimated regression result confirm to classical (normal) linear regression model assumptions. These test include

TEST FOR HETEROSCEDASTICITY: This test is used to ascertain the assumption of equal spread of the variance of error term (homoscedastic) between members of the series of observations. The white heteroscedasticity test (with no cross term) will be employed in the test.

TEST FOR MULTICOLLINEARITY: this is carried out using the correlation matrix. This suggests that if the correlation co-efficient is in excess of 0.8, and then there is a serious multicollinearity problem. If the co-efficient is less than 0.8, we conclude that is no multicollinearity

NORMALITY TEST: This test will be conducted to see whether the error term follows the normal distribution. The jargue-Bera (JB) test of normality shall be applied.

AUTO-CORRELATION TEST: This is to test whether the errors corresponding to different observations are uncorrected. The conventional dubin-watson statistics would be applied.

JUSTIFICATION OF THE MODEL: We shall use OLS because of the fact that it is best situated for testing specific hypothesis about the nature of economic relationship in (2005)

The OLS is simple and easy to interpret and above all, it is more reliable because of the properties which it posses. The properties are efficiently, constituency and unbiasedness. This means that its error term has a minimum and equal variance Gujorati, (2004)

## **SOURCES OF DATA**

The data for this shall be secondary data obtained from various sources such as the central bank of Nigeria publication (e.g economic and financial review, statistical bulletin, annual report and statement of account, bulletin 2011 publication.

## **CHAPTER FOUR**

## DATA PRESENTATION AND INTERPRETATION OF RESULT

## 4.1 PRESENTATION OF RESULT

The regression result in line with the model specification on the model is presented below.

**Table 4.1: Presentation of Result** 

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-40469.98	282667.0	-0.143172	0.8872
CBC	4.958836	2.563630	1.934302	0.0636

FGE	-2.993986	0.673696	-4.444123	0.0001
INTR	8849.110	15878.73	0.557293	0.5819
ER	8660.694	5515.520	1.570241	0.1280
R-squared Adjusted R-squared S.E. of regression	0.631673 0.577106 498364.1	Mean depend S.D. depend Akaike info	lent var	496696.8 766357.1 29.21865
Sum squared resid Log likelihood Durbin-Watson stat	6.71E+12 -462.4984 1.137341	Schwarz cri F-statistic Prob(F-stati		29.44767 11.57612 0.000013

## 4.2 INTERPRETATION OF THE RESULT

## 4.2.1 INTERPRETATION OF THE REGRESSION COEFFICIENTS:

The result showed that the intercept is -40469.98. This shows that if the explanatory variables are held constant, the value of the manufacturing sector (MAS) will be -40469.98. The coefficient of commercial bank credit (CBC) has a positive value of 4.958836. This result implies that a unit increase in CBC will increase GDP by 4.958836. The second variable representing federal government expenditure (FGE) has a negative value of -2.993986. This implies

that a unit change in FGE will cause a -2.993986 change in the GDP. Interest rate (INTR) has a positive value of 8849.110. This implies that a unit change in INTR will bring about an 8849.110 increase in the GDP. Lastly, the coefficient of exchange rate (ER) has a positive value of 8660.694, which implies that a unit change in ER will bring about an increase in the GDP by 8660.694.

## 4.2.2 EVALUATION BASED ON ECONOMIC CRITERIA

This shows if the a prior expectation confirms to the observed result

Variables	Expected signs	Observed signs	Remark
CBC	+	+	Conforms
FGE	+	-	Does not Conforms
INTR	-	+	Does not conform
ER	+	+	Conforms

From the table above, it is seen that all other variables apart from interest rate and federal government expenditure did conform to economic theory.

## 4.4.3 STATISTICAL TEST CRITERIA (FIRST ORDER TEST)

## 1. R<sup>2</sup>-Coefficient of determination:

This shows the goodness of the fit on how the independent variables explain the depending variables.

From the result, the value of  $R^2$  is 0.631673, which means that the explanatory variables (independent variables) explain about 63.17% variations in the explained (dependent) variable.

## 2. The t-test:

Variables	t values	5% critical values	Decision
Constant	-0.143172	±2.0518	not significant
СВС	1.934302	±2.0518	not significant
FGE	-4.444123	±2.0518	Significant
INTR	0.557293	±2.0518	not significant
ER	1.570241	±2.0518	Not significant

This test reveals if the independent variables are statistically significant or not. Under n-k degrees of freedom at 5% level of significance, the critical value is 2.0518. Thus we reject ho, if by absolute value t cal > 2.0518

From the table above, the constant, CBC, INTR, and ER are all insignificant, only FGE is significant.

## 3. F- Test

This shows the overall performance of the regression model. The decision rules is to reject Ho if f-cal > f-tab under 0.05 level of significance

$$F$$
-cal = 11.57612

$$F$$
-tab = 2.73

From observation, f-cal > f-tab, i.e. 11.57612 > 2.73, therefore we reject Ho and conclude that the model is well specified and adequate for forecasting and policy analysis.

## 4.2.4 ECONOMIC TEST (SECOND ORDER TEST

## 1. **Autocorrelation test**

In order to test for the presence of auto correction in the error term (u;) the Durbin-watson d\* statistic is used.

## **Decision Rule**

Null Hypothesis (Ho)	Decision	If
No positive auto correlation	Reject	0 < d* <dl< td=""></dl<>
No positive autocorrelation	no decision	$dl < d^* \le du$
No negative auto correlation	Reject	$4-dl < d^* \le 4$
No negative auto correlation	no decision	$4-du \le d^* \le 4-dl$

No auto correlation positive or	do not reject	du < d*< 4-du
Negative		

## GIVEN:

From observation, the  $d^*$  falls in the first row of the decision, which is  $0 < d^* < dl$ . This is clear by sustaining into it as 0 < 1.137341 < 1.24371. Thus we conclude by rejecting Ho that there is positive serial correlation in the residual.

## 2. Normality test:

The normality test adopted is the Jarque – Bera (JB) test for normality. Thus JB test for normality is an asymptotic or large samples and it is based on the OLS residuals. This test computes the skewness of the OLS residuals and it follows the Chi-square distribution.

## Hypothesis

Ho: B = 0 = (the residuals are normally distributed)

Hi:  $B \neq 0$  = (the residuals are not normally distributed)

The decision rule is to reject Ho if  $x^2$  cal > it's critical value (at 2 df) and accept  $H_1$ .

Hence,  $X^2$  cal = 6.252181 and  $X^2$  tab= 5.991

Our  $X^2$  cal <  $X^2$  tab, thus we accept Ho and conclude that the residuals are normally distributed

## 3. Test for Multicollinearity:

The test is carried out using the correlation matrix. This suggests that if the pair wise correlation coefficient between two repressors' is in excess or greater than 0.8 then we say that there is multicollinearity if less then there is no multicollinearity among the explanatory variables. The correlation matrix is presented below;

	MAS	СВС	FGE	INTR	ER
MAS	1.000000	0.522910	0.244578	0.226538	0.582639
СВС	0.522910	1.000000	0.911110	0.214823	0.959842
FGE	0.244578	0.911110	1.000000	0.176676	0.854621
INTR	0.226538	0.214823	0.176676	1.000000	0.244461
ER	0.582639	0.959842	0.854621	0.244461	1.000000

From the table, the pair-wise FGE and CBC, ER and CBC, and ER and FGE, have values in excess of o.8. Therefore, we are fit to conclude that multicollinearity exists between them.

## 4. HETEROSCDASTICITY TEST:

This test is carried out to evaluate the levels of distribution of the error term. It is used to test the variance of error term is constant. It follows chi-square distribution with degrees of freedom equal to the number of regression in the auxiliary regression in excluding the constant.

## **Test hypothesis:**

Ho: Homoscedasticity (The variance of the error term is constant)

Hi: Heteroscedasticity (The variance of the error is not constant)

@ 0.05 (5% significance level)

The decision rule is to reject Ho if  $x^2$ -cal  $> x^2$ -tab.

From the Heteroscedasticity test result,  $x^2$ -cal = 7.958019 (@ 1 degree of freedom), while from the  $x^2$ -tab (@ 0.05 degrees of freedom) = 3.84.

Since  $x^2$ -cal  $> x^2$ -tab, we reject Ho and conclude that the variance of the error term is not constant.

#### 4.3 HYPOTHESIS TESTING:

H<sub>o</sub>: The deposit money bank lending rate has no significant impact on manufacturing sector in Nigeria.

H<sub>o</sub>: Deposit money bank interest rate has no significant effect on the manufacturing development in Nigeria.

CONCLUSION: The various results obtained, revealed that the commercial bank credit and the interest rate have a positive relationship with the manufacturing sector, however, the t-test showed that the commercial bank credit and the interest rate have insignificant impacts on the manufacturing sector. Therefore we accept the null hypothesis that the deposit money bank lending rate and the interest rate have no significant impact on the manufacturing sector in Nigeria.

#### **CHAPTER FIVE**

## SUMMARY, RECOMMENDATION, AND CONCLUSION.

## Summary finding

The summary of the findings are itemized below

- 1. There is a positive but insignificant impact of commercial bank credit on the manufacturing sector in the economy.
- 2. Federal government expenditure has a negative but significant impact on economic development.
- 3. There is a positive and insignificant impact of interest rate to the development of the economy.
- 4. Exchange rate has positive and insignificant relationship in the development of the economy.

#### Recommendation

- 1. Financial and banking issues, should initate conductive monetary and fiscal policies to boost the well being of the manufacturing sector.
- 2. A significant reduction in interest rate will at a stroke, bring relief to the manufacturing sector which will stimulate investment activity.

- 3. There should be moderation of sectoral credit limits, so that deposit money bank can give loan based on the rationality and viability of industrial project
- 4. Deposit money banks needs to be strengthened to enable the sector play its role of financial intermediary
- 5. Government should seek to maintain stable exchange rate policy.
- 6. The deregulation of interest rate should be pursued to a lgical conclusion.
- 7. Stable policies in the deposit money bank should pursued. As this will help enhance growth on the manufacturing sector.

#### CONCLUSION

Based on the revelation in this study, will conclude that interest rate has significant impact on the manufacturing sector in Nigeria .Further more federal government expenditure has a negative impact though significant.

To achieve this manufacturing sector growth that is desired. The governments have to strive to regulate the interest rate through total liberalization or deregulation of interest in Nigeria.

With decreased rate of interest, more loans would be issued out for manufacturing sector.

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