BANKS LENDING RATE: PANACEA FOR MANUFACTURING SECTOR PERFORMANCE IN NIGERIA

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ABSTRACT

The study seeks to evaluate the Banks Lending Rate: Panacea for Manufacturing Sector Performance in Nigeria. Data was sourced from the CBN statistical bulletin (various issues). The data were subjected to descriptive statistics and the Parsimonious Error Correction Mechanism of the OLS was used to test the hypotheses. It was find out that there is a significant relationship between sub-prime lending rate and the performance of the manufacturing sector in Nigeria. The study went further to recommend that the Central Bank of Nigeria should review downward the monetary policy rate.

Keywords: Lending Rate, Manufacturing

INTRODUCTION

The impact of bank credits to the arowth 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 5percent) through a better mobilization and careful use of economic resources. This objectives is not attainable without significant levels of resources from the financial sector which in the mobilization of credit facilities. Banks have to be effective intermediaries for mobilizing and channeling deposits to the productive sectors of the economy especially the manufacturing sector. (Ogari, Nkamare and Charles, 2014).

Prior Structural Adjustment Programme (SAP) in 1986, interest rate in Nigeria was generally fixed by the Central Bank of Nigeria (CBN) with periodic adjustments which was then dependent on the government sectoral priorities. The monetary authority promotina in investment in key sectors in an economy, charged special interest rates on loans taken so as to promote the rate in the output of the sectors for a arowth transformation in economic growth (Udoka, 2000). The rates of interest were regulated by government through the Central Bank of Nigeria so as to guide the economy towards sustainable economic progress through these key sectors. According to Mckinnon & Shaw (1973), the lot of financial challenges period experienced а (government regulations, law's, and other non-market restrictions preventing financial intermediaries from functioning at full capacity. The deposit rate rose from 4 percent in 1975 to 9.5 percent in 1986, while the lending rate changed from 6 to 10.5 percent within the same period. Nevertheless, the low lending rates could not be sustained. The low and sometimes negative real interest rates discouraged savings, increased the demand for loanable funds. The demand for credit soon exceeded the supply of funds while essential sectors of the economy were starved of funds (Obute, Asor and Idoko, 2012).

On 31st July 1987, the Central Bank of Nigeria introduced the market interest rate which is characterized by the forces of demand and supply rate. Interest rate became market driven where the forces of demand and supply determined interest rate level. This was due to economic instability of the 1980's (Davis and Emerenini, 2015).

From policy reversal in 1994, market lending rate was reintroduced. A claim of changes and high rate under the regulation of lending rate led to flexible rate. Inspite of this, rates were set between 12 percent to 15 percent per annum while a ceiling of 2l percent per annum was fixed for lending. A minor modification to allow for flexibility was observed in 1995, in which flexible interest rate were determined by supply and demand for credit (Udoka & Anyingang, 2012), (Omole & Falokun, 1999).

Since 2004, the Monetary Policy Committee of the Central Bank of Nigeria fixed the lending rates depending on performance of the economy. In 2013, the lending rate was 17.10 percent while the monetary policy rate was 12 percent saving rate 2.39 percent (CBN, 2012).

To this end, effect and role of interest rate was noticeable due to the link between the financial sector and real sector of the economy'. For example, the interest rate which translates into cost of capital has direct implications for investment. High interest rate reduce the potentials of manufacturers to assess credit. In addition, high deposit rate improves savings which is necessary for investment

Statement of the Problems

The various categories of lending rates which include the prime lending rate, nominal lending rate, overdraft rate and sub prime lending rate have been on the increase over the past decades and this has affected the performance of the manufacturing sector. This has been more worrisome given the current decline in the international price of crude oil. This decline in the manufacturing sector have pushed the economy into the immediate past economic recession. NBS (2016) the poor capacity of the Nigerian manufacturing sector has increased the inflation rate by 18.5 percent and a negative growth rate of 2.2 percent. This is characterized by Inadequate financial supports that distorted interest rate policies by both the Central Bank and Deposit money banks, export of raw materials and import of finished

products have been identified as obstacles to the development of the manufacturing sector in Nigeria (Libanio, 2006).

For example, between the period of 1986 when the Structural Adjustment Programme (SAP) was introduced and 2012, prime lending rate increased at an average of 6.1 percent, nominal lending rate increased with about 3.2 percent, overdraft lending rate increased with about 7.9 percent and sub prime lending rate increased with about 5.5 percent (Charles, 2013). Also, average terms deposit rate grew to 6.81% from 5.94% in the second half of 2011. Prime and maximum landing rates moved to 17.02 and 23.27 from 16.82 and 23.25% respectively in the second half of 2011(Charles, 2013). The spread between average terms deposit rates and maximum landing rates narrowed to 16.46% point in the first half of 2012 from 18.06% in the second half of 2011(Davis and Emercimini, 2015). Deposit rate were negative in real terms even the year on year inflation rate of 12.9% in June 2012. Also, the reduced and sometimes negative interest rate on deposit did not encourage savings. The demand for credit thus exceeded the supply of loanable funds and essential sectors of the economy which includes manufacturing were starved of funds (Davis and Emercimini, 2015). Recent report by the Central Bank of Nigeria showed that, aggregate bank credit to the domestic economy fell by 2.7 percent in the first quarter of 2012, in contrast to the growth of 54.0 percent at the end of the second quarter of 2011 (Adolphus and Deborah, 2014). Short term majorities remain dominant in the Deposit Money Banks at the end of 2012. The fluctuations in the prime lending rate, nominal lending rate, overdraft lending rate and sub prime lending rate have even made it more difficult for manufacturers to obtain credit facilities. It has become even more difficult for manufacturers to make forecasts or predictions which

constitutes a hindrance to output expansion in the manufacturing sector (Inacio, 2014).

Objectives of the Study

The main objective of this research is to empirically evaluate Bank Leading Rate: Panacea for Manufacturing Sector Performance in Nigeria. The sub objectives include:

- 1. To examine the association between overdraft lending rate and manufacturing performance in Nigeria
- 2. To determine the association between sub-prime lending rate and manufacturing performance in Nigeria

Statement of Hypotheses

The following hypotheses will be tested for this study

- Ho: There is no significant relationship between overdraft lending rate and manufacturing performance in Nigeria
- Ho: There is no significant relationship between subprime lending rate and manufacturing performance in Nigeria

Conceptual Clarification

In 1990, interest rate were fully deregulated in Nigeria and banks in turn set their interest rate in accordance to the forces of demand and supply. Three (3) arguments were put up to justify this favourable behaviour towards the forces of demand and supply (Ndekwu (1993). They relate to the real rate of interest (nominal rate must sufficiently adjust for the general price level), tight monetary policy (growth of credit and money supply is restricted) and money market behaviour (pressure on interbank funds in the market pushes up interest rates). The expected rate of inflation also plays an important role in the determination of the interest rate, especially

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the real interest rate represented by the Fisher's equation; r = i + pe, where r = real interest rate, I = the nominal interest rate and e is the expected inflation rate. Harvey (1986), noted that this is due to the fact that fund lenders require positive real expected returns (not just expected returns) from giving out their funds while borrowers pay positive real cost for access to loanable funds. Creditors therefore, find it uneconomical to give money at less than the expected rate of inflation since changes in expectations about inflation have a significant influence on the rate of interest.

The significance of interest rate is hinged on its equilibrating influence on market forces in the financial institutions. Colander (2001) and Ojo (1993) agreed with this position stating that the channeling of savings into financial assets and the willingness of individuals to incur financial liabilities is influenced by cost of funds on those financial assets and liabilities as cited in. (Acha and Acha, 2011). The developmental role of interest rate is possible because of the linkage that exist between the financial and real sectors.. It is therefore through this linkage that the effect of interest rate on the financial sector is transmitted to the real sector (Chizea, 1993).

Effects of Bank Lending Rate on the Manufacturing Sector

Boldbaatar (2006), in his empirical review asserted that the high bank lending rate affect all the sectors in an economy. In defending his claim in this direction; 14 Banks lending to the federal government shot up by 23.7 percent to \$369.1 billion in January from \$298.4 **b** in the previous month. This was disclosed by the central bank of Nigeria in its monthly report for January 2004 released Wednesday. According to the Central Bank of Nigeria "deposit money banks claim on the federal government rose by \$70.7 **b** or 23.7 percent during the review month, why banks credit to the private sector increased by \$42.3 **b** or 3.2 percent. At the end of the month, banks credit to private sector stood still at \$1.348 **tr** as against \$1.292 **tr** in the previous month. However, aggregate bank credit to the domestic economy during the month declined by 9.7 percent to \$1.599.7 **tr** from \$1.771 **tr**.

Nevertheless, Boldbaatar (2006), did not fail to acknowledged that the high bank-lending rate really dealt with the manufacturing sector. According to him, bank lending to the sector had always been high before now, but due to the unwanted increase in the lending interest rate, borrowing from the manufacturing sector has rather and regrettably gone too low.

Finally, Haruna (2012), frowned that in spite of the many favourably government policies formulated to enhance industrialization in Nigeria, the problems of interest rates have tremendously affected industrial growth in recent years. Haruna also recorded that the current recapitalization policy of the Central bank lending rate, no doubt, has grossly affected the ability of the manufacturing sector especially the small and medium scale industries.

Determinants of interest rate

Interest rate are influenced by factors such as investment, savings, consumption, demand and supply of money, price expectations, technological changes, duration of loan etc. During period of fiscal deficit the rate of interest could be controlled in such a way that the implicit tax on financial assets becomes a hidden source of revenue for government to finance the deficit. External sector developments are also known to affect domestic interest rates, Such factors include foreign trade, world interest rate and world prices as well as exchange rates.

The impact of world exchange and interest rates depend on the degree of financial openness of the domestic economy. (Obadeyi, Akingumola and Afolabi, 2013).

Review of Empirical

Nwosa, Oseni and Olasunkanmi (2013), assessed the effect of banks loan to small and medium enterprises on manufacturing output in Nigeria. Using data covering 1992 to 2010 and the Error Correction Modelina technique, the result showed that banks loan to SME sector had insignificant impact on manufacturing output both in the long and short run. Chris and Anvingang (2012), evaluated the impact of interest rate fluctuation on economic growth of Nigeria. Using data covering the period between 1970 and 2010 and the Ordinary Least Squared technique, the result showed negative relationship between interest rate and economic growth. Acha and Acha (2011), investigated interest rate in Nigeria. The study used Pearson's Correlation, coefficient and Regression Technique. Evidence from the result showed that interest rate is a core determinant of savings and investments and they added that bank credits are mostly not used for productive purpose. Davis and Emerenini (2015), assessed the impact of interest rate on investment in Nigeria. Adopting the Multiple Regression Technique the result revealed that high interest rate negatively affected investment in Nigeria. Olamide, Frances and Akongwale (2013), analyzed policy option for low and sustainable lending rates in Nigeria. They adopted descriptive statistics and found that high interest rates are driven by high sunk costs due to paucity of infrastructure.

Theoretical Framework The Classical Theory of Interest

The classical theory of interest states that the rate of interest is determined by the supply and demand of

capital. The supply of capital is governed by the preference while the demand for capital is government by the expected productivity of capital. The classical theory is also known as the supply and demand theory of waiting or saving because both the time preference and the productivity of capital depend upon waiting or saving.

The demand for capital consists of the capital for productive and consumptive purposes. Ignoring the demand for capital for purposes of consumption, investors demand capital because it is productive but its productiveness is subject to the law of variable proportions or the law of diminishing marginal productivity.

The law of diminishing marginal productivity or diminishing returns explains that additional units of capital are not as productive as the earlier units when employed on a fixed factor. Investors are encouraged to borrow when the marginal productivity of capital is higher than the market rate of interest. However other determinants of the demand for capital include the growth of population, technical progress, process of rationalization, the standard of living of the community among others.

The supply of capital is a function of the level of savings. It depends upon the will to save and the ability or power to save. There are some people whose motive for saving is not interest elastic. They would save even at zero rate of interest and there are others who would not save no matter the level of interest rate. However there are others whose motive for saving is interest elastic and they save because the current rate of interest is just enough to induce them to save when the rate of interest falls below this level. Thus at higher levels of interest

rate, community savings would increase and by implication the supply of loanable funds will also increase

Assumptions of the classical Theory

- > It assume that income level is constant
- It assumes savings and investment schedule as independent
- It assumes savings as a direct function of interest rate
- > It assumes full employment

Methodology Model Specification

The model to be used for the study is stated as follows:

 $MNP = F(OLR, SPLR) \qquad eq. i$ $MNP = b0 + b1, OLR + b2 SPLR + Ut \dots eq. ii$ Where:

- MNP = Manufacturing performance
- OLR = Overdraft leading rate
- SPLR= Sub-prime leading rate
- Ut = Error term

Test of Hypotheses

Although various tests will be conducted, the parsimonious ECM will be specifically used to test the relevant hypotheses and analyze the research questions. Specifically, the t statistic in the parsimonious ECM result will be used to test the various hypotheses. The decision rule will be to reject the particular null hypotheses and gives an affirmative response to the research question if the t calculated is greater than the t critical. The reverse is the case if the t calculated is less than the t critical in absolute term.

Presentation and Interpretation of Results Descriptive Statistics

The result of the descriptive statistic is shown in the table below:

Table 1. Descriptive Statistics Result							
	LMNP	LOLR	LSPLR				
Mean	8.977705	2.999244	54851.41				
Median	9.523129	3.040218	10214.85				
Maximum	11.58871	3.586016	249220.6				
Minimum	5.743003	2.302585	1322.800				
Std. Dev.	1.346067	0.301684	72648.16				
Skewness	-0.752502	-0.651439	1.062285				
Kurtosis	3.609772	3.064044	2.742839				
Jarque- Bera	3.735550	2.410587	6.488235				
Probability	0.154467	0.299604	0.039003				
Sum Sum Sq.	305.2420 59.79260	101.9743 3.003434	1864948. 1.74E+11				
Dev.							
Observation	34	34	34				
S							

Table 1: Descriptive Statistics Result

Source: Author's computation, 2018.

The mean of the manufacturing output is 8.98 and the standard deviation is 1.35 indicating emerging deviation. The mean for overdraft lending rate is 3.00 and standard deviation is 0.030 indicating a low spread while the mean for sub-prime lending rate is 54851.41 and standard deviation is 72648.16.

Eigenvalue	Trace Statistic	5 Percent Critical Value	1 Percent Critical
			Value
			76.07
0.937220	211.7561	68.52	
0.843138	128.7126	47.21	54.46
0.715204	73.14099	29.68	35.65
0.629229	35.46150	15.41	20.04
0.172942	5.696409	3.76	6.65
	Max-Eigen	5 Percent	1 Percent
Eigenvalue	Statistic	Critical Value	Critical
0.937220	83.04348	33.46	Value
			38.77
0.843138	55.57160	27.07	32.24
0.715204	37.67949	20.97	25.52
0.629229	29.76509	14.07	18.63
0.172942	5.696409	3.76	6.65
	Eigenvalue 0.937220 0.843138 0.715204 0.629229 0.172942 Eigenvalue 0.937220 0.843138 0.715204 0.629229 0.172942	EigenvalueTrace Statistic0.937220211.75610.843138128.71260.71520473.140990.62922935.461500.1729425.696409Eigenvalue 0.937220Statistic 83.043480.84313855.571600.71520437.679490.62922929.765090.1729425.696409	EigenvalueTrace Statistic5 Percent Critical Value0.937220211.756168.520.843138128.712647.210.71520473.1409929.680.62922935.4615015.410.1729425.6964093.76EigenvalueMax-Eigen Statistic 83.043485 Percent Critical Value 33.460.84313855.5716027.07 0.7152040.84313855.5716027.07 0.7152040.62922929.7650914.07 0.1729420.1729425.6964093.76

Table 2: Summary of Johansen Cointegration testresult

Source: Authors Computation, 2018.

Both the trace statistics and the Max-Eigen statistics suggest a five co-integrating equation each. This result will now enable us estimate the overparameterized Error Correction Mechanism (ECM).

Table 3:	Over p	parameteri	zed ECM	Result:			
Dependent Variable LMQ							
Variable	Coefficient	Std. Error	t-Statistic	Prob.			
LOLR	0.576498	3.468571	0.166206	0.8695			
LOLR(-1)	2.856376	4.439846	0.643350	0.5266			
LOLR(-2)	-1.611393	0.571559	-2.819294	0.0097			
LSPLR	0.172379	2.048636	0.084143	0.9337			
LSPLR(-1)	-0.250889	0.079748	-3.146024	0.0047			
LSPLR(-2)	0.084236	1.518792	0.055463	0.9563			
ECM(-1)	-0.850317	0.211487	-4.020658	0.0006			
С	-54.60108	21.57933	-2.530249	0.0191			
$R^2 = 0.84$, AIC = 2.10, SC = 2.60, DW = 2.28, tcritical =							

1.96

Source: Authors Computation, 2018.

Test of Hypotheses

The result of the hypotheses analysed above is as follow

Hypothesis One

Ho1: There is no significant relationship between overdraft lending rate and manufacturing output in Nigeria

Since the absolute value of the t calculated (-6.87)> t critical (1.96), the alternative hypothesis of no significant relationship between overdraft lending rate and manufacturing output is accepted. This gives an affirmative response to the research question which signifies that overdraft lending rate matters for manufacturing output in Nigeria.

Hypothesis Two

Ho1: There is no significant relationship between sub prime lending rate and manufacturing output in Nigeria

Since the absolute value of the t calculated of -2.77 is greater than the t critical of 1.96, the alternative hypothesis of a significant relationship between sub

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prime lending rate and manufacturing output and an affirmation that sub prime lending rate matters for manufacturing productivity in Nigeria.

Diagnostic Checks

The diagnostic checks include the serial correlation Langrange Multiplier (LM) test used to test whether the residuals are serially correlated, the Jarque-bera normality test used to test whether the residuals are serially correlated, the Cumulative Sum of Recursive Residuals (CUSUM) and the Cumulative Sum of Squares of Recursive Residuals (CUSUMQ) to test whether the residuals are stable. The results are shown in the table and figures below:





Source: Authors Computation, 2018.

The result of the jarque bera test with a probability of 0.99 which is greater that 0.05 indicates that the residuals are normally distributed.

Breusch-Godfrey Serial Correlation LM test shown in the appendix with probability of 0.69 indicates that the

residuals are not serially correlated. The White Heteroskedasticity test with probability of 0.99 indicates that the residuals are homoskedastic (have a constant variance). The result of the CUSUM and CUSUMQ stability test is shown in the figures below:



Figure 2: CUSUM Stability test result

Source: Authors Computation, 2018.

The result of the Cumulative Sum of Recursive Residual (CUSUM) stability test indicates that the residual is stable since the CUSUM line fell between the two 5 percent lines. This indicates that the model is stable.

Figure 3: Cusumq Stability test

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Source: Authors Computation, 2018.

CONCLUSION

The result indicates a significant relationship between overdraft lending rate and manufacturing output in Nigeria. This indicates that efficient financial policy on overdraft lending rate could be an impetus in improving the performance of the manufacturing sector. The coefficient of the overdraft lending rate which indicates a negative linear relationship between overdraft lending rate manufacturing output. The result shows that reduction in the overdraft lending rate could increase the output of the manufacturing sector in Nigeria.

The result shows a significant relationship between subprime lending rate and manufacturing output in Nigeria. The result shows that efficient policy on sub-prime lending rate is important in improving the output of the manufacturing sector in Nigeria. The negative overdraft relationship between lendina rate and manufacturing output indicates that a reduced sub-prime lending rate is important to improve the level of industrial output in Nigeria.

RECOMMENDATIONS

The following recommendations are therefore made for policy purpose:

- 1. The Central Bank of Nigeria should review downward the monetary policy rates. This will be beneficial in that the Deposit Money Banks will then reduce their lending rates and this will increase the availability of credit to the manufacturing sector which will in turn increase their productivity.
- 2. The Deposit Money Banks should reduce the unnecessary demands for collateral securities from manufacturers; this will improve the performance of the manufacturing sectors.

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