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Bank Lending Activities and Economic Development in Nigeria; An Empirical Investigation

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Abstract. This paper examined the effect of bank lending activities on economic development in Nigeria, covering the period, 1980-2013.In models 1 and 2, human development index and the industrial gross domestic product, were employed as proxies for human development and industrial development respectively while commercial bank credit to the general commerce, production, services and other sectors formed components of bank lending activities. Applying the test for stationarity with the Ordinary Least Squuare (OLS), and Cointegration procedures, the hypothesis that there is no signficant relationship between bank lending activities and economic development was tested. The results revealed a significant relationship between bank lending activities and economic development in Nigeria. Whereas in model 1, both credit to the general commerce and production sectors were statistically significant as well as met the a priori expectation, model 2 showed that only credit to the services sector carried the wrong sign and at the same time was statistically insignificant. Study, thus concludes that the Central Bank of Nigeria needs to step up its supervisory roles to reduce incidence of insider dealings, bad credit administration and poor corporate governance among commercial banks in Nigeria.

Keywords: ***Bank Lending Activities Human Development Index, Industrial Development.***

1. Introduction

The central role of banks in any given economy can hardly be over-emphasized. Banks perform several economic functions such as lending to various sectors of the economy. Other functions and in line with their intermediation role include acceptance, safe keeping of deposits and other valuables, transfer of funds as well as money creation through various forms of lending. Banks also encourage banking habits among the citizenry while providing employment opportunities and other corporate social responsibilities to the people. Besides banks provide the channel through which government implements monetary policies (Agbada, 2010).

Lending is one of the main activities of commercial banks and other financial institutions in Nigeria. This is evident by the size of loans that form banks' assets and the annual substantial increase in the amount of credit granted to borrowers in the country. Loan portfolio is naturally the largest asset and the largest source of income for banks (Dietrich and Wanzenried, 2009; Njanike, 2009; Ali, et al, 2011; Babalola, 2012; Jahn, 2012).

The Commercial Banks mostly grant credit on short-term basis except in few occasions where they lend on medium and long-term basis provided it will not hamper the liquidity of the bank. Commercial banks loans must be given with collaterals or securities to back up the loans in case of a default. Often, there are policies that guide commercial bank lending which must be adhered to before loans are granted. The level of interest rate has a very great role to play in commercial bank lending practices (Adekanyi, 1983; Aburine, 2008).

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According to Ugoani (2013), banking activities have continued to be of immense support to the growth of the economy, especially through the credit facilities they offer to various sectors. These credits are expected to improve investments and in turn impact positively on economic growth. The various sectors of bank lending to the Nigeria economy as pointed out by the Central Bank of Nigeria (2013), include, Production sector, General commerce sector, Services sector, and Others.

The impacts of the credit contribution to the sectors are expected to be seen at least in both quantitative and qualitative terms. For instance, it is imperative to determine the extent bank credit has affected human development, reduced unemployment and poverty in the economy. The foregoing therefore supports the fact that if banks function effectively and efficiently, should play very vital roles in the economy by contributing immensely to the financial, economic and social development of the economy.

Perhaps, what remains to be seen, at least in both quantitative and empirical terms, is the extent commercial banks support to all the identified sectors of the economy has in turn influenced the level of economic growth and development in Nigeria. This obvious gap is what the present study seeks to fill as it tests the hypothesis that *there is no significant relationship between banking activities and economic development in Nigeria*. Consequently, this study is on the impact of commercial banks' credit to the different sectors of the economy on the level of economic growth and development in Nigeria, covering the period, 1981-2013.

2. Review of Empirical Literature

Finance generally plays a key role in economic development of countries, especially with the developing economies that have urgent need for economic growth and development. For instance, finance is required by different individuals for different purposes (Yakubu and Affoi, 2013). Financial institutions such as commercial banks play intermediation role by channeling funds from the surplus spending units to the deficit spending units of the economy, therefore, transforming bank deposits into credits (Yakubu and Affoi, 2013).

The role of credit in economic development has been recognized as credits are obtained by various economic agents to enable them meet operating expenses. Business firms obtain credit to buy machinery and equipment. To farmers, credit facilitates the purchase of seeds, fertilizer and erection of various kinds of farm buildings. Governments finance both recurrent and capital expenditures through credits. Also, individuals take credit to pay for goods and services (Adeniyi, 2006).

Ademu (2006) asserts that the provision of credit with sufficient consideration for the sectors' volume and price system is a way of generating self-employment. According to Ademu (2006), this happens because credit helps create and maintain a reasonable business size as it is used to establish and/or expand the business, to take advantage of economies of scale. It can also be used to improve informal activity thereby increasing its efficiency through resource substitution that is facilitated by credit. In all these, the banking sector helps to make credit available by mobilizing surplus funds from savers and on-lending such to investors who have brilliant ideas on how to create additional wealth in the economy but lack the necessary capital to execute the ideas (Nwanyanwu, 2010).

The capital required by both government and non-government institutions may come from individuals, banks and non-bank financial institutions and even government. Whatever be the channel, the process of intermediation presupposes that funds be channeled from the surplus- spending to deficit-spending units. However, of all the channels the banking sector has come to enjoy a pride of place as the most efficient intermediary institution for ensuring that funds are allocated optimally in any given economy.

Essien and Akpan, (2007) observed that lending activities in Nigeria over the years have suffered great setbacks with a resultant reduction in investments and corresponding low economic activities expected to drive the economy. Broadly speaking, one of the problems of commercial banking in Nigeria is that of poor management. In some of these banks, issues relating to corporate governance, asset quality, regulation and cost effectiveness, are undermined. According to, Sanusi (2009), *"The excessively high level of nonperforming loans in the five banks… was attributed to poor corporate governance practices, tax credit administration process and the absence or non-adherence to credit management practices."*

Also, the ability of any bank to deliver credit to the real sector depends on a number of factors, the banks' operating environment inclusive. The operating business environment of most Nigerian banks has been identified as 'very harsh' and therefore very unfriendly (Kurfi, 2008). These problems have been worsened by different forms of security challenges at almost every part of the country.

More so, most of the banks' capital base is so poor. The capital adequacy of a bank goes a long way to determine the ability of that bank to make loans available to the needing sectors. This is important because, the volume of loans that could be made to an individual or body corporate by law is determined by the single obligor limit, which is tied to the capital base, (Sanusi, 2007).

On the other hand, most banks present lending requirements which are usually unattainable by their customers. The issue of collateral requirements by banks here also hindered the volume of credit availability to the sectors of the economy. Although banks are expected to set their credit ceiling based on the prime rate, some others tend to exceed the percentage interest rate more especially when the supervising bank allows a range of interest charge. Customer confidence is the cornerstone of banking system stability. In Nigeria, customers are usually afraid of Banks' stability. Public perception about the stability of a bank has strong implication for lending, borrowing and investment activities.

Furthermore, problems of insider abuses tend to impact negatively on bank lending ability and stability. The number of reported cases of attempted or successful fraud /or forgeries in the banking industry is alarming. According to CBN, (2010):

"There were a total of 5,960 cases of attempted fraud or forgery, involving N19.7 billion and US$19.2 million… in 2010. Out of this amount, the actual losses to the banks were N11.4b and US$ 10.98 million".

These practices tend to weaken the ability of banks to mobilize credits to the needing sectors. Some past studies by Usman, (1999) have questioned government direct involvement in credit allocation. Prior to the banking consolidation, Nigeria witnessed a massive direct government involvement in credit administration, especially in the industrial sector characterized by weak technological base, lack of linkages, poor infrastructural development and policy inconsistency. These have resulted in sub-optimal investments, high production cost and production of goods that cannot compete with the international standard.

Credit Administration according to Nzotta (2004), is concerned with implementing credit decisions as authorized by various levels of deciding authorities to ensure that each credit remains satisfactory in terms of quality. This is what is expected of the banks to fulfill. The extent to which economic growth of the Nigeria has achieved through credit policies of banks remains one of the contentious issue and therefore needs further probing.

In the light of the above, there is that need to investigate whether the commercial banks lending to the sectors are adequate or not to generate the desired level of economic development in Nigeria. Hence, the present study seeks to determine the influence of bank lending activities on economic development in Nigeria.

3. The Model and Methodology

Here, a case study approach is adapted and so Nigeria is the population of interest. This study covers the effect of bank lending activities on the economic development of Nigeria for the period, 1980-2013. Also, bank lending activities are as functionally defined by the Central Bank of Nigeria's (CBN) and therefore, all our data set are from the secondary sources as found in the CBN statistical Bulletin (various issues). In collecting the data, the focus was mainly on the key variables identified to include bank credit to the following sectors; Production sector (PDNCR), General commerce sector (GECOMCR), Services sector SERCR (), and Others (OTHCR).

The above-named explanatory variables were regressed against the human development index (HINDEX) in model 1 and again, against the industrial gross domestic product (INGDP) in model 2, as dependent variables with the intention of testing the lead hypotheses thus;

HO_1: There is no significant relationship between bank lending activities and the level of human development index in Nigeria.

HO_2: There is no significant relationship between bank lending activities and the level of industrial gross domestic product in Nigeria.

Using model 1 as an example, the above hypothesis was transformed into a model as follows:

For the hypotheses, the regression equation is presented thus;

$$HINDEX_t = \beta_0 + \beta_1 GECOMCR_t + \beta_2 OTHCR_t + \beta_3 PDNCR_t + \beta_4 SERCR_t + U_t \quad \text{……..3.1}$$

Rearranging equation 3.1 above, we have;

$$U_t = HINDEX_t - (\beta_0 + \beta_1 GECOMCR_t + \beta_2 OTHCR_t + \beta_3 PDNCR_t + \beta_4 SERCR_t) \quad \text{…… 3.2}$$

$$U_t^2 = HINDEX_t - (\beta_0 + \beta_1 GECOMCR_t + \beta_2 OTHCR_t + \beta_3 PDNCR_t + \beta_4 SERCR_t)^2 \quad \text{……3.3}$$

Summing both sides of equation 3.3 we get;

$$\sum_{j=1}^{n} U_{gt}^2 = \sum_{t=1}^{n} (GDP_{gt} - \beta_0 + \beta_1 GECOMCR_t + \text{…..} + \beta_4 SERCR_t)^2 \quad \text{…3.4}$$

In the Regression, $\sum_{t=1}^{n} U_{gt}^2$, (estimate of the population disturbance), is given by $\sum_{t=1}^{n} e^2$, otherwise called the RESIDUAL

SUM OF SQUARES (RSS)

$\sum_{t=1}^{n} (HINDEX_t - HINDEX_t)^2$, is the sum of squares of the deviation of the

actual human development index ($HINDEX_t$) variables from their mean. While the explained sum of squares (ESS) is gotten with the formula, $ESS = R^2 X(TSS)$

Where;

R^2 = the coefficient of determination from the regression.

Therefore,

RSS = TSS – ESS

Discussion of Results

4. Discussion of Results

Variable	Philips-Perron Unit Root Test			
	T-statistic.	**Critical value**	**Order of Integration**	**Significance**
PDNCR	-11.19752	-3.653730	1(1)	1%
GECOMCR	-5.875531	-3.653730	1(1)	1%
SERCR	-8.435347	-3.653730	1(1)	1%
OTHCR	-9.631036	-3.679322	1(1)	1%

Source: E-views 6.0 Econometric Package.

4.2.1.1 Unit root test results

The unit root test is carried out using the Philips-Perron test in order to determine whether the data set is stationary and the order of integration. Evidently, from table 4.1, all the variables turned out to be stationary at first difference and under 1% level of significance.

4.2.1.2 The co-integration results

Thus, with the data set turning out to be stationary, we then applied the Johansen co-integration test which adopts no exogenous variables as it is based on the vector auto regression (VAR) modeling. The essence of this test is to establish the presence of a short or long-run equilibrium existing between the variables and hence the various estimated regression equation results. These results are presented in table 4.2.

Table 4.2 Co-integration and Test Results

Model	Johanssen Co-integration Test		
		Number of Co-integrating Equations	Nature of Equilibrium
1	Commercial Banks' Credit and Industrial Development	4	Long-run
2	Commercial Banks' Credit and Human Development	4	Long-run

Source: E views 6.0 Econometric Package.

From table 4.2, all the models showed evidence of 4 co-integrating equations, therefore there is the existence of long-run relationship between the variables in the two models (see results in the appendix).

4.3 Hypotheses testing

4.3.1 Bank lending activities and human development in Nigeria

In order to determine the effect of bank lending activities on human development in Nigeria, we therefore carried out a multiple regression model as already detailed in section three. The model 1 hypothesis is stated thus:

HO_1: There is no significant relationship between bank lending activities and the level of human development index in Nigeria.

The result of these hypotheses is presented in table 4.2. As already pointed out in chapter three, the first test carried out was the analysis of variance (ANOVA), F-test seeking to test the significance of the model as a whole.

TABLE 4.3 Hypothesis one Result/Output

Dependent Variable: HINDEX
Method: Least Squares

Date: 12/16/14 Time: 10:50
Sample: 1980 2013
Included observations: 33

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.001025	0.019981	-0.051297	0.9595
GECOMCR	4.25E-07	1.18E-07	3.606289	0.0012
OTHCR	-1.03E-08	2.41E-08	-0.428001	0.6719
PDNCR	7.28E-08	1.63E-08	4.460124	0.0001
SERCR	-1.00E-07	6.63E-08	-1.508617	0.1426

R-squared	0.790324	Mean dependent var	0.083403
Adjusted R-squared	0.760370	S.D. dependent var	0.179761
S.E. of regression	0.087997	Akaike info criterio n	-1.884307
Sum squared resid	0.216816	Schwarz criterion	-1.657563
Log likelihood	36.09106	Hannan-Quinn criter.	-1.808014
F-statistic	26.38485	Durbin-Watson stat	2.157243
Prob(F-statistic)	0.000000		

NB: *** = significant at 1%; ** = significant at 5%; * = Not significant. F-ratio tabulated DF (4, 29); 1% = 4.04, 5% = 2.70, t-ratio DF (29); 1% = 2.76, 5% = 2.04.

4.3.1.1 Test of model significance – anova method

In order to confirm the specification status of our model, we employ the analysis of variance or ANOVA, for short. The ANOVA table from the regression result is as presented in table 4.3 and the appendices.

Decision rule

Employing the E-views software, since the F – ratio calculated (26.38485) > F – ratio critical (4.04, 2.70), at both 1% and 5% levels of significance respectively, we reject Ho and conclude that there is a significant relationship between bank lending activities and human development in Nigeria (see result in appendix).The estimated regression result is presented thus;

$$\textbf{HINDEX}_t \textbf{= -0.001025 + 4.25E-07GECOMCR}_t \textbf{ – 1.03E-08OTHCR}_t \textbf{ + 7.28E-08PDNCR}_t \textbf{ – 1.00E-07SERCR}_t \textbf{ …..4.1}$$

4.3.1.2 Test of the significance of the explanatory variables

Furthermore, to test the significance of the individual components of bank lending activities in contributing to the total variation in the level of human development in Nigeria, the student t – test is employed. We again refer to the multiple regression result in table 4.3.

From Table 4.3, only two of the explanatory variables (the commercial banks' credit to the general commerce sector (GECOMCR) and commercial banks' credit to the production sector (PDNCR)) proved to be significant contributors to the level of human development in Nigeria, since the t-ratio calculated (3.606289,4.460124) > t-ratio critical (2.76, 2.05) at both 1% and 5% levels of significance, respectively.

4.3.2 Bank lending activities and industrial development in Nigeria

Here also, in order to determine the effect of external debt on economic development in Nigeria, we therefore carried out a multiple regression model test as already detailed in section three. The model 2 hypothesis is stated thus:

HO_2: There is no significant relationship between bank lending activities and the level of industrial gross domestic product in Nigeria.

The result of these hypotheses is presented in table 4.3. As already pointed out in chapter three, the first test carried out was the analysis of variance (ANOVA), F-test seeking to test the significance of the model as a whole.

TABLE 4.4 Hypothesis two result/output

Dependent Variable: INGDP
Method: Least Squares
Date: 12/16/14 Time: 10:55

Sample: 1980 2013
Included observations: 33

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	349304.6	327793.8	1.065623	0.2957
GECOMCR	5.786305	1.932210	2.994657	0.0057
OTHCR	0.842313	0.395817	2.128039	0.0423
PDNCR	1.364220	0.267806	5.094060	0.0000
SERCR	1.696058	1.087213	1.560006	0.1300

R-squared	0.942787	Mean dependent var	3610039.
Adjusted R-squared	0.934613	S.D. dependent var	5645448.
S.E. of regression	1443588.	Akaike info criterion	31.34189
Sum squared resid	5.84E+13	Schwarz criterion	31.56863
Log likelihood	-512.1412	Hannan-Quinn criter.	31.41818
F-statistic	115.3490	Durbin-Watson stat	1.976174
Prob(F-statistic)	0.000000		

NB: *** = significant at 1%; ** = significant at 5%; * = Not significant. F-ratio tabulated DF (4, 29); 1% = 4.04, 5% = 2.70, t-ratio DF (29); 1% = 2.76, 5% = 2.04.

Source: E-views 6.0 Statistical Package.

4.3.2.1 Test of model significance – anova method

As was the case under model 1, employing the E-views software, since the F – ratio calculated (115.3490) > F – ratio critical (4.04, 2.70), at both 1% and 5% levels of significance respectively, we reject Ho and conclude that there is a significant relationship between bank lending activities and industrial development in Nigeria (see result in appendix).The estimated regression result is presented thus;

$$\mathbf{INGDP_t = 34304.6 + 5.786305GECOMCR_t + 0.842313OTHCR_t + 1.364220PDNCR_t + 1.696058SERCR_t \; .....4.2}$$

4.3.1.3 Test of the significance of the explanatory variables

As under model 1, having tested the significance of the model, we go a step further to test the significance of the different sources of commercial banks' credit to the economy in contributing to the total variation in the level of industrial development in Nigeria. This is achieved through the student t – test. We refer to the regression result in Table 4.4. From Table 4.4, only the commercial banks' credit to the services sector (SERCR) failed to exert a significant effect on the level of industrial development in Nigeria. Stated differently, the commercial banks' credit to the general commerce (GECOMCR), production (PDNCR) and other sectors (OTHCR) were statistically significant.

4.4. Discussion of results

From the results, it is evident from the hypotheses that bank lending activities bear a significant relationship with the level of economic development in Nigeria, represented by the level of human development index (HINDEX) and the industrial gross domestic product (INGDP). Equally revealing is the fact that these two models showed about 79% and 94% levels of relationship between the explanatory variables or bank lending activity components and the level of human and industrial development respectively for the period under review in Nigeria, 1980-2013. In the same vein, with an R^2 of about 79% and 94% it therefore, suffices to say that the variations in the explanatory variables have been able to explain a great proportion, (79 % and 94%) of the variations in the levels of human development index and the industrial gross domestic product respectively.

However, whereas under model 1, both credit to the general commerce and production sectors were statistically significant and, with their positive coefficients met the a priori expectation, under model 2, all the explanatory variables met the a priori expectation in terms of their positive coefficients, with only credit to services sector being statistically insignificant.

5. Conclusion and Recommendation

On the basis of the above research findings, the study therefore, concludes that for bank lending activities to be useful to the economy there should be proper ways of monitoring all credits contracted with a view to ensuring that misappropriation is drastically reduced if not eradicated. To this end, the Central Bank of Nigeria needs to step its supervisory roles to reduce incidence of insider dealings, bad credit administration and poor corporate governance among commercial banks in Nigeria.

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