Research Journal of Finance and Accounting
ISSN 2222-1697 (Paper) ISSN 2222-2847 (Online)
Vol.8, No.12, 2017

Bank Credit and Economic Growth in a Recessed Economy

DIMGBA, Chidinma Martha[1] EGINIWIN, Joseph Ese[2]
OGBONNA, Kelechukwu Stanley[3] ATSANAN, Angela Ngunan[3]
1.Department of Business Administration, Nnamdi Azikiwe University, Awka
2.Department of Accounting and Finance, Edwin Clark University, Delta
3.Department of Banking and Finance, Nnamdi Azikiwe University, Awka

Abstract
The study examines the extent to which Bank Credit relates to economic growth in a recessed economy. The objective of the study is to determine the extent of relationship that exist between Bank Credit and economic growth of selected Small Scale Enterprises in Nigeria from 1992 to 2015. The study employs Philip-Peron and Augmented Dickey Fuller Unit Root Test, Johansen Co-integration, OLS regression and Granger Causality. The result of the study revealed that Bank credit to Small Scale Enterprises significantly related to economic growth in the short run and long run. Hence, the study recommends that Bank Credit to Small Scale Enterprises should be increased to grow the economy like the developed economy that thrives on Small Scale Enterprises.
Keywords: Bank Credit, Small Scale enterprises, GDP

1. Introduction

Finance is a major tool for economic growth and its continuous free flow from the savings surplus unit to the saving deficit unit that require such funds for investment purposes facilitates the multipliers effect of money via financial institution in any economy. In every developing economy of the world, efficient credit facility is the engine that drives investment and productivity. In a recessed economy like Nigeria, appropriate credit facility to key sectors of the economy both at small scale and large scale can lubricate and prove the next sweetening curve to economic appreciation. Ademu (2006) posit that the provision of credit with sufficient consideration for the sector's volume and price system is a way to generate self-employment opportunities. This is because credit helps to 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 (Yakubu and Affoi, 2013). Credit is the aggregate amount of funds provided by commercial banks to individuals, business organizations/industries and government for consumption and investment purposes. Timnsina (2014) argued that individuals obtain credit for both consumption and investment purposes, business organizations/industries borrow loans to invest in plant and machinery where as government borrows loans to spend for recurrent as well as capital purposes. Credit can be gotten from two major markets; namely the money market and the capital market. The money market is the market for short term credits and major players in this market are commercial banks, discount houses, insurance e.t.c. while the capital market is the market for medium and long term credit like the stock exchange. For the purpose of this study, emphasis will be placed on short term credits by commercial banks to small scale enterprises and private investment companies and how such credit facilitated economic growth in Nigeria. Hence, the following objective is formulated for the study;

To determine the type of relationship that exists between Bank Credit and economic growth of selected Small Scale Enterprises in Nigeria from 1992 to 2015.

Hypotheses

$H0_1$: There is significant relationship between bank credit to small scale enterprises and economic growth (GDP).
$H0_2$: There is significant relationship between bank credit to private sector and economic growth (GDP).

2. Review of Related Literature

Concept and theoretical review

According to Investopedia (2017), Bank credit is the aggregate amount of credit available to a person or business from a banking institution. It is the total amount of funds financial institutions provide to an individual or business. It is an agreement between banks and borrowers where banks trust a borrower to repay funds plus interest for either a loan or line of credit at a later date. It allows borrowers to buy goods or services. However, it requires a fixed minimum monthly payment for a specified period. Hence, Credit is the money from the lender to the borrower (Nwanyanwu, 2010). Yakubu and Affoi (2014) reveal that Credit cannot be divorced from the banking sector as banks serve as a conduit for funds to be received in form of deposits from the surplus spending unit of the economy and passed on to the deficit spending units who need funds for productive purposes. Banks plays the role of an intermediary between the surplus units of an economy who have less need for such funds and saving deficit of an economy who require funds for investment purposes. Financial institutions credit comes at a cost and the cost terms vary by bank, credit type, the borrower credit rating and the purpose of the funds. Two

major type of bank credit exist, namely secured and unsecured loan. Their requirement differs in fees, interest rate, terms and condition, regulations and collateral requirement (Investopedia, 2017). The intermediation functions of financial institutions are agents of economic growth.

Economic growth is the increase in the inflation-adjusted market value of the goods and services produced by an *economy* over time. It is conventionally measured as the percent rate of increase in real gross domestic product, or real GDP, usually in per capita terms (Wikipedia, 2017). The concept of economic growth is viewed as an increase in the net national product in a given period of time (Dewett, 2005). Other views of economic growth are in Todaro and Smith (2006) who defined economic growth as a steady process by which the productive capacity of the economy is increased over time to bring about rising levels of national output and income. Jhingan (2006) however simplify economic growth by viewing it as an increase in output. Economic growth is basically measured in terms of Gross Domestic Product (GDP). Hence, the financial intermediation process of financial institutions is required to facilitate Gross Domestic Product.

Major theories exist in the literature that supports the functionality of financial institutions to facilitate economic growth. They include Marxian Theory (looking at the six stages of growth), Shumpeterian Theory (quality-improving innovations), Harrod-Domar Theory of Growth (saving and the capital output ratio), Endogenous Growth Theory and Neo-Classical Model of Growth. The growth models relevant for this study are Neo-Classical Model of Growth and Endogenous Growth Theory. Neo-classical growth theory states that labor and capital are the major factors of production. i.e. Y= f (K, L) where Y denotes aggregate output, K denotes aggregate capital stock, and L is the labor force. If technology and human capital are added, then equation will be: $Yi,t=AK\alpha(Lh)1-\alpha$. (Mankiw, Romer, and Weil, 1992).

Bank credit facilitates to acquire more capital in this production function. When a new technology is available, the labor and capital need to be adjusted to maintain growth equilibrium. To acquire new technology and thus to increase total factor productivity, the role of credit provided by banks would be of immense help (Timsina, 2014). Small Scale enterprise and Private sector credits fosters growth both through a spur in investment and an efficiency/productivity channel. The shortcoming in the Neo-classical growth theory is addressed using the Endogenous Growth Theory (new growth theory). According to Jhingan (2006), endogenous growth theory emphasizes technical progress resulting from the rate of investment, the size of the capital stock of human capital. The theory therefore holds that policy measures can have an impact on the long-run growth rate of an economy (Wikipedia, 2017).

Empirical Review

Different studies have being carried out on commercial bank credit often describe as financial development and economic growth in the literature. Levine (1993) and Levine (1997) in their study of financial development and economic growth discovered that financial development has predictive power for future growth; and interpret this finding as evidence for a casual relationship that run from financial development to economic growth. Their claim is that banking sector development can spur economic growth in the long run are also supported by the findings of De Gregorio and Guidotti (1995), who consider that financial deepening affects growth through a combination of the two effects but with more importance for the efficiency effect.

Sanusi and Salleh (2007) examined the relationship between financial development and economic growth in Malaysia using autoregressive distributed lag approach, found that ratio of broad money to GDP, and credit provided by the banking system have positive and statistically significant impact on economic growth in the long-run. The results further indicated that a rise in investment will enhance economic growth in the long-run. Abu-Bader and Abu-Qarn (2008) examine the causal relationship between financial development and economic growth in Egypt using a tri-variate VAR framework proves that the causality between financial development and economic growth is bi-directional. Hence, their study shows that the impact of financial development on growth is through both investment and efficiency. Ahmed (2008), studying the long run effect of financial development on economic growth using fully modified OLS discovered that the ratio of private sector credit to GDP and domestic credit to GDP (as indicators of financial development) exerted a negative impact on economic growth (financial openness as proxy for financial liberalization) when private credit was used, while the relationship was positive but insignificant when domestic credit was employed.

Murty, Sailaja and Demissie (2012) examined the long-run impact of bank credit on economic growth in Ethiopia using multivariate Johansen cointegration approach using time series data for the period 1971/72-2010/11. Their study investigated the transmission mechanism through which bank credit to the private sector affects long-run growth is investigated. Their study discovered a positive and statistically significant equilibrium relationship between bank credit and economic growth; Deposit liabilities also affect long-run economic growth positively and significantly through banks services of resource mobilization in Ethiopia. Looking at the effect of control variables such as human capital, domestic capital, and openness to trade on growth are found to be positive and statistically significant while inflation and government spending have statistically significant negative impact on economic growth in the long-run. Hence, their study conclude that bank credit to the private

sector affects economic growth through its role in efficient allocation of resources and domestic capital accumulation.

Ben Salem and Trabelsi (2012) in their study of importance of financial development as a determinant of growth in seven SEMCs using the Pedroni's panel co-integration analysis discovered the existence of a long-run relationship between finance and growth. Timsina (2014) examines the impact of commercial bank credit to the private sector on the economic growth in Nepal (from supply side perspectives), using Johansen co-integration approach and Error Correction Model show that bank credit to the private sector has positive effects on the economic growth in Nepal only in the long run, but in the short run, a feedback effect from economic growth to private sector credit was felt. In line with Timsina (2014) is previous study of Khan et al (2005) on the link between financial development and economic growth in Pakistan using the autoregressive distributed lag approach found that financial depth exerted positive impact on economic growth in the long run but the relationship was insignificant in the short-run. This therefore requires policy makers to focus on long run policies for banks credit to promote economic growth in the long run.

In Nigeria, Yakubu and Affoi (2014) examines commercial bank credit and economic growth in Nigeria, using OLS regression techniques and discovered that bank credit significantly facilitated economic growth in Nigeria. However, they hold that poor credit culture hampered the anticipated growth via the multiplier effect of full credit culture utilization would have had on the economy. In the study of Emecheta and Ibe (2014) on the impact of bank credit on economic growth in Nigeria using the reduced form of vector autoregressive (VAR) technique discovered that bank credit to the private sector, broad money (M2) significantly impact economic growth. Their study considers the multiplier effect of M2 in the economy to encourage credit facilities in the economy. Major discoveries were also made in the literature as to why banks credit (financial development) have failed to achieve absolute economic growth in developing economies of the world. Andabai (2014) posits that, lending or credit policy of a bank specifies guidelines and blueprint designed to give direction towards the achievement of sound, safe and profitable lending decision. However, the bureaucracy involved frustrates major users of credit from coming forth to obtain credit for investment purposes in Nigeria. The prevalence of corruption in the banking system also affected credit facilities of commercial banks for economic growth. According to Okereke and Kurotamunobaraom (2016), in their study of the impact of corruption in deposit money banks on the Nigerian economic growth discovered that corruption though not significantly related economic growth but affected credit availability for investment purposes in Nigeria. The therefore recommends, among others, that practical steps should be taken by all stakeholders to strengthen the anti-corruption agencies, encourage private sector participants to enforce compliance with ethical standards in the deposit money banks (DMBs) in Nigeria.

3. Methodology

In order to meet the objectives and hypotheses of the study, data is secondarily sourced from CBN statistical Bulletin of 2016 and *Ex Post Facto research design* was used for the study. The hypothesis will be tested at 5% level of significant. The functional relationship is specified thus:

$Y = F (CBCSSE, CBCPS)$ ……. (1)

The econometric model of this functional relationship is given as:

$GDP = \alpha + \beta_1 CBCSSE + \beta_2 CBCPS + \mu$ …… (2)

Where,

GDP = Gross domestic product

CBCSSE = Commercial Bank Credit to Small Scale Enterprises

CBCPS = Commercial Bank Credit to Private Sector

α = Autonomous GDP when Commercial bank credit to both CBCSSE and CBCPS are held constant

β = Coefficient of commercial bank credits

μ = Error term

Given the assumed relationship, based on a priori reasoning between the GDP and commercial bank credits

4. Presentation of Results and Analysis

Table 1: Summary of Unit Root result Using ADF

Variables	T-statistics	Prob. Value	Critical Value @5%	Level/Difference	Decision
CBCSSE	-4.860166	0.0009	-3.004861	I(1)	Stationary
CBCPS	-3.790420	0.0099	-3.012363	I(2)	Stationary
GDP	-3.578898	0.0152	-3.004861	I(1)	Stationary

Table 2: Summary of Unit Root result Using PP

Variables	T-statistics	Prob. Value	Critical Value @5%	Level/Difference	Decision
CBCSSE	-4.858869	0.0009	-3.004861	I(1)	Stationary
CBCPS	-4.648251	0.0015	-3.012363	I(2)	Stationary
GDP	-3.599593	0.0145	-3.004861	I(1)	Stationary

Researchers Compilation using Eviews 9.5

Table 1 and 2 shows that the variables under consideration are stationary regardless of the unti root tool employed. They are stationary at the same differencing for CBCSSE, CBCPS and GDP using both Augmented Dickey Fuller and Phillips-Perron Unit root test. Hence, all the variables are stationary and study can proceed for further analysis

Table 3: Johansen Co-integration test (Trace Test)

Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.923408	64.04210	29.79707	0.0000
At most 1	0.240624	7.518207	15.49471	0.5182
At most 2	0.064317	1.462529	3.841466	0.2265
Trace test indicates 1 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				

Table 4: Johansen Co-integration test (Max-Eigen Test)

Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.923408	56.52389	21.13162	0.0000
At most 1	0.240624	6.055678	14.26460	0.6061
At most 2	0.064317	1.462529	3.841466	0.2265
Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				

Source: Researchers' computation using E-views 9.5

From the tables 3 and 4, the results reveal that both the Trace and Maximum Eigen statistics did not reject all the null hypothesis of no co-integration at the 5 percent level. Trace test besides rejecting the null hypotheses of two hypotheses, Trace test affirmed the presence of one co-integrating equations at 5 percent level. Maximum Eigen test also established that one of the three variables is co-integrated at the 5 percent level. The implication is that a linear combination of the variables is thus stationary and are said to be co-integrated in the long run.

Table 5: OLS Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CBCSSE	2.37E-05	5.80E-06	4.092277	0.0005
CBCPS	3.29E-07	2.63E-08	12.50346	0.0000
C	14.06708	0.295407	47.61932	0.0000
R-squared	0.892264	F-statistic		86.96085
Adjusted R-squared	0.882004	Prob(F-statistic)		0.000000

Source: Researchers' computation using E-views 9.5

The table 5 shows an OLS regression of CBCSSE and CBCPS on GDP. The result reveal that the coefficient of determination (R^2) = 0.8923 is high and suggests strongly that the variation in GDP was accounted for up to 89.23% by the explanatory variables of CBCSSE and CBCSP. The F-ratio of 86.96 indicates that the overall model is statistically significant even at the 1% significance level. The t-statistics output of CBCSSE and CBCPS indicated in table 5 shows 4.092 with P-value of 0.0005 and 12.503 with P-value of 0000 respectively prove that the individual variables significantly impacted GDP. The high F ratio statistics of 86.96% show that the model is statistically significant at both the 5% and 1% level of significance.

Table 6: Serial Correlation Test

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	2.671838	Prob. F(2,19)	0.0949
Obs*R-squared	5.268236	Prob. Chi-Square(2)	0.0718

Source: Researchers' computation using E-views 9.5

The result of the serial correlation with probability value of 0.0949 is reliable thus; we accept H0 and reject H1. We then conclude that there is no serial autocorrelation in the model and that the model is appropriate.

Table 7: Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.739627	Prob. F(2,21)	0.4893
Obs*R-squared	1.579326	Prob. Chi-Square(2)	0.4540
Scaled explained SS	1.372065	Prob. Chi-Square(2)	0.5036

Source: Researchers' computation using E-views 9.5

The result of the heteroskedasticity test indicates that the probability of 0.4893 is greater than 0.05; hence, we accept the null hypothesis (H_0) meaning that there is no heteroskedasticity in the model and there is homoskedasticity. This shows that the models have global utility and is normally distributed. And based on this we conclude that this model best explain the relationship between these variables included in the model.

Table 8 Pair-wise Granger Casuality Test

Pairwise Granger Causality Tests			
Date: 04/30/17 Time: 22:12			
Sample: 1992 2015			
Lags: 2			
Null Hypothesis:	Obs	F-Statistic	Prob.
CBCSSE does not Granger Cause GDP	22	0.58108	0.5700
GDP does not Granger Cause CBCSSE		1.05522	0.3698
CBCPS does not Granger Cause GDP	22	41.3025	3.E-07
GDP does not Granger Cause CBCPS		17.9894	6.E-05
CBCPS does not Granger Cause CBCSSE	22	2.54781	0.1077
CBCSSE does not Granger Cause CBCPS		0.27561	0.7624

Source: Researchers' computation using E-views 9.5

From Table 8, the CBCSSE was unable to granger-cause a change in GDP in the long run but the GDP was also unable to granger cause a change in CBCSSE. This shows that there was no directional impact between CBCSSE and GDP. CBCPS was able to granger-cause a change in GDP and the GDP show a corresponding effect on the CBCPS, thus showing that there was a bi-directional impact between CBCPS and GDP.

5. Conclusion and Recommendation

This study examines the role of bank credit on economic growth in a recessed Nigerian economy. Based on the findings of the study, it was observed that Bank Credit has a long run relationship with economic growth and the short run result also proved that Bank Credit to both the Small Scale Enterprises and Private Sector impacted the economic growth significantly. The result is in line with the findings of Sanusi and Salleh (2007) and Timsina (2014). However, the ratio of credit to small scale enterprises was porous and affects the rate of their contribution to economic growth in a recessed developing economy like Nigeria. Thus, the study concludes that bank credit to both the Small Scale Enterprises and Private Sector significantly impacted economic growth both in the short run and the long run in Nigeria. Based on the findings and conclusions, the study recommends that Bank Credit to Small Scale Enterprises should be increased to grow the economy like the developed economy that thrives on Small Scale Enterprises.

References

Abu-Bader, S., & Abu-Qarn, A.M. (2008). Financial development and economic growth: Empirical evidence from MENA countries, Review of Development Economics, Vol. 12, pp. 803-817.

Ademu, W.A. (2006). "The Informal Sector and Employment Generation" Selected for the 2006 annual conference of the Nigeria Economic Society in calabar August 22 to 24.

Ahmed, A.D. (2008). Financial liberalization, financial development and growth in sub-saharan Africa's economic reform: An empirical investigation, Centre for Strategic and Economic Studies, Victoria University, Australia.

Andabai, P. W. (2014). Private Sector Development and Economic Growth in Nigeria, International Journal of Advanced Research in Statistics, Management and Finance Vol. 2 No. 1.

De Gregorio, I. & Guidotti, P. E. (1995). Financial Development and Economic Growth, World Development, 23 (3): pp. 433-448.

Dewett, K. (2005). Modern Economic Theory, New Delhi: Shyam Lal Charitable trust.

Emecheta, B. C. & Ibe R. C. (2014). Impact of Bank Credit on Economic Growth in Nigeria: Application of Reduced Vector Autoregressive (VAR) Technique

Engle & Granger, C.W.J. (1987). "Co-integration and Error Correction: Representation, Estimation and Testing", Econometrica, 55, pp.251-276.

Investopedia (2017). Bank Credit http://www.investopedia.com/terms/b/bank-credit.asp#ixzz4fioufIT5
Jhingan, M.L., 2006. The Economic of Development and Planning. 38th Edn., Virnda Publication (P) Ltd., Delhi
Khan, M.A., Qayyum, A., & Saeed, A.S. (2005). Financial development and economic growth: the case of Pakistan, The Pakistan Development Review, 44, 4(2), pp. 819-837
King, R.G, and R. Levine (1993a). "Financial Intermediation and Economic Development", In Mayer and Vives (Eds): Financial Intermediation in the Construction of Europe. London Centre for Economic Policy Research: 156-189
Levine, R. (1997). "Financial Development and Economic Growth: Views and Agenda" Journal of Economic Literature, 35: 688-726.
Levine, R. (2002). "Bank –Based or Market Based Financial Systems: Which is better?" Journal of Financial Intermediation 11:398-428.
Mankiw, N. G., Romer, D. & Weil. D. N. (1992). "A Contribution to the Empirics of Economic Growth." Quarterly Journal of Economics, May, 107(2): 407-437.
Murty, K. S., Sailaja, K. and Demissie, W. M. (2012). The Long-Run Impact of Bank Credit on Economic Growth in Ethiopia: Evidence from the Johansen's Multivariate Cointegration Approach. European Journal of Business and Management, Vol 4, No.14, 2012.
Nwanyanwu, O.J., 2010. An Analysis of Bank Credit on the Nigeria Economic Growth (1992-2008). Jos J. Econ., 4: 43-58.
Okereke, E. J. & Kurotamunobaraomi, T. (2016). Corruption in Deposit Money Banks and Economic Growth in Nigeria (1999-2013)–[Revised] Journal of Accounting and Financial Management ISSN 2504-8856 Vol. 2 No.1
Phillips, P.C.B., & Perron, P. (1988).Testing for a Unit Root in Time Series Regression, Biometrica, 75, pp. 335-346.
Sanusi, N. A. & Sallah, N.H.M. (2007). Financial development and economic growth in Malaysia; an application of ARDL approach. [0nline], available: http/www.ibacnet.org/bai2007,proceedings/papers/2007bai7443.doc.
Timsina, N. (2014). Impact of Bank Credit on Economic Growth in Nepal, NRB Working Paper No. 22.
Todaro, M.P. and S.C. Smith, 2006. Economic Development. 9th Edn., Pearson Education Ltd., England.
Wikipedia (2017) Endogenous Growth Theory
Wikipedia (2017). Economic Growth.
Wikipedia, 2013. Retrieved form: Wikipedia.org/wiki/Endogenous_growth_theory #Models_in_Endogenous_Growth
Yakubu, Z. & Affoi, A.Y. (2014). An Analysis of Commercial Banks' Credit on Economic Growth in Nigeria, Current Research Journal of Economic Theory 6(2): 11-15.

Authors

Dimgba, Chidinma is an administrative officer at Business Administration Department, Faculty of Management Science, Nnamdi Azikiwe University, Awka, Anambra state. She is an astute administrator with over six (6) years experience and Master Degree student within the same department. She is also a researcher with keen interest in management and productivity.

Ogbonna, Kelechukwu Stanley is a Doctoral Student at the Department of Banking and Finance, Faculty of Management Science, Nnamdi Azikiwe University, Awka, Anambra state. He is a researcher cum financial and investment analyst with experience as a consulting staff in the capacity of investment officer and revenue officer at Rivers State Inland Revenue Services.

Eginiwin, Joseph Ese is a Doctoral Student at the Department of Accounting, Faculty of Management Science, Nnamdi Azikiwe University, Awka, Anambra state. He is a seasoned accountant, researcher, administrator and lecturer at Edwin Clark University, Delta state.

Atsanan, Angela Ngunan is a Doctoral student at the Department of Banking and Finance, Faculty of Management Science, Nnamdi Azikiwe University, Awka, Anambra state.