

CREDIT CHANNELS OF FINANCIAL SECTOR DEVELOPMENT AND ECONOMIC GROWTH IN NIGERIA

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Abstract: *The development of the Nigerian financial system has been scrutinized in the recent years as to whether the system support the growth of the economy according to financial sector development theories. However, the inability of previous studies to adequately pay attention to the credit channels of financial sector development necessitated this study. Thus, using data from 1986 to 2018, this study provide a nexus between credit channels of financial sector development and economic growth in Nigeria estimated with Autoregressive Distributed Lag technique (ARDL). Findings from the Bound Co-integration result suggested a long-run relationship between credit channels of financial sector development and economic growth in Nigeria. The study found and concluded that, credit to core sector and credit to government impede economic growth in the short, with credit to core sector stimulating economic growth in the long run. The study recommended that effective policies should be formulated to further allocate more credit to the core sector as major driver of economic growth. Credit allocated to government should be judiciously utilized for growth enhancing purposes.*

Keywords: *credit channel, growth, financial development, repression*

JEL: *F43, E51, G1, O47, G28*

Introduction

The development of the financial system is germane to promoting economic growth and development in a modern economy. Financial sector development ensures the flow of funds from the surplus unit to the deficit unit of the economy for investment purposes which is crucial for economic growth and development (Guiso, Sapienza, & Zingales, 2004; Schmidt & Hryckiewicz, 2006; Greenwood & Jovanovic, 1990). Financial system development stimulates economic growth and development through technology and innovation improvement that promotes intermediation efficiency in the economy (Rousseau, & Wachtel, 1998; Levine, Loayza & Beck, 2000; Dawson, 2015; Arestis, Chortareas, & Magkonis, 2015). Thus, a well developed financial system plays a vital role in the development process of an economy.

The credit channel through which financial sector development influenced economic growth emphasizes on the effective allocation of mobilized financial resources inform of credit to the real and productive sector. Theoretically, it is suggested that, effective allocation of credit to different sector like industrial, services, agriculture, and conduction sectors engenders economic growth and development (Beck, 2013; Levine,

2004; Schumpeter, 1911). Robinson (1952) opined that adequate and efficient allocation and provision of credit enhance investment and real sector productivity. Availability of credit facilitate production of goods and services of the real sector which has multiplier effects on different sectors of the economy (Gilchrist & Himmelberg, 1995; Popov, 2017). Allen and Santomero (2001); Mehl and Winkler (2003) asserted that, a developed financial system allocates credits at low cost, less risks and eliminate asymmetry information. According to Shaw (1973), credit development and allocation supports economic growth both in the short run and long run.

The credit allocation of financial sector especially commercial banks in Nigeria has received significant attention from government and policymaker. Prior to the adoption of deregulation policy, it was believed that there is inefficiency in credit allocation due to interest rate control, credit ceiling, and special directives on credit allocation (Fapetu & Obalade, 2015). Over the years, especially since 1986, the Nigerian financial sector has undergone different reforms which were aimed at ensuring not only effective mobilization of financial resources but also adequate allocation of credit to real sectors (Soludo, 2004; Okpara, Onoh, Ogbonna & Iheancho, 2018).

Despite diverse policies and reforms formulated to enhance the performance of the financial sector, it is widely believed that the sector has not achieved its aim of meeting the credit need of the real sector (Nkoro & Uko, 2013). Also, Adekunle, Sakami and Adedipe (2013) stated that, there is weak connection between the financial sector and the growth because production and investment sector of the economy that are germane to promoting economic growth are not adequately financed by the sector. However, studies conducted on the relationship between financial sector development and economic growth in Nigeria did not give special attention to the credit channel of financial sector development (Abubakar & Gani, 2013; Madichie, *et al.*, 2014; Iheanacho, 2016; Okpara, *et al.*, 2018; Egbo & Nwankwo, 2018; Obamuyi & Faloye, 2018). For instance, Fadare (2010); Bhusal (2012) looked at the effect of financial reforms and economic growth and found reforms to influenced economic growth. In addition the study of (Abubakar & Gani, 2013; Madichie, *et al.*, 2014; Iheanacho, 2016; Okpara, *et al.*, 2018; Egbo & Nwankwo, 2018; Obamuyi & Faloye, 2018) mainly employed overall credit to the private sector and it influence ON economic growth. The Nigerian financial system has witnessed growth and expansion in terms of size and financial instruments. However, the need to further position the financial system as a major credit provider and driver of inclusive growth while weathering different macroeconomic internal and external challenges necessitated this study. The main novelty of this study lies in the adoption of credit to core sector and credit to government as a departure from previous studies. This study employed credit to core sector of the economy because the sector is the major driver of economic growth in Nigeria. Also credit to government measures the ability of the financial sector to provide finance to government which determines the capacity of the government to support it revenue shortage and provide facilities to support growth in the economy. In lieu of the aforementioned gap, this study explored the nexus between credit channels of financial sector development and economic growth in Nigeria. The rest of the paper is divided into methodology, presentation of results and conclusion.

Methodology

Theoretical Frameworks

Series of theories have linked the credit channels of financial sector development to economic growth. Schumpeterian Model of Economic Growth initiated by Schumpeter (1934) acknowledged the role of efficient allocation of credit to promote economic development through entrepreneurship innovation. However, Neo-Classical Model of Growth of Solow (1956) laid more emphasized on technological improvement as the major driver growth by treating credit capital as exogenous variable. Endogenous Growth Model of Levine (1997), Bencivenga and Smith (1991) and Saint-Paul (1992) stressed on the effective and efficient allocation of mobilized finance in terms of credit to the real sector by eliminating liquidity risk and promote savings which are germane to induce real investment and growth.

Finally, the financial repression hypothesis of McKinnon (1973) and Shaw (1973) recognized the critical role that financial institutions play in fostering economic growth through resources mobilization and credit allocation. McKinnon (1973) and Shaw (1973) are of the opinion that a liberalized and effective financial system has the capacity to eliminate inefficiency in savings allocation, reduce risk and promote competitions which in turn support real sector activities by providing the required credit to the sector.

Data and Model Specification

This study employed quantitative data from 1986 to 2018. All data for the study were secondary and times series sourced from Central Bank of Nigeria Statistical Bulletin (2018) and World Development Index. In collecting the data, the focus was mainly on the key variables which include credit to core private sector, market capitalization, monetary policy rate, total saving, net credit to government and real gross domestic product.

Model Specification

The mode for this study was modeled following the empirical study of Shaw (1973); Rousseau and Wachtel (1998); Levine, *et al.*, (2000); Dawson (2015); Arestis, *et al.*, (2015). As a medication to reflect the main focus of this study, Credit to Core Sector and Credit to Government are employed as credit channel of financial sector development. Thus, the simple model for this study is given as:

$$RGDP = f(CCS, CG, MPR, TSGDP)$$

$$LRGDP = \alpha_0 + \alpha_1 CCSGDP + \alpha_2 CGGDP + \alpha_3 MPR + \alpha_4 TSGDP + u$$

Where: LRGDP = Log of Gross Domestic Product, CCSGDP = Credit to Core Sector as a percentage of Gross Domestic Product, CGDP = Credit to Government as a percentage of Gross Domestic Product, MPR = Monetary Policy Rate, TSGDP = Total Saving as a percentage of Gross Domestic Product. α_0 = Constant Term $\alpha_1 - \alpha_4$ = Coefficient of Parameters. u = Error Term

A priori Expectation

Theoretically, the adequate allocation of credit to important sector of the economy is expected to enhance economic growth. Thus, $\alpha_1 - \alpha_4 > 0$. This in tandem with the

assertion of Levine (1997), Bencivenga and Smith (1991); Saint-Paul (1992); McKinnon (1973) and Shaw (1973).

Method of Data Analysis

This study was built upon multiple regression model to examine the effect of credit channel of financial sector development on economic growth in Nigeria. It is necessary to determine the stationarity of the data series employed. This process is required to avoid the issue of non-stationarity of time series data which may lead to misleading results and wrong conclusion. Thus, Augmented Dickey-Fuller unit root test was adopted to assess the stationarity level and order of integration of the individual data series. The, data series are however expected to be stationary at purely level, first difference or combination of level and first difference. The estimated series indicated that the data series are combination of level and first difference which led to the adoption of dynamic technique of Autoregressive Distributed Lag modeling approach.

The Bound Co-integration test was employed to determine the long run relationship among the variables. This technique provided more robust result than other co-integration technique because it has the capacity to investigate long and short run relationship among data series of different integration. Autoregressive Distributed Lag technique was employed to establish the short run and long run effect of credit to core sector, total saving, monetary policy rate, credit to government on real gross domestic product. This technique determine the speed of adjustment from short run to long run equilibrium state while estimating the coefficient of each variables employed in the study in a dynamic manner.

Result and Discussion

Table 1: Summary of Unit Root Test

Series	ADF Test (Level)	Probability Value	ADF Test (First Difference)	Probability Value	Remarks
LGDP	-0.704465	0.8312	-3.114380	0.0358	1(1)
CCSGDP	-0.986714	0.7460	-5.481712	0.0001	1(1)
CGGDP	-3.410994	0.0182	-	-	1(0)
MR	-3.14970	0.0328	-	-	1(0)
TSGDP	-2.093901	0.2483	-5.151718	0.0000	1(1)

Source: Researchers' Computation, 2021

Table 1 presents the unit root test for the data series employed in the study. The result shows that, credit to government as a percentage gross domestic product and monetary policy rate are stationary at level while log of real gross domestic product, credit to core sector as a percentage gross domestic product, and total savings as a percentage gross domestic product are stationary at first difference.

Lag Selection Criterion

Table 2: The Lag Selection Criterion

Lag	LogL	AIC
0	-394.685	26.71234

1	-248.093	19.33953
2	-193.38	18.09200
3	-138.793	16.85287*

Source: Researchers' Computation, 2021

The result of the lag selection criteria is presented in table 2. The information Akaike Information Criterion helps suggest the best model will give adequate empirical result. The result according to Akaike Information Criterion shows that the optimum lag for the estimation of the ARDL model is lag 3.

Bound Co-integration Test

Table 3 ARDL Bounds Test Result

Critical Value Bounds		
Significance	I0 Bound	I1 Bound
5%	2.62	3.79
Estimated Bound F-statistic at k = 10.72561		

Source: Researchers' Computation, 2021

The result of the ARDL Bound test for long run relationship is presented in table 3. The result indicates confirmation of long run relationship among the macroeconomic variables employed in the study. This is because the F-statistic value of 10.72561 at k is greater than the lower bound critical value of 2.62 at 5%. This implies that there is long run relationship credit channel of financial sector development has long run relationship with real gross domestic product in Nigeria. The implication of this is that increase in the allocation of credit to core sector and government in the economy will significantly influences economic growth in the long run.

Autoregressive Distributed Lag Results

Table 4: Error Correction Model

Dependent Variable: LR GDP				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CCPSGDP)	-0.007052	0.003242	-2.175091	0.0487
D(CG GDP)	-0.004670	0.001388	-3.364239	0.0051
D(CG GDP(-1))	-0.002445	0.002098	-1.165361	0.2648
D(CG GDP(-2))	0.004330	0.001440	3.006372	0.0101
D(MPR)	0.002754	0.001068	2.578876	0.0229
D(TSGDP)	-0.009287	0.003903	-2.379512	0.0333
D(TSGDP(-1))	-0.009574	0.002104	-4.550740	0.0005
CointEq(-1)	-0.120244	0.014011	-8.582138	0.0000

Source: Researchers' Computation, 2021

The result of the dynamic relationship between financial sector development and economic growth is presented in table 4. The result shows that credit to core private sector as a percentage gross domestic product has negative and significant effect on log of real gross domestic product in Nigeria. Furthermore, the result indicates that credit to government as a percentage of gross domestic product has negative effect on log of real gross domestic product both at current period and lag one but only significant at current period. It is established that, credit to government as a percentage of gross domestic product

the has positive and significant effect on real gross domestic product at lag two. Also, monetary policy rate is found to have positive and significant effect on real gross domestic product in Nigeria. However, total savings as a percentage of gross domestic product has negative and significant effect on log of real gross domestic product but at current period and lag one. Finally, the co-integration equation has a value of -0.120244 with a corresponding probability value of 0.0000 which is statistically significance at 5%. This implies that there may be a distortion in short runs which will be corrected in the long run via adjustment mechanism. This indicates that short term distortions in the variables are of enormous importance in their long term relationship and 12% of this disequilibrium is corrected in the current period.

Table 5: Long Run Result

Dependent Variable: LRGDP				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
CCSGDP	0.072031	0.012581	2.461460	0.0042
CGGDP	-0.098652	0.009565	-10.313511	0.0000
MPR	0.086896	0.019740	4.402011	0.0007
TSGDP	0.036414	0.015590	2.335803	0.0362
C	8.435384	0.370561	22.763849	0.0000

Source: Researchers' Computation, 2021

The result of the long run result is presented in table 5. The long run result shows that credit to core sector as a percentage gross domestic product has positive and significant effect on real gross domestic product with a coefficient of 0.072031. The implication of this finding is that increase in the flow of credit from financial institutions to the core or important sector of the economy like manufacturing, industrial, and agricultural sector enhances the sectors' performance and hence contribution to economic growth. The positive relationship between credit to core private sector and gross domestic product conformed with the assertion of Beck (2013); Levine, (2004); Schumpeter (1911); Robinson (1952); Gilchrist and Himmelberg (1995); Popov (2017); Allen and Santomero (2001).

However, credit to government as a percentage gross domestic product has negative and significant effect on real gross domestic product with a coefficient of -0.098652. This may result from the fact that government prefers external debt to domestic credit. Also, it may large be due to mismanagement and underutilization of credit where financial resources are diverted for personal use other than investment in long term capital project that would enhance economic activities and growth.

Furthermore, it is found that monetary policy rate has positive and significant effect on real gross domestic product. This may result from stable monetary policy rate being adopted by government which promotes deposit mobilization and lending activities which are germane for promoting economic growth. Finally, total savings as a percentage of gross domestic product has positive and significant effect on real gross domestic product with coefficient of 0.036414. This implication of this is the ability of financial institutions to mobilize savings would promote lending and real sector activities thereby promoting economic growth.

Conclusion and Recommendations

This study investigated the nexus between credit channels of financial sector development and economic growth in Nigeria from 1986 to 2018. A well developed financial system has the capacity to ensure effective mobilization and allocation of credits to the real sector to enhance growth through optimum utilization of credits. Findings from this study provide evidence of long run relationship between credit channels of financial sector development and economic growth in Nigeria. This study in line with findings concluded that, credit to core sector and credit to government impede economic growth in the short, with credit to core sector stimulating economic growth in the long run. The study recommended that effective policies should be formulated to further allocate more credit to the core sector as major driver of economic growth. Credit allocated to government should be judiciously utilized for the provision of infrastructural facilities to support economic activities and growth. Finally, the current monetary policy rate should not only be sustained but also reduce to a certain threshold to facilitate adequate mobilization of financial resources and credit allocation for growth purpose.

References

1. Abubakar, A. & Gani, I.M. (2013). Impact of banking sector development on economic growth: Evidence from Nigeria. *Journal of Business Management & Social Sciences Research*, 2(4), 47- 59.
2. Adekunle, O.A., Salami, G.O. & Adedipe, O.A. (2013). Impact of financial sector development on the Nigerian economic growth. *American Journal of Business and Management*, 2(4), 347-356, <https://doi.org/10.11634/216796061706361>
3. Alabi, M. O., Tella, S. A., Odusanya, I. A., & Yinusa, O. G. (2018). Financial deepening, foreign direct investment and output performance in Nigeria. *Scientific Annals of Economics and Business*, 65(2), 193-204. DOI: <http://dx.doi.org/10.2478/saeb-2018-0007>
4. Allen, F. & Santomero, A.M. (2001). What do financial intermediaries do. *Journal of Banking and Finance*, 25, 271 – 294, [https://doi.org/10.1016/S0378-4266\(99\)00129-6](https://doi.org/10.1016/S0378-4266(99)00129-6)
5. Arestis, P., Chortareas, G. & Magkonis, G. (2015). The financial development and growth nexus: A meta analysis. *J. Econ. Surv.*, 29, 549–565, <https://doi.org/10.1111/joes.12086>
6. Beck, T. (2013). *Finance for development: A Research Agenda*. ESRC-DFID DEGRP Research Report. 2013. gov.uk/media/57a08a48e5274a27b200050b/FinanceDevelopment-Research-Report-September-2013.pdf (accessed on 15 December, 2020).
7. Bencivenga, V.R. & Smith, B.D. (1991). Financial Intermediation and Endogenous Growth. *Review of Economics Studies*, 58(2), 195–209
8. Bhushal, B.P. (2012). Impact of financial policy reforms on financial development and economic growth in Nepal. *International Journal of Business and Social Sciences*, 3(14), 33-45.
9. Bist, J.O. (2018). Financial development and economic growth: Evidence from a panel of 16 African and non-African low-income countries. *Cogent Economics & Finance*, 6, 1449780, <https://doi.org/10.1080/23322039.2018.1449780>
10. Dawson, P.J. (2010). Financial development and economic growth: A panel approach. *Appl. Econ. Lett.*, 17, 741–745, <https://doi.org/10.1080/13504850802314411>
11. Egbo, E.I. & Nwankwo, S.N.P. (2018). Effect of financial sector development on economic growth: A case of Nigeria. *Journal of Economics and Sustainable Development*, 9(20), 80 – 91.
12. Fadare, S.O. (2010). Recent banking sector reforms and economic growth in Nigeria. *Middle Eastern Finance and Economics*, 8, 146-160.
13. Fapetu, O. & Obalade, A. (2015). Sectoral allocation of banks' credit and economic growth in Nigeria. *International Journal of Academic Research in Business and Social Sciences*, 5(6), 161-169.

14. Gilchrist, S. & Himmelberg, C. (1995). Evidence on the role of cash flow for investment. *Journal of Monetary Economics*, 36(3), 541-572.
15. Greenwood, J. & Jovanovic, B. (1990). Financial development, growth, and the distribution of income. *Journal of Political Economy* 98, 1076-1107.
16. Grilli, V. & Milesi-Ferretti, G. M. (1995). Economic effects and structural determinants of capital controls. *IMF Staff Papers*, 42(3), 517-551
17. Guiso, L., Sapienza, P. & Zingales, L. (2004). Does local financial development matter? *Quarterly Journal of Economics*, 119(3), 929-969, <https://doi.org/10.1162/0033553041502162>
18. Iheanacho, E. (2016). The impact of financial development on economic growth in Nigeria: An ARDL analysis. *Economies*, 4(24), 1-12, <https://doi.org/10.3390/economies4040026>
19. Imoughele, Ehikioya, L., Ismaila, S., & Mohammed, M. (2013). Commercial bank credit accessibility and sectoral output performance in a deregulated financial market economy: Empirical evidence from Nigeria. *Journal of Finance and Bank Management*, 1(2), 36-59.
20. Levine, R. (2004). *Finance and Growth*. University of Minnesota.
21. Levine, R., Loayza, N. & Beck, T. (2000). Financial intermediation and growth: Causality and causes. *J. Monet. Econ.*, 46, 31-77, [https://doi.org/10.1016/S0304-3932\(00\)00017-9](https://doi.org/10.1016/S0304-3932(00)00017-9)
22. Mehl, A. & Winkler, A. (2003). *The Finance-Growth Nexus and Financial Sector Environment: New Evidence from Southeast Europe*. Presented at the Ninth Dubrovnik Economic Conference on Banking and the Financial Sector in Transition and Emerging Market Economies, Dubrovnik, Croatia, 26-28 June.
23. Obamuyi, T.M & Faloye B.A. (2018). Finance and economic growth of Nigeria. *Journal of Economics and Finance*, 9(1), 9-14, DOI: 10.9790/5933-0901040914
24. Okaro, C.S. (2016). Deposit money banks' credit and Nigerian economic growth and development (1981-2015). *NG-Journal of Social Development*, 5(5), 106-123.
25. Okpara, C.O., Onoh, A.N., Ogbonna, B.M. & Iheancho, E. (2018). Econometrics analysis of financial development and economic growth: Evidence from Nigeria. *Global Journal of Management and Business Research*, 18(2), 1 - 11.
26. Popov, A. (2017). *Evidence on finance and economic growth*. ECB Working Paper 2115, <https://doi.org/10.4337/9781785360510.00009>
27. Rousseau, P. & Wachtel, P. (1998). Financial intermediation and economic performance: Historical evidence from five industrialized countries. *J. Money Credit Bank*, 30, 657-678, <https://doi.org/10.2307/2601123>
28. Saint-Paul, G. (1992). Technological choice, financial market and economic development. *European Economic Review*, 36(4), 763-782, [https://doi.org/10.1016/0014-2921\(92\)90056-3](https://doi.org/10.1016/0014-2921(92)90056-3)
29. Schmidt, R.H. & Hryckiewicz, A. (2006). *Financial systems: Importance, differences and convergence*; IMFS Working Paper Series No. 4, Germany, <http://nbn-resolving.de/urn:nbn:de:hebis:30-70340>
30. Schumpeter, J. A. (1934). *The theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle*. New Brunswick, NJ: Transaction Publishers.
31. Schumpeter, J.A. (1911). *A theory of economic development*. Cambridge: Harvard University Press.
32. Shaw, E.S. (1973). Financial deepening in economic development. *Oxford University Press, New York*.



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