

Effect of Financial Intermediation on Economic Development of Nigeria

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Abstract: *This study examined the effect of financial intermediation on the development of the economy of Nigeria using data spanning 1986 to 2017. The data were obtained from Central Bank of Nigeria Statistical Bulletin, World Bank (World Development Indicators) and International Monetary Fund (World Economic Outlook). The study considered credit to private sector, lending rate and money supply as independent variables, while real GDP growth rate and unemployment rate were used as dependent variables. Auto-regressive distributed Lag (ARDL) technique was employed and Eviews 9 was used for the analyses. In order to achieve the objective of the study, series of tests were conducted, including normality test, stationarity test, cointegration test, ARDL estimation and error correction. The tests provided the basis for the conclusion that credit to private sector do not really contributes positively to the development of the economy. This could be due to high lending rate (interest rate). High lending rate is detrimental to the development of the economy. Thus, the study recommends, among others, that the monetary authority should make policies to compel banks to lower their lending rates to encourage the productive sectors of the economy to perform better.*

Keywords: *Financial Intermediation, Economic Development, Nigeria*

A version of this Paper was presented at the 8th International Conference of Accounting and Finance Research Association held at University of Calabar International Conference Centre, November 4 – 6, 2018

Date of Submission: 23-12-2018

Date of acceptance: 07-01-2019

I. Introduction

Finance has been identified as the underlying requirement for input factor in economic development and also regarded as an engine of growth in any economy (Onoh, 2002). In an economy like ours which is in a hurry to develop despite serious constraints, much attention is therefore placed on the financial system and its components for the mobilization of funds for economic growth (Ogiriki&Andabai, 2014). The economic agents that are responsible for such transfers are called financial intermediaries and the process through which it is done is called financial intermediation (Umoh, 2005). Ogiriki&Andabai(2014) pointed out that financial intermediaries have become an engine of growth and development by the process of financial intermediation. Okereke (2005) stressed that; channelling of funds from surplus to deficit units of the economy will encourage productive innovation even though it is also risky.

The financial system plays a key role as it makes savers' funds more liquid, while it invests a portion of the funds into illiquid long-term investments. Furthermore, Levine (1997; 2005) explains that economic growth is closely linked to the liquidity provision function of the financial system. The link arises because some high-return projects require a long-term commitment of capital, but savers do not like to relinquish control of their savings for long periods. As one of the empirical evidence linking liquidity provision and economic growth, Levine (2005) noted that isolating this liquidity function from the other financial functions performed by banks, however, has proven prohibitively difficult. Nzotta (2004) posited that, the banking sector is the dominant sector in the Nigerian financial service industry. He also described it as the most vibrant component and whatever difficulties it passes through affects the entire economy greatly. Generally, activities of the deposit money banks impact on the soundness and stability of the financial system hence the special attention accorded them by the regulatory authorities (Umoh, 2005).

In July, 2004, the central bank of Nigeria (CBN) launched a 13-point agenda aimed at creating bigger banks with stronger statements of financial position, ensuring safe and sound banking practice and enhancing regulatory capacity to supervise the industry (Ogiriki&Andabai, 2014). According to Soludo (2004), the key element of the reform program was the increase in minimum capital base of banks from N2 billion to N25

billion by December, 2005. The reform program was driven by the following factors; (i) Nigerian banks were small, depended on government or public sector deposits and unable to meet the economy's funding needs. (ii) Banking penetration was low and retail offering were limited. For example deposits in the hands of small businesses and individuals was 80% of the total currency in circulation. (iii) The narrow scale and scope of services provided by Nigerian banks led to loss of businesses to their foreign counterparts. (iv) The industry was fragmented and many banks operated as fringes players. (v) Corporate governance was poor and insider abuse and sharp practices by directors and other related parties were rampant. (vi) There was loss of confidence in the banking system. Nnanna (2004) concluded that, the banking reforms by the CBN were therefore intended to address these issues and specifically strengthen the Nigerian banking system, with the vision to ultimately make Nigeria the financial hub of Africa and to stem the systematic distress that have played the system, practically reposition Nigerian banks to compete favourably with foreign banks, encourage consolidation through mergers and acquisition, enhance professionalism in the conduct of banking business, and make the banking system safer and engender depositors confidence. Nevertheless, some firms are still struggling to survive and grow in the economy due to financial problems which invariably affects the economy. This questions the effectiveness of the intermediation process. Thus, this study focuses on examining the effect of financial intermediation on economic development in Nigeria. The specific objectives of the study are to:

1. Examine the effect of credit to private sector on unemployment rate
2. Determine the effect of credit to private sector on real gross domestic product's growth rate
3. Examine the effect of money supply on unemployment rate
4. Determine the effect of money supply on real gross domestic product's growth rate
5. Ascertain the effect of lending rate on unemployment rate
6. Assess the effect of lending rate on real gross domestic product's growth rate

The research hypotheses that guided this study are:

- H₀₁: Credit to private sector has no significant effect on unemployment rate
H₀₂: Credit to private sector has no significant effect on real GDP growth rate
H₀₃: Money supply has no significant effect on unemployment rate
H₀₄: Money supply has no significant effect on real GDP growth rate
H₀₅: Lending rate has no significant effect on unemployment rate
H₀₆: Lending rate has no significant effect on real GDP growth rate

The study covered the period spanning 1986 to 2017. 1986 was used as the base year because financial liberalisation reform took place that year. This study will be beneficial to the following:

1. The monetary authority: The study shows how banks perform their mandate of channelling funds from the surplus unit to the deficit unit of the economy. This enables the monetary authority to ascertain if the banks are doing well as regards to financial intermediation or not.
2. Banks: This research report mirrors the activities of banks in relation to financial intermediation. The study further recommends the way forward. As such, banks may rely on the findings and recommendations of the study to make adjustments for a better operation.
3. Investors: The findings of this study enlighten the investors on the intermediation role of banks and its effect on economic growth of the country. This helps very well in making proper investment and financing decisions.
4. Researchers: This study serves as a reference material for further research in this field of study.
5. Lecturers/students: This research work serves as a study material for both lecturers and students on issues relating to financial intermediation and economic growth.

II. Review of Related Literature

Conceptual Review

Financial system is made up of various financial institutions that operate in an orderly manner to ensure the smooth flow of funds, the regulatory and supervisory authorities that control the activities of the institutions, the financial market, its participants and instruments traded. Ezirim (2005) also described the financial system as the aggregation of financial market arrangements, institutions and agents that interact with each other and other economic units, together with the set of rules and regulations that guide their interactions. Onoh (2002) observed that, the Nigerian financial sector comprises various segments including the regulatory and supervisory authorities for banks and non-bank financial institutions; others are the money market and its institutions, the capital market and its players. The financial system mobilises savings from the surplus units (lenders) and moves these funds to deficit units (Borrowers). According to Barnisile (2005), volume of credit available to economic units for investment determines the rate of economic growth as measured by the Gross Domestic product. Nzotta (2004) observed that, interest rates, credit ceiling and sectoral allocation have been found useful to ensure efficiency in resource allocation as well as innovative ideas and development in institutions.

Ezirim (2005) posited that, the challenges posed by globalization, liberalization and technological innovations are enormous, especially in terms of competition and thereby increasing sophistication of consumer financial services which will put a lot of pressure on existing resources. Onyewe (2004) asserted that, despite the large number of banks, which should have provided considerable competition, there is wide spread between the deposit and lending rates. Pagano (1993) explained three channels through which financial development may affect economic performance. First of all, financial intermediaries improve efficiency of investments. Second, efficient financial systems decrease transaction costs and as a result increase savings. Third, financial sector development may increase or decrease savings. Along with the screening and monitoring the most productive investments, financial intermediaries increase productivity through risk sharing and risk minimization. Improvement in productivity can occur as a result of specialization of producers; however this specialization bears some risk. Developed financial intermediaries mitigate risks by diversifying and sharing these risks between investors (Acemoglu & Zilibotti, 1997). In contrast, it is too risky for producers and investors in countries with inefficient financial markets to increase productivity by specialization. Benhabib and Spiegel (2001) also confirmed the hypothesis that financial intermediaries support economic growth by increasing total factor productivity.

In addition to increasing efficiency, financial intermediaries also drive economic growth through capital accumulation. According to Montiel (1995), development of financial services networks, financial markets, and instruments are necessary for transformation of savings to investments for economic growth. However, Beck (2013) found evidence that financial sector affects economic growth through productivity rather than capital accumulation. Financial impact conduit for economic growth may also differ depending on the level of economic development of countries. Industrialized countries might be more sensitive to productivity path, whereas capital accumulation is more important for developing countries (Rioja & Valey, 2004).

Theoretical Review

The study is anchored on the theory of financial intermediation. The theory according to Allen and Santomero (1998) is designed for institutions that take deposits or issue insurance policies and channel funds to firms. The theory states that the development of intermediaries tends to lead the development of the financial markets; the development of the financial sector leads to the development of the economy. Banks have existed since ancient times, taking deposits from households and making loans to economic agents requiring capital. The economic agents invest the funds in productive economic activities which yield returns and boost economic growth.

The theory of financial intermediation completely disqualifies the traditional Arrow-Debreu model of resource allocation. This model states that firms and households interact through markets and financial intermediaries play no role. According to the model, markets are perfect and complete, the allocation of resources is therefore efficient and there is no room for intermediaries to improve welfare. Moreover, the Modigliani-Miller theorem applies in this context as it asserts that financial structure does not matter as households can construct portfolios which offset any position taken by an intermediary, therefore intermediation cannot create value (Fama, 1980). According to Allen and Santomero (1998), the view that financial markets allow an efficient allocation and intermediaries have no role to play is clearly at odds with what is observed in practice.

Empirical Review

Usman, Alimi and Onayemi (2018) evaluated the effect of bank intermediation activities on economic growth in Nigeria using secondary data obtained from Central Bank of Nigeria Statistical Bulletins within the period 1983 and 2014. The OLS regression result showed that loan and advances and money supply have positive effect on economic growth. The cointegration result indicated the existence of a long-run relationship between the variables. The study concluded that financial intermediation by banks has statistically significant impact on economic growth in Nigeria. Oluwasogo, Princess, Oluwatoyin and Folasade (2017) examined the effect of financial intermediation on economic growth in Nigeria covering the period 1980 to 2014. The study used Johansen cointegration test and Error Correction Model. The study showed that financial intermediation has a long-run relationship with economic growth.

Gisanabagabo and Ngalawa (2016) empirically investigated the possible cointegration and causal link between financial intermediation and economic growth in Rwanda, using quarterly data spanning 1966Q1 to 2010Q4. A Structural Vector Autoregressive model was used to analyse the short-run dynamics between the variables used. The findings showed evidence of cointegrating relationship between financial intermediation and economic growth. The study observed that a shock to domestic private sector credit accounts for the largest portion of fluctuations in real output growth, while the shock to potential liquidity came second. Olowofeso, Adeleke and Udoji (2015) examined the impacts of private sector credit on economic growth in Nigeria using the Gregory and Hansen (1996) cointegration test which accounts for structural breaks and endogeneity

problems. The method was applied to quarterly data spanning 2000:Q1 to 2014:Q4, while the fully modified ordinary least squares procedure was employed to estimate the model coefficients. The study found a cointegrating relationship between output and its selected determinants, albeit, with a structural break in 2012Q1. Amongst others, findings from the error correction model confirmed a positive and statistically significant effect of private sector credit on output, while increased prime lending rate was inhibiting growth. In view of the financial intermediation roles of deposit money banks, the paper supports efforts of the Central Bank of Nigeria (CBN) in promoting a sound and real sector-friendly financial system.

Nwanne (2015) assessed the implications of cost of financial intermediation on economic growth in Nigeria. The study made use of ordinary least square regression analysis. The co-integration test indicated a long-run relationship between cost of financial intermediation and economic growth in Nigeria. The study shows that total loan (TL) has significantly impacted on economic growth in Nigeria, that interest rate has significantly impacted positively on the growth of Nigerian economy and that the level of total deposit over the years has impacted negatively on economic growth in Nigeria. The study pointed out a policy implication that improper management of financial intermediation cost may have caused several macroeconomic consequences in Nigerian economy and the framework for demonstrating its consequence in the real sector of the economy. Hence, the issue of how total loan, interest rate and total deposit link to the level of economic growth is of a great concern in Nigerian economic performance. The study recommended that Nigerian government should ensure that proper control and regulations should guide financial intermediation cost in order to achieve a sound financial system.

Ogiriki and Andabai (2014) examined the relationship between financial intermediation and economic growth in Nigeria using secondary data spanning (1988-2013). The data used were collected from the CBN statistical bulletin and national bureau of Statistics. Hypotheses were formulated and tested using vector error correction model and the test for stationarity proves that the variables are integrated in the order of one which implies that unit roots do not exist among the variables. There is also a long-run equilibrium relationship between economic growth and financial intermediation and the result also confirms about 96% short-run adjustment speed from long-run disequilibrium. The coefficient of determination indicates that about 89% of the variations in economic growth are explained by changes in financial intermediation variables in Nigeria. The study therefore recommends that the monetary authorities should properly control and regulate the activities of the intermediaries in order to achieve a sound financial system in the country. The study added that efforts should be made by monetary authorities to checkmate banks from possessing excess liquidity in order to prevent inflation in the economy.

Nwite (2014) studied the effect of financial intermediation on economic growth in Nigeria. The study used ordinary least square regression analysis. The study shows that interest rate margin has significantly impacted on economic development in Nigeria, that credit to private sector has significantly impacted positively on the development of Nigerian economy and that the level of lending rate over the years has impacted negatively on economic growth in Nigeria. According to the study, proper management of financial intermediation will help the economy to develop. This means that there is significant and positive effect of financial intermediation on economic growth in Nigeria. The study recommended that Nigerian government should carry out a component analysis of the real sector of the economy with a view to having a better understanding of the inverse relationship between loans to the private sector and the performance of the economy through financial intermediation. Shittu (2012) examined the impact of financial intermediation on economic growth in Nigeria. Time series data from 1970 to 2010 were used and were gathered from the CBN publications. For the analysis, unit root test and cointegration test were employed and the error correction model was estimated using the Engle-Granger technique. The paper established that financial intermediation has a significant impact on economic growth in Nigeria.

Ogwumike and Salisu (2009) examined the short-run, long-run and the causal relationship between financial development and economic growth in Nigeria from 1975 to 2008. Using the Bound test approach, the study found a positive long-run relationship between financial development and economic growth in Nigeria. Financial intermediation- credit to private sector, stock market and financial reforms exert significant positive impact on economic growth. Further, analysis of the short-run dynamics revealed that about 40% of the resulting disequilibrium is captured each period indicating minimal deviations from the equilibrium. The study indicated that the result of the VAR-Granger causality test tends to support the supply-leading hypothesis. The study recommended that appropriate regulatory and macroeconomic policies that will foster the expansion and development of the Nigerian financial institutions should be pursued by the relevant authority.

Badun (2006) reviewed empirical research on the link between financial intermediation by banks and economic growth. Special attention was paid to the issues of causality, non-linearity, time perspective, financial intermediation proxies, and interaction terms. The review showed that there are still quite a few unresolved issues in empirical research, which causes scepticism towards prioritizing financial sector policies in order to cause economic growth. According to the study, progress in the finance and growth literature is slow and

researchers seem to go round in circles. The study recommended a possibly fruitful direction for future empirical research as the relationship between government and banks, especially from the standpoint of political economy.

Tasic (2007) examined the important functions of the banking system: to transform short-term liquid deposits into long-term illiquid financial assets that can fund long gestation activities and, thus, raise the rate of economic growth. To investigate this function empirically, the dissertation used two new data sets on the maturity of bank credit to the private sector. First data set contains yearly observations covering 74 countries during the period from about 1990 to 2005, while the second data set contains quarterly observations covering 14 transition countries from about 1995 to 2006. Using the data on a broad set of countries, the dissertation shows that economic growth is enhanced in countries where the financial system extends more long-term credit.

Motivated by banks' high cost of funds, Musa, Okorie, Okoro, Dada, Chiemeké and Owolabi (2015) explored the determinants of banks' cost of funds. The study employed a panel regression analysis using bank-specific, industry-specific and macroeconomic data involving 10 selected deposit money banks from January 2012 to March 2014. To contain the problems of endogeneity and cross sectional heterogeneity identified, the Generalized Method of Moment (GMM) approach was used. The results of the estimations of weighted banks' cost of fund and profitability model indicated that banks funding costs are determined by bank specific characteristic, mainly salaries and wages, other overheads including cost of infrastructure, banks' risk premium, liquidity condition and inflation as well as money supply. To reduce banks' cost of funds, the paper recommended the sustenance and promotion of the CBN and federal government interventions in infrastructural development, further liberalization of financial market through introduction of more instruments, balancing price stability objectives and earning ability of banks when using CRR and promote shared service schemes to reduce banks' other overhead costs. Yusifzada and Mammadova (2015) examined financial intermediation and economic growth. They found that financial depth does not fully reflect how well the financial intermediaries serve to economic agents in stimulating economic growth. According to the study additional aspects of financial system such as access, efficiency and stability should be taken into account in order to shed light into the relationship between finance and economic growth. The paper captured four aspects of finance – depth, access, efficiency and stability – to investigate the impact of financial development on economic growth. The results suggest that the impact of the four parameters of financial development differs depending on the level of financial development and has an inverted S-shape function.

III. Research Methodology

The study used ex post facto research design in analysing the effect of financial intermediation on economic development of Nigeria. An ex post facto research design is a method in which groups with quantities that already exist are compared on the dependent variable(s). It is also known as “after the fact” research. The study focused on the whole economy of Nigeria. The variables used include unemployment rate, real GDP growth rate, credit to private sector, lending rate and money supply. The data for this study were gathered from Central Bank of Nigeria Statistical Bulletin 2017, World Bank (World Development Indicators) and International Monetary Fund (World Economic Outlook, 2018). This study used two models as specified below:

Model 1

$$UR = f(CPS, LR, MS) \quad - \quad - \quad - \quad - \quad - \quad - \quad - \quad - \quad - \quad (i)$$

$$UR = a_0 + a_1CPS + a_2LR + a_3MS + e \quad - \quad - \quad - \quad - \quad - \quad - \quad - \quad - \quad - \quad (ii)$$

Model 2

$$RGDPGR = f(CPS, LR, MS) \quad - \quad - \quad - \quad - \quad - \quad - \quad - \quad - \quad - \quad (iii)$$

$$RGDPGR = a_0 + a_1CPS + a_2LR + a_3MS + e \quad - \quad - \quad - \quad - \quad - \quad - \quad - \quad - \quad - \quad (iv)$$

Where:

- UR = Unemployment Rate
- RGDPGR = Real Gross Domestic Product's Growth Rate
- CPS = Credit to Private Sector
- LR = Lending Rate (Prime)
- MS = Money Supply
- a₀ = Intercept
- a₁ – a₃ = Coefficients
- e = Error Term

Logarithm was introduced to improve the linearity of the model – credit to private sector and money supply were logged as they are not in ratio form like others. The study employed Jarque-Bera (JB) test to ascertain the normality of the data series. Augmented Dickey-Fuller (ADF) test was employed to determine the stationarity of the variables. Auto-regressive Distributed Lag Models (ARDL) was used to establish the effect of the independent variables on the dependent variable of each of the two models. Johansen

cointegration test was carried out to ascertain the existence of a long-run relationship between the variables. E-views 9.0 econometric software was used for the analyses.

IV. Results and Discussion

Table 1: Normality Test Results

	CPS	LR	MS	RGDPGR	UR
Jarque-Bera	2.082019	3.362003	2.119014	4.766040	2.657770
Probability	0.353098	0.186187	0.346627	0.092271	0.264772

Source: Computed by the authors with the help of E-Views 9.0

From the normality test results presented in Table 1, the null hypothesis of a normal distribution is accepted for all the variables used in this study (Credit to Private Sector, Lending Rate, Money Supply, Real GDP Growth Rate and Unemployment Rate) because they all have a Jarque-Bera statistic with a probability greater than 5%.

Table 2: Stationarity (Unit Root) Test Results

Variable	Augmented Dickey-Fuller Test Statistic	1% Level Critical Value	5% Level Critical Value	10% Level Critical Value	Order of Integration	Prob.*	Durbin-Watson Statistic
UR	-6.209275	-3.670170	-2.963972	-2.621007	1(1)	0.0000***	2.003108
RGDPGR	-3.532562	-3.661661	-2.960411	-2.619160	1(0)	0.0137***	1.870228
CPS	-4.378753	-3.699871	-2.976263	-2.627420	1(1)	0.0019***	1.983486
LR	-5.055666	-3.661661	-2.960411	-2.619160	1(0)	0.0003***	2.016917
MS	-3.082713	-3.670170	-2.963972	-2.621007	1(1)	0.0387***	1.895268

***, ** and * connotes that variables are stationary at 1%, 5% and 10% significance level respectively.

Source: Computed by the authors with the help of Eviews 9

The unit root test results displayed in Table 2 shows that Real GDP Growth Rate and Lending Rate are stationary at level, while Unemployment Rate, Credit to Private Sector and Money Supply are stationary at first difference. The results reveal that all the variables are stationary at 5%. Durbin-Watson statistic for all the variables shows no issue of autocorrelation.

Due to the fact that some variables are stationary at level while others are stationary at first difference, autoregressive distributed lag model (ARDL) as the suitable estimation technique was employed.

Table 3: ARDL Bounds Test for Model 1

Null Hypothesis: No long-run relationships exist		
Test Statistic	Value	K
F-statistic	5.246175	2
Critical Value Bounds		
Significance	I0	I1
10%	3.17	4.14
5%	3.79	4.85
2.5%	4.41	5.52
1%	5.15	6.36

Source: Computed by the authors using Eviews 9

From the results of the ARDL Bounds test displayed in Table 3, the F-statistic of 5.3 is higher than both the lower bound of 3.79 and the upper bound of 4.85 at 5% level of significance. As such, the null hypothesis of no long-run relationships is rejected, implying that there exist long-run relationships between unemployment rate (dependent variable) and the financial intermediation variables (independent variables). The extent of the long-run relationships is presented in Table 4.

Table 4: ARDL Long-run Coefficients for Model 1

Dependent variable: UR				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LR	-0.980025	0.616298	-1.590180	0.1314
LOG(CPS)	-17.585641	6.074230	-2.895123	0.0105
LOG(MS)	19.917395	6.498844	3.064760	0.0074
C	4.253039	17.123498	0.248374	0.8070

Source: Computed by the authors using Eviews 9

The log-run coefficients presented in Table 4 has shown that credit to private sector, LOG(CPS) and money supply, LOG(MS) have long-run relationships with unemployment rate. This is justified by the significance of their coefficients at 5% level. While credit to private sector has a negative long-run effect, money supply has a positive long-run effect on unemployment rate. The results further show that the effect of interest rate is negative. However, the effect is not significant at 5% level.

Table 5: ARDL Error Correction Results for Model 1

Dependent Variable: D(UR)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.976405	15.56229	0.255515	0.8016
D(LR)	0.277085	0.283311	0.978024	0.3426
D(LR(-1))	0.999579	0.383330	2.607622	0.0190
DLOG(CPS)	-6.296733	8.486560	-0.741965	0.4689
DLOG(CPS(-1))	4.292480	4.827191	0.889229	0.3871
DLOG(CPS(-2))	-2.907054	4.619460	-0.629306	0.5380
DLOG(CPS(-3))	-6.162695	4.285530	-1.438024	0.1697
LOG(MS)	18.62189	8.711206	2.137694	0.0483
ECM(-1)	-0.934956	0.260609	-3.587576	0.0025
R-squared	0.622748		F-statistic	2.401091
Durbin-Watson stat	2.076915		Prob(F-statistic)	0.054329

Source: Computed by the authors using Eviews 9

The error correction results for model 1 presented in Table 5 reveal that the error correction term, ECM has the right sign which is a negative sign. The ECM (-1) has a coefficient of -0.934956 statistically significant at both 1% and 5%, indicating a fast adjustment speed. The results imply that 94% of the disequilibrium in the previous period is corrected in the present period (year). The results further indicate that changes in unemployment rate, D(UR) are explained by changes in the past year's lending rate, D(LR(-1)) and present year's money supply, LOG(MS). The model advocates that a unit change in each of the variables (past year's lending rate and present year's money supply with numerical values of 0.999579 and 18.62189 respectively) has the potential to cause changes in unemployment rate by their numerical sizes. The positive signs denote increase in unemployment rate. This means that increase in lending rate will result in increase in unemployment rate. The reason is that high lending rate is detrimental to economic progress. Similarly, increase in money supply will lead to increase in unemployment rate. This is due to the fact that too much of money in circulation could trigger inflation which is harmful to economic activities.

However, credit to private sector, DLOG(CPS) lagged once, twice and thrice, has no statistically significant effect on unemployment rate after the dynamic adjustment (incorporating both the short-run dynamics and long-run information through the error correction term). The "no significant effect" of credit to private sector on unemployment rate could be due to the high interest rate charged on credit facilities which hamper the ability of the firms to make good profits after interest payments. Thus, the firms find it difficult to expand and employ more staff.

The R-squared of 62% confirms that the model is good for economic forecast, implying that 62% of the changes in the dependent variable are explained by the independent variables. The F-statistic is significant at 5% level signifying that the entire model is statistically significant. The Durbin-Watson statistic of 2.08 affirms the absence of serial correlation given the standard of 2.0.

Table 6: ARDL Bounds Test for Model 2

Null Hypothesis: No long-run relationships exist		
Test Statistic	Value	K
F-statistic	3.233460	2
Critical Value Bounds		
Significance	I0	I1
10%	3.17	4.14
5%	3.79	4.85
2.5%	4.41	5.52
1%	5.15	6.36

Source: Computed by the authors using Eviews 9

The results of the ARDL Bounds test for Model 2 displayed in Table 6 indicate that the F-statistic of 3.23 is lower than both the lower bound of 3.79 and the upper bound of 4.85 at 5% level of significance. As such, the null hypothesis of no long-run relationships is accepted, meaning that no long-run relationships exist between the dependent variable (real GDP growth rate) and the independent variables. Thus, the long-run coefficients presented in Table 7 confirm this result.

Table 7: ARDL Long-run Coefficients for Model 2

Dependent variable: RGDPGR				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LR	-0.349933	0.747392	-0.468205	0.6445
LOG(CPS)	-12.921207	10.443539	-1.237244	0.2297
LOG(MS)	14.072667	10.936662	1.286742	0.2122
Cm	-4.765613	16.823373	-0.283273	0.7797

Source: Computed by the authors using Eviews 9

The log-run coefficients for Model 2 presented in Table 7 reveal that the coefficients of all the independent variables {LR, LOG(CPS), LOG(MS)} have a probability higher than 0.05. This connotes that no long-run relationship exist between the independent variables and the dependent variable (RGDPGR). Thus, there is no need for error correction model, rather, ARDL estimation was carried-out and the results presented in Table 8

Table 8: ARDL Estimation Results for Model 2

Dependent Variable: RGDPGR				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
RGDPGR(-1)	0.534524	0.160527	3.329816	0.0032
LR	0.338142	0.211443	1.599212	0.1247
LR(-1)	0.042667	0.213763	0.199600	0.8437
LR(-2)	-0.543695	0.173172	-3.139624	0.0049
LOG(CPS)	-5.529434	5.802201	-0.952989	0.3514
LOG(CPS(-1))	6.925380	5.685546	1.218068	0.2367
LOG(CPS(-2))	-7.410460	3.636501	-2.037799	0.0544
LOG(MS)	6.550492	4.988721	1.313060	0.2033
C	-2.218280	7.969863	-0.278333	0.7835
R-squared		0.555866	F-statistic	3.285375
Durbin-Watson stat		2.397856	Prob(F-statistic)	0.013673

Source: Computed by the authors using Eviews 9

The ARDL results for model 2 as presented in Table 8 indicate that lending rate has a significant negative effect on real GDP growth rate at lag 2. This means than an increase in lending rate will result in 0.543695 decreases in real GDP growth rate after two years. Credit to private sector has a significant negative effect on real GDP growth rate at lag 2, implying that credit to private sector will affect real GDP growth negatively after two years. The possible reason is high lending rate which undermines the positive effect of credit to private sector on economic growth. Money supply has a positive effect on real GDP growth rate but the effect is not statistically significant at 0.05 level.

The R-squared depicts that 56% of the variations in the dependent variable are accounted for by the independent variables in the model. The F-statistic of approximately 3.3 has a probability of 0.01 which is lower than 0.05, signalling that the model is significant and reliable for economic findings. Durbin-Watson statistic of 2.4 is not far from the threshold of 2.0 affirming the absence of autocorrelation.

In order to have a proper test, the hypotheses are restated in both their null and alternative forms as follows:

Hypothesis 1

H₀: Credit to private sector has no significant effect on unemployment rate

H₁: Credit to private sector has a significant effect on unemployment rate

From the results of the analysis for model 1 presented in Table 4, the effect of credit to private sector on unemployment rate is not statistically significant. Thus, the null hypothesis is accepted while the alternative hypothesis is rejected.

Hypothesis 2

H₀: Credit to private sector has no significant effect on real GDP growth rate

H₁:Credit to private sector has a significant effect on real GDP growth rate

As observed from the results of the analysisfor model 2 presented in Table 8, credit to private sector has a negativeand significant effect on real GDP growth rate. Therefore, the null hypothesis is rejectedwhile the alternative hypothesis is accepted.

Hypothesis 3

H₀: Money supply has no significant effect on unemployment rate

H₁: Money supply has a significant effect on unemployment rate

The results of the analysis for model 1 showed that money supply has a positive and significant effect on unemployment rate. Thus, the null hypothesis is rejected whilst the alternative hypothesis is accepted.

Hypothesis 4

H₀: Money supply has no significant effect on real GDP growth rate

H₁: Money supply has a significant effect on real GDP growth rate

As revealed by the outcome of the analysis for model 2, money supply has a positive but not significant effect on real GDP growth rate. Therefore, the null hypothesis is accepted; the alternative hypothesis is rejected.

Hypothesis 5

H₀: Lending rate has no significant effect on unemployment rate

H₁: Lending rate has a significant effect on unemployment rate

From the results for model 1, lending rate has a positive and significant effect on unemployment rate. Hence, the null hypothesis is rejected while the alternative hypothesis is accepted.

Hypothesis 6

H₀: Lending rate has no significant effect on real GDP growth rate

H₁: Lending rate has a significant effect on real GDP growth rate

The ARDL estimation results for model 2 indicate that lending rate has a significant negative effect on real GDP growth rate. As such, the null hypothesis is rejected and the alternative hypothesis is accepted.

Discussion of Findings

The results of the analyses conducted revealed that credit to private sector has no significant effect on unemployment rate. The possible reason for this is high lending rate in the economy. As firms access funds (credit facilities) at high interest rate to finance their chosen investments, they used a larger portion of their profits to pay interests on the borrowed capital and this inhibits the firms' ability to expand and employ more staff. Therefore, the firms could not assist in curbing unemployment in the economy. This result does not agree with a priori expectation of a significant negative effect of credit to private sector on unemployment rate. The findings of this study also indicated that credit to private sector has a negative and significant effect on real gross domestic products' growth rate. This means that the credit facilities granted to the private sector of the economy by banks do not add value probably due to high interest charged. Thus, firms using the credit facilities might end-up paying interest that is higher than the profit they make in a particular period. This result contradicts the findings of Olowofeso, Adeleke and Udoji (2015); Nwite (2014) who found a positive and statistically significant effect of private sector credit on economic growth. The result is contrary to a priori expectation of a significant positive effect of credit to private sector on real GDP growth rate.

From the results, money supply has a significant positive effect on unemployment. The reason could be the issue of inflation as too much money in circulation can trigger inflation. As a result, businesses will be affected adversely, forcing them to downsize their workforce thereby increasing unemployment. The result disagrees with a priori expectation of a significant negative effect of money supply on unemployment rate. Also, the findings showed that money supply has a positive but not significant effect on real GDP growth rate. This deviates from the a priori expectation of a significant positive effect of money supply on real GDP growth rate. Furthermore, lending rate exhibits a positive effect on unemployment rate. This implies that if lending rate increases, unemployment rate will increase too. High costs of funds (credit) adversely affect the performance of firms and impair their ability to grow and employ more staff. The result agrees with a priori expectation. Also, lending rate has a significant negative effect on real GDP growth rate, implying that high interest rate is detrimental to the growth of the economy. The result is in-line with the findings of Olowofeso, Adeleke and Udoji (2015); Nwite (2014) who found a negative effect of lending rate on economic growth. The result of this study is contrary to the findings of Nwanne (2015) who found that interest rate has a significant positive effect on economic growth in Nigeria. Also, the result agrees with a priori expectation of the study.

The results of the ARDL bounds test for model 1 indicated that there is a long-run relationship between financial intermediation and economic development. Similarly, Ogiriki and Andabai (2014); Usman, Alimi and Onayemi (2018) and Oluwasogo, Princess, Oluwatoyin Folasade (2017) found a long-run relationship between financial intermediation and economic growth.

V. Conclusion and Recommendations

In Conclusion, the volume of credit to private sector do not really contribute positively to the development of the economy of Nigeria in terms of enhancing economic growth and curtailing unemployment. The possible reason as explained in the text is high interest rate. Money supply helps the nation to achieve a better economic growth. However, lending rate has a negative effect on balance of trade. The study therefore recommends are as follows:

- i. The monetary authority should make policies to compel banks to lower their lending rates to encourage the productive sectors of the economy to perform better.
- ii. Money supply should be moderate, so as not to cause inflation which could increase the unemployment rate in the economy.
- iii. More access to credits should be granted to the viable and productive sectors of the economy to boost economic development.

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Emmanuel Isaac John. "Effect of Financial Intermediation on Economic Development of Nigeria." IOSR Journal of Economics and Finance (IOSR-JEF) , vol. 10, no. 1, 2019, pp. 23-32.