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FINANCIAL SECTOR REFORM AND ECONOMIC GROWTH IN NIGERIA: AN ECONOMETRIC APPROACH

The nexus between financial sector reforms and Nigeria's economic performance is examined. Annual data for the period from 1981 to 2018 is used, and the impact of credit issued to the private sector on the economic growth in Nigeria is examined. The influence of market capitalization on economic growth in Nigeria is evaluated, the relationship between money supply to GDP and economic growth is determined, and lastly, the relationship between the exchange rate and economic growth in Nigeria is examined. The results of the Augmented Dickey-Fuller test show that the order of integration of the variables is $I(1)$ and $I(0)$, respectively. An Autoregressive Distributed Lag (ARDL) model was used because it suits the result of the preliminary test. A cointegration test among the variables was carried out using the ARDL bound test approach. The ARDL estimates reveal that market capitalization positively and significantly affects or influences economic performance in the long run, while credit supply to the private sector (financial deepening) positively and significantly influences Nigeria's economic performance in the short run. The findings further show that Nigeria's economy fails to converge whenever there is disequilibrium. The recommendation is made that, since capital market reforms appear to have a significant positive effect on the economy in the long run, the government should continue with the implementation of the necessary reforms in the Nigerian capital market and the financial sector in general for the betterment of Nigeria's economy.

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Development economists have not reached a moderate consensus on the existence and nature of the relationship between finance and economic growth. Early economists, like Lucas in his array of essay on economics, did not even believe that finance is one of the determinants of economic growth (Meier and Seers, 1984; Ross and Levine, 2005). Robinson (1952) asserted that enterprises lead and finance follows, meaning that there is no causal relationship between finance and growth, but finance is sensitive to change in the real sector of the economy. On the contrary, Miller (1988) demonstrates that the proposition that the financial market contributes to economic growth is clear, and that there is no need for further argumentation on the existence of a nexus between the two. Gurley and Shaw (1955), and McKinnon (1973) also vehemently reject the idea that the link between finance and growth should be jettisoned,

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as doing so would cripple our understanding of economic growth. It is against this background that the present research seeks to disambiguate the relationship between financial sector reform and economic growth in Nigeria, even though the question of whether there is a link between the two has been addressed repeatedly in the context of Nigeria with mixed results.

Several notable studies by Ikhide and Alawode (2001), Oke, Uadiale and Okpala (2011), Sikiru (2011), and Taiwo and Anthony (2011) examine the link between financial reform and economic growth in Nigeria but their studies suffer a number of setbacks. Firstly, Oke and Okpala (2011), and Ikhide and Alawode (2001) fail to differentiate between the short run and long run effect, which makes their study unsuitable for policy formulation, and their respective studies also fail to differentiate between the regulated and the deregulated era. Secondly, Obamuyi (2009) limits his study to interest rate reform and liberalization rather than the effect of the comprehensive financial sector reforms in Nigeria. Thirdly, the study conducted by Sikiru (2016) is defective because what constitutes a reform in his study is monetary policy reform and foreign exchange market reforms, while capital market reform and the liberalization of capital movement are ignored; in addition to the study's failure to differentiate between the regulated and the deregulated era. Finally, Taiwo and Anthony (2011) investigated the impact of financial sector reforms on the economic performance of Nigeria using a VAR model, and their research found that the means of financial performance were not strong relative to the pre-reform period and that the correlation between the performance indicators and the financial indicator were very low or negative under the reform. However, the present study puts into question the reliability of this result and the decision of the authors to use a VAR model to evaluate I(2) variables. It is suspected that the presence of I(2) is a reflection of the authors' failure to account for shocks, which in turn makes the result of their study unreliable.

However, the present study is different and makes progress in relation to the following: a differentiation is made between the long run and short run using the ARDL approach; a further differentiation is made between the era of regulation and deregulation, in order to account for structural changes. The employed methodological approach is a product of all the necessary pre-estimation tests. In view of the above, the objective of the present study is to re-examine and clarify the relationship between financial sector reforms and economic growth in Nigeria.

The broad objective of this study is to carry out an empirical analysis of the effect of financial sector reform on economic growth in Nigeria. However, the specific objectives of the study are, as follows: (1) Investigate the impact of credit to the private sector on economic growth in Nigeria; (2) Evaluate the influence of capitalization on economic growth in Nigeria; (3) Determine the relationship between money supply to GDP and economic growth in Nigeria; (4) Examine the relationship between the exchange rate and economic growth in Nigeria.

The Nigerian financial system

The Nigerian financial market has witnessed tremendous reforms, transformation and market-driven changes since the introduction of the Structural Adjustment Program

(SAP) in 1986. Before that, the Nigerian financial market was under firm government control because there was a ceiling on interest rates and credit expansion, high reserve requirements, selective credit policies and regulation of entry and exit from the banking industry (Ogwumike and Afeez, 2012).

With the adoption of a market-driven strategy, the banking and non-banking financial institutions expanded due to the incentives provided for the growth and development of financial institutions. The number of banks jumped from 41 in 1986 to 115 in 1997 and fell to 21 by 2017 after various bank reforms. The number of deposit money bank branches increased from 1,323 in 1986 to 5570 in 2016. In the same vein, the number of community banks (microfinance banks) rose from 169 in 1990 to 991 in 2017, while the number of specialised non-banking financial institutions rose from 84 in 1990 to 235 in 2016 (Ogwumike and Afeez, 2012).

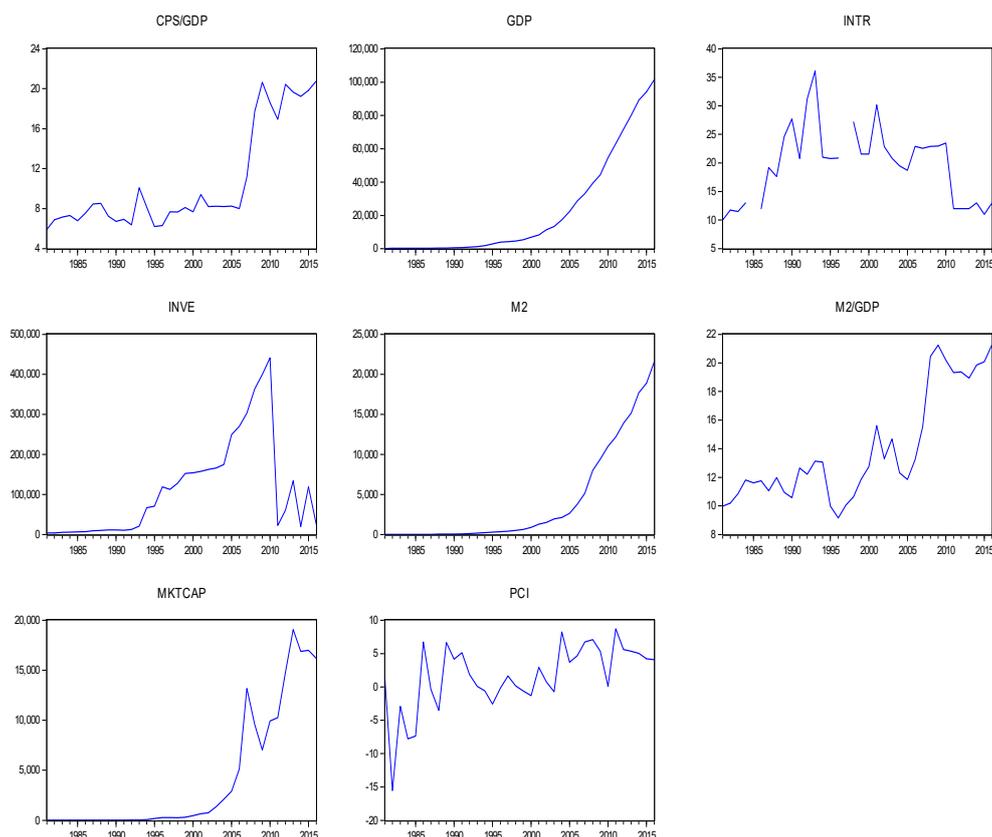
This deregulation of the Nigerian economy led to an increase in competition in the banking industry, forcing many banks to embrace the aggressive competitive strategies required in order for them to consolidate their survival. However, the age long problems of capital inadequacy, asset quality ratio, managerial inefficiency, earning ratio and liquidity crisis, coupled with inefficient political and economic institutions, continued to result in a bank crisis, which further aggravated the capacity of the financial system to perform its intermediation role. For these reasons, in 1991 the Nigerian government came up with a policy of managed deregulation, which resulted in a managed float, the pegging of lending and deposit rates, and the placement of an embargo on the further licensing of banks. But the reality is that the Nigeria financial system is not totally free from government control because the system experiences periodic intervention from both the Ministry of Finance and the Central Bank of Nigeria (CBN, 2011).

Do financial sector reforms in Nigeria affect economic growth? Available records from Central Bank of Nigeria reveal that before the introduction of SAP, the government through its low interest rate policy tried to promote investments and growth of the economy. The period of low interest rates led to negative real rates of interest on deposits as well as loans and weakened the proper functioning of the financial system because of the unwillingness of Nigerians to facilitate investment through saving. The outcome of this scenario was a serious economic disruption which led to currency depreciation and external debt repayment problems in addition to having a disastrous effect on the volume and productivity of investment.

As can be seen in Figure 1, credit to the private sector as a percentage of the GDP was at its pre-reform level around 1990/1991 and after 2005 and grew tremendously up until 2009 before drastically dropping in 2009/2010. Without any doubt, this development could be attributed in part to the divergence between deposit and lending rates and the global financial crisis. Likewise, the GDP per capita did not witness significant improvement until after the deregulation. The level of investment was low and started improving after 1985, followed by a huge drop in 2009/2010; and at present, the level of investment has not witnessed much improvement since the occurrence of the global financial crisis.

Figure 1

Selected financial indicators and GDP at current price in Nigeria



Source. Authors' computation using EViews.

The M2 to GDP ratio was at its lowest level before the deregulation and was also low in 1995 and 2005, however, it grew significantly after the bank reform of 2005 and has maintained steady growth since then. The capital market activities were also low until 2005 when it witnessed significant improvement. The activity in the capital market plummeted in 2009/2010 due to the global economic meltdown.

During the deregulation period the interest rate was high. Furthermore, during the period of deregulation/guided deregulation (from 1987 to 1996), the real deposit rate was negative and reached its lowest point. In the same vein, the real GDP growth rate was negative (at its lowest point) during the pre-reform era up until 1985 when a positive real GDP was achieved. The rate of development measured by the per capita income (PCI) was also negative (at its lowest point) until 1985 when a positive

PCI of 6.72 was achieved. Interestingly, the effect of the financial reform did not bring positive change until after 1987. The PCI worsened again during the period of guided deregulation starting from 1991 and the mixed results continued up until 2002. Thereafter, the PCI continued to show positive trends until 2015. However, despite this positive trend in the PCI between 2003 and 2015, the living conditions deteriorated in the post-reform era, as opposed to the pre-reform period.

Literature review

Conceptual review

“Banking sector reforms” refer to the restructuring of the banking sector in order to embrace and encourage the reliance on market mechanisms and to eliminate the direct control and direct government intervention in the financial sector. However, to actualize this globally acceptable economic system, financial sector reforms were initiated by the Nigerian government in an effort to improve competition, reduce distortion in investment decisions and promote a sound and more efficient financial system (Taiwo and Anthony, 2011). The reforms, which targeted structural changes, monetary policy reform, interest rate liberalisation and foreign exchange market reform, encompass both financial market and institutional reforms in the financial sector. The broad objectives of financial sector reform are to remove the control on interest rates, to eliminate the non-price rationing of credit, to enhance institutional structure and supervision, to adopt indirect monetary management, to strengthen the money and capital markets, and to improve the links between the formal and informal financial sectors (CBN, 2005). In order to achieve these noble objectives, the following measures were adopted during the reforming of the Nigerian financial system:

Financial structure reforms. This started with the promulgation of Decree No. 22 of 1988 which established the Nigeria Deposit Insurance Corporation in 1988 as a means to insure depositors’ funds. Further steps included the enactment of the Bank and Other Financial Institution Decree (BOFID) of 1991 which regulated the conduct of the financial institutions and the introduction of Universal Banking in Nigeria in 2000. Commercial and Merchant banks were merged and were named Deposit Money Banks (DMBs); the 1991 BOFID was repealed in 1998, and the BOFID of 1991 and 1998 was replaced with the Banks and Other Financial Institutions Act (BOFIA) in 2004 and 2007, respectively. The Asset Management Corporation was established in 2009 to take over the bubble assets of the Deposit Money Banks (Taiwo and Anthony; 2011) and the Treasury Single Account was formed to improve transparency in the management of public funds.

Monetary policy management. Following the introduction of SAP in 1986, from 1987 onward, banks in Nigeria were allowed to allocate credits or funds at their own discretion. Starting in 1989, interest rates were to be determined by the market mechanism and interest rate payment on deposits became the subject of negotiation between the customers and banks (Ojo, 1993).

Foreign exchange market reforms. The foreign exchange market reform was initiated in 1986 when a second-tier foreign exchange market was established, and ever since then the market has continued to witness several policy reversals and modifications such as the Autonomous Foreign Exchange Market and the Dutch Auction System among other reforms. Further reforms in the area of foreign exchange deposits took effect in year 2000 by allowing the public to receive foreign currency in a domiciliary account in order to ensure that foreign remittances were kept in savings account within the banking system (Ogwumike and Afeez, 2012).

Liberalization of the financial sector. This encourages the free movement of capital, people, ideas and technology, which in turn greatly promotes foreign direct investment. The existing restrictions on capital transfers were abolished.

Capital market reforms. The details of the reforms in the capital market are, as follows:

- Interest rate liberalization.
- Privatization and commercialization of public organizations.
- Debt conversion programme.
- Capital market liberalization.
- Reconstitution of the Securities and Exchange Commission.
- Withholding tax on dividend reform.
- Reducing the difficulty involved in listing, disclosing and checking insider trading.

Economic growth is defined as an increase in the productivity of a country over a given period of time. It is usually measured by the GDP, which is the overall monetary value of all the end products and services produced within a country over a given period of time (Echekoba et al., 2015). Usually, GDP is calculated on an annual basis, but it can be calculated on a quarterly basis as well. In an open economy, the GDP is the summation of private and public consumption, government outlays, investments and exports minus the imports that occur within a defined territory.

McKinnon and Shaw's theory of financial development. McKinnon and Shaw posit that, especially in a less developed country, when the interest rate is liberalized or deregulated it will result in an increase in the real interest rate, which in turn would result in an increase in savings, spur investments and would subsequently lead to economic growth (McKinnon, 1973). The original framework created by McKinnon and Shaw was centred around financial repression, the need to eliminate or reduce financial repression by allowing the market forces to determine real interest rates, as well as the elimination of credit control by policy makers, among other issues. Repression results in poor savings, high consumption, poor investments and repressed economic growth (McKinnon, 1973). McKinnon and Shaw's ideas or beliefs are centred around distortions in the market that are caused by financial repression (McKinnon, 1973). When an economy is highly regulated, such as when the interest rate is set at a ceiling, the amount saved and invested will be so low and the economy will be highly repressed. The interest rate ceiling or regulation will cause a shortage

of funds and credit in the market, which would result in credit rationing. If such a ceiling is placed on deposit rates, the banks will profit from it.

Endogenous growth model. The endogenous growth model was pioneered by Lucas and Romer to shed light on the relationship between finance and economic growth (Solow, 1956). Even though the statistical and mathematical derivation and proof behind this model is beyond the scope of the present study, the steady state dynamic equilibrium equation is, as follows:

$$Y = A(R) F(K_i, H_i) \cdot H^e, \quad (1)$$

Where Y is the aggregate output, A is the technical coefficient, and K_i and H_i are the inputs of physical and human capital, respectively. The variable H is the economy's average level of human capital. The parameter represents the strength of the external effects from human capital.

Finance impacts inclusive economic growth through different channels, such as capital formation. If more capital is invested to fund innovation and improve technological progress, there will be accelerated economic growth.

This model was adapted because it explains the interconnectivity between economic growth and development (the dependent variable). The above theories are great because they allow researchers to formally prove the linkage or influence of various channels of the financial market on the economy, however, the theories are characterized by a high degree of mathematical knowledge and very stringent requirements.

Empirical review

Previous papers, including Chinn and Ito (2006) and Tressel and Detragiache (2008), discovered that financial deregulation results in a deepening of financial systems, but they also found that well-developed financial institutions are a precondition for financial deepening to occur.

Levine and Zervos (1998) used cross-sectional data from 47 countries for the period between 1976 and 1993 in order to examine the effect of stock market activity on economic growth, capital stock growth, productivity growth, and the private savings rate. The results of their study revealed a strong positive relationship between stock market liquidity, real GDP growth, capital stock growth and productivity growth. Saaed and Hussain (2015) investigated the causal links among financial development, trade openness and economic growth in Kuwait between 1977-2012 using a vector autoregressive technique. The results revealed that a long-term effect and causal relationship exists between trade openness, financial development and economic growth. They further reported that the money supply was the only measure of financial development that causes trade openness.

Rehman, Ali and Nasir (2015) examined the relationship between financial development, trade openness and economic growth in the Saudi Arabian economy between 1971 and 2012. They found evidence of a unidirectional causality between trade openness and economic growth in Saudi Arabia and further found that economic

growth causes financial development. The results show that combined causality exists among the variables.

Research gap

Oke, Uadiale and Okpala (2011) investigated the relationship between remittances and financial development in Nigeria from 1977 to 2009 using the ordinary least squares estimation technique and the Generalized Method of Moments (GMM) estimator. The results of this study show that remittances positively and significantly influence financial development in Nigeria while the ratio of private credit to GDP has no significant relationship. The authors suggest that since remittances appear to be the only variable that has significant impact on financial development, remittances should be encouraged using appropriate policy formulation and implementation. However, the study by Oke, Uadiale and Okpala (2011) failed to differentiate between the short-term and long-term effect, which made their research unsuitable for policy formulation.

Obamuyi (2009) examined the link between interest rate liberalisation and economic growth in Nigeria from 1970 to 2006 using a co-integration and error-correction model to capture both the long-term and short-term dynamics. The result of his study shows that the real lending rates have a significant effect on economic growth and that a long-term relationship exists between economic growth, interest rates and liberalisation. Unfortunately, Obamuyi (2009) limited his study to interest rate reform and liberation rather than the effect of the comprehensive financial sector reforms in Nigeria.

Ikhide and Alawode (2001) investigated the effect of reforms on macroeconomic stability in Nigeria using discriminant analysis. The findings of their study reveal that the health of the banking sector was impaired following the adoption of financial reforms in Nigeria. The results of their study can be attributed to the wrong sequencing, which resulted in the poor performance of the financial reforms. Furthermore, their study failed to account for both the long- and short-term dynamics.

Sikiru (2016) examined the effect of bank reforms on economic growth in Nigeria from 1972 to 2011 using the Cointegration and Error Correction Model. The result of the study reveals the presence of a short-term relationship. The author reports that only the money supply and the exchange rate have a positive effect on the economy. However, this study is defective, because what constitutes a reform is a monetary policy reform, while foreign exchange market reforms, capital market reform and the liberalization of capital movement are ignored. Furthermore, the study also failed to differentiate between the regulated and the deregulated era.

Lastly, Taiwo and Anthony (2011) investigated the impact of financial sector reforms on the economic performance of Nigeria using a VAR model. The paper found that the means of financial performance were not strong, relative to the pre-reform period, and that the correlation between the performance indicators and the financial indicator were very low or negative under the reform. However, the present study puts into question the reliability of this result and the choice of using a VAR

model to evaluate I(2) variables, as was done by this authors. The presence of I(2) may possibly be a reflection of the authors' failure to account for shocks, which would make the result of their study unreliable.

Methodology

Research design

The research design used in the present study is instrumental and descriptive. The design is used for research that is undertaken after the fact has emerged.

Sources and measurement of the variable

Variables	Definition	Sources
GDP	Gross Domestic Product	Central Bank of Nigeria Statistical Bulletin (1981-2018)
$\frac{m2_t}{gdp_t}$	Ratio of money supply to GDP	Central Bank of Nigeria Statistical Bulletin (1981-2018)
$\frac{cps_t}{gdp_t}$	Ratio of credit to the private sector to GDP	Central Bank of Nigeria Statistical Bulletin (1981-2018)
RIR_t	Real Interest Rate	Central Bank of Nigeria Statistical Bulletin (1981-2018)
$\frac{Mc_t}{gdp_t}$	Market Capitalization to GDP	Central Bank of Nigeria Statistical Bulletin (1981-2018)

Model Specification

The study adapts Levine and King's model with slight modifications in order to achieve its objectives. Although both McKinnon and Shaw's research and the Endogenous Growth model are the theories that underpin the present research, the two theories are too mathematical and the complex system of requirements for each of them could significantly complicate the empirical or analytical confirmation of the results. In view of this, a purely empirical model of finance – such as the growth nexus by Levine and King – is preferred for the purposes of this study.

Levine and King's regression is specified as:

$$Y_{it} = a_0 + B_1 F_{it} + B_2 X_{it} + e_{it}, \quad (2)$$

Where Y_{it} is the growth or development, a_0, B_1, B_2 are coefficients, F_{it} is an indicator of a country i Financial Sector Development at time t, X_{it} is the value of control variable for a country i at time t, and e_{it} is the error term.

However, the dependent variable (growth) in Levine and King's regression in equation (2) was substituted with the GDP in equation (3) because of the interconnectivity that exists between growth and development. The independent variable (indicators of financial sector development) in equation (2) was also substituted with financial development variables in equation (3) because financial sector reform is synonymous with financial deepening and financial development. A time series regression /equation, as against the panel regression above, was formulated for this study because the research is focused on estimating a time series data that contains stochastic components.

Thus, the modified or expanded model in the present study is specified, as follows:

$$GDP_t = f\left(\frac{m2_t}{gdp_t}, \frac{cps_t}{gdp_t}, RIR_t, \frac{Mc_t}{gdp_t}\right), \quad (3)$$

Where $\frac{m2_t}{gdp_t}$ is the ratio of broad money supply to GDP (financial deepening);

$\frac{cps_t}{gdp_t}$ is the ratio of credit to the private sector to GDP (financial deepening);

RIR_t is the real interest rate; $\frac{Mc_t}{gdp_t}$ is the ratio of market capitalization to GDP.

Diagnostic tests

Preliminary or pre-estimation Analysis¹

While it was essential to conduct a formal unit root test, it was of upmost importance to first plot the time series under investigation in order to get a clearer picture of the stationarity and integrating properties of the variables. Based on this, GDP, M2/GDP, CPS/GDP, MC, and EXCH were graphically examined and presented in Figure 1 during the introductory part of this paper. As is evident from the graphs, the variables were trended in nature, which was clear evidence of unequal means and variance over time. On this basis, the assumption could be made that the variables under study were not stationary over the studied period. Therefore, the graphs presented in Figure 1 gave the impression that the variable could only be stationary after a difference. Upon the realization that a numerical or statistical fact could not be derived from the graphical expression, Augmented Dickey Fuller unit root tests were applied to examine numerically and statistically the stationary nature of the variables. All the variables are stationary at the first difference except for the exchange rate, which is stationary at level.

Table 1

Unit Root Test

Variable	Levels	First Difference	Order of Integration
GDP	-1.9513	0.6499	1(1)
MS to GDP	-2.3749	-4.5715	1(1)
MC	-1.7911	-6.2030	1(1)
CPS to GDP	-2.3293	-4.9248	1(1)
EXCH	-3.5442	-	1(0)

At a 5% significance level.

Source. Author's computation.

Lag Selection Criteria

This study uses the Akaike information criterion (AIC) (see the Appendix) to select the optimal lag because it is better to have an overfitted model than an underfitted

¹ The data used in the present study was sourced from the CBN Statistical Bulletin (various years) and the NBS statistical reports (various years).

one. A lag of 2 was selected because the observation is small and the selection of too much lag would reduce the available information for estimation, which would severely hamper the degree of freedom. Thereafter, diagnostic tests were carried out to determine both the short and long run effect of the financial sector reforms on the economic growth in Nigeria. Table 2 shows the estimated ARDL (2, 1, 0, 0, 0) model, wherein a structural change in 1986 is accounted for. From the result in Table 2, it becomes clear that the economic performance in previous years, the capital market reform and the monetary policy reform are a significant reason behind the variation in Nigeria's economic performance. Both capital market reform and monetary policy reform have a significant negative effect while the structural changes do not significantly influence the economic performance, and this may have to do with the lack of full autonomy by the Central Bank of Nigeria.

Table 2

Dependent Variable: LGDP				
Method: ARDL				
Variables	Coefficient	Std. Error	t-Statistic	Prob.*
LGDP(-1)	1.669112	0.416967	4.00298	0.0004
LGDP(-2)	0.106147	0.182314	0.582222	0.5652
MC	-3.48E-05	2.18E-05	-1.600286	0.1212
MC(-1)	-6.70E-05	2.44E-05	-2.742367	0.0107
LEXCH	-0.08173	0.081909	-0.997813	0.3272
LMS_TO_GDP	-0.585354	0.617155	-0.948471	0.3513
LCPS_TOGDP	0.924803	0.458551	2.016792	0.0538
BREAK	0.023067	0.276456	0.083437	0.9341
C	-9.814285	4.720583	-2.079041	0.0472
Included observations: 36 after adjustments				
R-squared	0.777487	Mean dependent variable	12.79718	
Adjusted R-squared	0.711558	S.D. dependent variable	0.549431	
S.E. of regression	0.295082	Akaike information criterion	0.609192	
Sum squared residue	2.350985	Schwarz criterion	1.005072	
Log likelihood	-1.965464	Hannan-Quinn criterion	0.747365	
F-statistic	11.79268	Durbin-Watson statistic	1.826099	
Prob(F-statistic)	0.000000			
Selected Model: ARDL(2, 1, 0, 0, 0)				

Source. Author's computation.

The next step is to test for the presence of the long run among the variable of interest in order to avoid false result. The results of the ARDL Bound test are presented in Table 3. It clearly shows that the Calculated F-Statistics is greater than the Critical Value. Therefore, the existence of a long-term relationship among the variables is empirically confirmed.

Table 3

ARDL Bounds test

Test Statistic	Value	k
F-statistic	4.483016	4
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.45	3.52
5%	2.86	4.01
2.50%	3.25	4.49
1%	3.74	5.06

Included observations: 36

Source. Author's computation.

The results of the long run test are presented in Table 4. The results show that only market capitalization (capital market reform) gives a significant explanation for the variation in economic performance in the long run. The effect of capital market reform in the long run is positive and significant. However, the results also show that with the introduction of structural changes in 1986 Nigeria's economic performance experiences a decline as compared to the pre-reform era.

Table 4

Long Run Test

Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
MC	0.000131	0.000067	1.946278	0.0621
LEXCH	0.105423	0.073338	1.437493	0.1621
LMS_TO_GDP	0.755043	0.801986	0.941466	0.3548
LCPS_TOGDP	-1.1929	0.967505	-1.23296	0.2282
BREAK	-0.02975	0.353789	-0.0841	0.9336
C	12.65936	1.594183	7.940968	0.0000

Source. Author's computation.

As can be seen in Table 5, the Error Correction Mechanism (0.77) is statistically significant at 10%. The ECM did not converge and became explosive. This implies that the Nigerian economy did not revert back to its equilibrium whenever there was disequilibrium. The results show that the instantaneous effect of monetary policy reform (specifically the ratio of credit supply to GDP) on economic performance was positive and significant while all other financial reform variables appeared insignificant and negative in the short run.

Table 5

Dependent Variable: LGDP

Selected Model: ARDL(2, 1, 0, 0, 0)

Cointegrating Form

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LGDP(-1))	-0.10615	0.182314	-0.58222	0.5652
D(MC)	-3.5E-05	0.000022	-1.60029	0.1212
D(LEXCH)	-0.08173	0.081909	-0.99781	0.3272
D(LMS_TO_GDP)	-0.58535	0.617155	-0.94847	0.3513
D(LCPS_TOGDP)	0.924803	0.458551	2.016792	0.0538
D(BREAK)	0.023067	0.276456	0.083437	0.9341
ECM(-1)	0.775259	0.425352	1.82263	0.0795

Included observations: 36

Source: Author's computation.

Conclusion

Based on the short run and long run results, the conclusion can be made that only market capitalization positively and significantly explains or influences economic performance in the long run, while credit supply to the private sector (financial deepening) positively and significantly influences Nigeria's economic performance in the short run. The positive and significant relationship between bank credit and economic growth has confirmed that saving and investment are not the only determinants of interest rate and economic growth, but also that credit creation plays a major part in economic growth. The present study confirms the doctrine of loanable funds which postulates that not only savings and investments but also credit creation is crucial for economic growth. Furthermore, the findings show that Nigeria's economy fails to converge when there is disequilibrium. The logic behind this result is that the cumulative effect of capital market reform is positive, in addition to the instantaneous effect of monetary policy reform (credit supply to the private sector) also being positive in the short run. The present study recommends that, since capital market reforms appear to have a significant positive effect on the economy, the government should continue with the necessary reforms to the Nigerian capital market and the financial sector in general for the betterment of Nigeria's economy. However, such a recommendation would make it seem as if all hope has been lost in other financial sector reforms, since only capital market reform was suggested, rather than holistic financial sector reforms. Capital market reforms, regulatory reforms, monetary policy reforms, capital movement reforms and foreign exchange market reforms are essential for an improved economic performance. Therefore, the Central Bank of Nigeria should be given full autonomy, so that current and future reforms may be successful.

References:

- CBN (2011). *CBN Statistical Bulletin*, Vol. 24, Abuja.
 CBN (2013). *CBN Statistical Bulletin*, Vol. 15, Abuja.

Echekoba, F. N., Okonkwo, V. I., Adigwe, P. K. (2015). Trade liberalization and economic growth: The Nigerian experience (1971-2012). *Journal of poverty, investment and development*, 14, pp. 51-72.

Ikhide, S. I., and Alawode, A. A. (2001). *Financial Sector Reforms, Macroeconomic Instability and the Order of Economic Liberalization: The Evidence from Nigeria*. AERC Research Paper 112. Nairobi: African Economic Research Consortium, November.

King, R. G and Levine, R. (1992). *Financial Indicators and Growth in Cross Section of Countries*. WPS January. Washington D.C.: The World Bank.

Levine, R. (2005). Finance and Growth: Theory and Evidence. In: Aghion, P. & Darlauf, S. (eds.). *Handbook of Economic Growth*. Elsevier B. V. United States, pp. 866-923.

Lucas, R. (1988). On the Mechanics of Economic Development. *Journal of Monetary Economics*, 22, pp. 3-42, North-Holland.

McKinnon, R. (1973). *Money and capital in economic development*. Washington, D.C.: Brookings Institute.

Meier, G., M., Seers, D. (1984). *Pioneers in development (English)*. London: Oxford University Press. Available at: <http://documents.worldbank.org/curated/en/389011468137378972/Pioneers-in-development>.

Miller, M. H. (1988). The Modigliani-Miller Propositions after Thirty Years. *Journal of Economic Perspectives*, 2 (4), pp. 99-120.

Obamuyi, T. M. (2009). *Government Financial Liberalization Policy and Development of Private Sector in Nigeria: Issues and Challenges*. Available at: www.growinginclusivemarkets.org.

Ogwumike, F. and Afangideh, U. (2008). Financial development and income distribution in Nigeria. *Journal of Monetary and Economic Integration*, 8 (1).

Ogwumike, F. and Salisu, A. A. (2012). Financial development and economic growth in Nigeria. *Journal of Monetary and Economic Integration* 8 (1).

Ojo, O. (1993). *A Review and Appraisal of Nigeria's Experience with Financial Sector Reforms*. Central Bank of Nigeria Research Department, Occasional Paper No. 8, August.

Oresotu, F. O. (1992). Interest Rate Behaviour under a Programme of Financial Reform: The Nigeria Case. *Central Bank of Nigeria Economic and Financial Review*, Vol. 30, N 2 (June), pp. 109-129.

Pesaran, M. H., and Shin, Y. (1999). An Autoregressive Distributed Lag Modelling Approach to Co-Integration Analysis. In: Strøm, S. (ed.) *Econometrics and Economic Theory in the Twentieth Century: The Ragnar Frisch Centennial Symposium*. Cambridge: Cambridge University Press.

Pesaran, M. H., Shin, Y. and Smith, R. J. (2001). Bounds Testing Approaches to the Analysis of Level Relationships. *Journal of Applied Econometrics*, 16, pp. 289-326.

Saaed, A. A & Hussain, M. A (2015). The Causal Relationship Among Trade Openness, Financial Development and Economic Growth: Evidence from Kuwait,

Journal of Emerging Issues in Economics, Finance and Banking, Vol. 4, N 1, pp. 1385-1414.

Shaw, E. (1973). *Financial Deepening in Economic Development*. New York: Oxford University Press.

Sikiru, A. (2016). An Investigation into the Impact of Bank Policy Reform on the Growth of the Economy. *Lagos Journal of Banking, Finance and Economic Issues*, Vol. 3, Issue 1.

Solow, R. M. (1956). A Contribution to the Theory of Economic Growth. *Quarterly Journal of Economics*, Vol. 70 (February), pp. 65-94.

Taiwo, P. O. and Anthony, E. A. (2011). Financial Sector Reform and the Performance of the Nigerian Economy. *The Review of Finance and Banking*, Vol.3 Issue 1, pp. 47-60.

Appendix

VAR Lag Order Selection Criteria

Endogenous variables: GDP

Exogenous variables: C MC MS_TO_GDP CPS_TOGDP EXCH

Date: 06/10/20 Time: 04:53

Sample: 1981 2018

Included observations: 34

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-448.5565	NA	2.27e+10	26.67979	26.90426	26.75634
1	-435.0536	22.23999*	1.09e+10	25.94433	26.21369*	26.03619
2	-433.4526	2.542844	1.05e+10*	25.90897*	26.22323	26.01614*
3	-432.8592	0.907471	1.08e+10	25.93290	26.29204	26.05537
4	-432.8219	0.054836	1.15e+10	25.98953	26.39356	26.12731

* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

1.10.2020