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Moderating effect of Institutions on Financial Sector Development and Economic Growth Nexus in Nigeria.

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Abstract

This study examines the nexus between financial sector development and economic growth with institutions as a moderating variable. The study uses quarterly data from 2010q1 to 2022q4 to evaluate the long run relationship between the financial sector and economic growth using the methodology of autoregressive distributed lag models, the bounds test for cointegration with structural breaks. The study finds that institutions moderate the relationship between financial sector development and economic growth in Nigeria with the coefficients of institution having a statistically significant positive relationship with the economic growth. The study therefore finds that with good institutions such as good governance quality and control of corruptions the effect of financial sector development on economic growth could be felt on the economy. The study therefore recommends that the government should strengthen its institutions such as ensuring governance quality by making those in control of governance to be accountable and control corruption in the country by ensuring that all those found guilty of the offense are punished according to the laws of the land.

Keywords*; Economic Growth, Financial Development, Institutional quality, Moderation, Structural Breaks*

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1. Introduction

Finance is considered as a major catalyst of enhancing economic growth of nations by channeling the resources needed for economic growth from the surplus spending units to the deficit spending units in an economy. The financial system is known to have contributed to the economic growth in several ways, some of which are; facilitating the accumulation of capital, savings and investments, provision of the payments mechanism for transactions in the economy most especially through the channel of money which seems to foster economic progress, by providing incentives that prevents economic agents from risks and helps in overcoming the problems of information asymmetries to the economic agents. (Merton and Bodie, 1995).

In an attempt to build an efficient and functional financial system in Nigeria, following the problems encountered during the colonial era where banks were in crisis as a results of direct controls of the financial system by the colonial masters which has hampered the impact of the financial system to be felt in the economic growth of the nation. Therefore, to make financial system more efficient, and more robust to the economic needs and growth of the a Nigerian economy, the country adopts structural ,adjustment programme in 1986, which come along with it series of reforms in the financial sector of the economy such as; licensing of more commercial banks and merchant banks in the country. (Alade ,2016) asserts that aside liberal licensing of banks in the country by the Central Bank of Nigeria, other reforms introduce to promote the financial sector's roles in stimulating economic growth includes; universal banking in 2000, banking system consolidation in 2004, and several other reforms introduced by the Central Bank of Nigeria to foster economic growth.

The nexus between financial sector and economic development has attracted so much attention among researchers and economists; leading to the two proponents of the relationship between financial sector and economic growth; that is the demand' led hypothesis and the supply led hypothesis. The divergent views led to a number of empirical studies in different countries by different researchers to determine which of the hypothesis prevails in the studies, Studies in supports of the demand led hypothesis includes among others includes (Odedokun, 1996, Hung and Lin, 2009) and those in support of the supply led hypothesis includes but not limited to Odeniran and Udeajo, 2010; Kiprop, Kalio, Kibet and Ki prop, 2015 and Balogo, 2014). Similarly the study of the relationships between financial sector development and economic growth has been undertaken within the linear framework on the assumption of non-linearity in the relationship between financial sector development and economic growth and such studies includes among others Nkoro and Uko, (2013) and Kapingura(2013). Similarly,

there are a number of studies that considers the nexus between financial sector development and economic growth as nonlinear and such studies includes; Mathew, Josaiah and Hannah (2016) and Huang and Lin (2000) amongst several studies.

The roles of institutions in enhancing economic growth cannot be overemphasized. North (1999) asserts that institutions are the rules that guide human interaction and that as a rule they can enhance productivity. Halls and Jones (1999) are of the opinion that good institutions protect output from diversion and thus promote growth of the economy. Thus, this study considers the roles of institutions in promoting economic growth as positive. A sound institution in terms of property rights, good governance, rules of law and absence of corruption have the stimulus of channeling the financial resources to the investors and other users of funds that can helps in capital accumulation and investments needed to promote economic growth of a country. Acemagu (2009) argues that there are two categories of the determinants of economic growth and these are; the proximate determinants consisting of the physical capital, human capital and technology; whereas, the fundamental factors are the institutions and natural resources.

Therefore, this study contributes to the debate on the relationship between financial sector and economic growth and differs from previous studies in the following ways; Firstly, it considers the influence of both the proximate and fundamental determinants of economic growth in a single study by incorporating financial sector development and institutions in a single model. Secondly, the study applies the mediating effect methods to examine the mediating role of institution in the financial sector and economic growth nexus and thirdly, it analysis the relationships between financial sector and economic growth in the primary, secondary and tertiary sectors growth in the Nigerian economy. Following the introduction is the trend analysis of the financial sector development and economic growth, section three is the review of related literature, section four presents the methodology used in the study, the fifth section is the presentation of empirical analysis and findings of the studies and section six concludes the section of the paper.

2 EMPIRICAL REVIEWS OF LITERATURE

2-1 Relationship between Financial Development and Economic Growth

Kojon, Saban and Yemane (2014) investigates the causal link between financial m sector development and economic growth in a 21 African countries for the period 1965-2008 and applying bootstrapped approach to test for causality and study finds that causality runs from financial development to economic, thus in support of finance led

growth hypothesis. Muhsin, Saban and Hussayn (2011) conducted a study of the causality between financial sector development and economic growth in the Middle East and North African Countries (MENA) for the periods 1980 -2007 and applying the panel data analysis approach of bootstrap causality approach, the study finds no evidence of causality either from financial sector development and vice versa. Durasteci, Seplar and Hakan (2017) investigates the nexus between financial sector development and economic growth in a 40 developing economics in the period 1989 to 2011 using annual panel data set and applying Augmented Mean Group and Common correlated effects of estimation and that the study documents a positive significant relationship between financial sector development and economic growth.

Akitola, Oji-Okoro and Itodo (2020) examines the relationship between financial sector development and economic growth in Nigeria using quarterly data spanning the periods 2000Q1 and 2019Q4 and using the Autoregressive distributed lag model (Bounds test) approach to cointegration finds that financial deepening as a measure of financial development has a significant positive relationship with economic growth. Puatwoe and Piabuo (2017) in a study of the effect of financial sector in economic development of Cameroon using time series data and applying ARDL bounds test methods to cointegration finds a significant positive long run relationship between financial sector development proxies and economic growth in Cameroon. Adeniran and Udeojo (2010) examines the relationship between financial sector development and economic growth in Nigeria for the period 1960 -2009 using annual time series data and applying the multivariate vector autoregressive approach, granger causality and variance decomposition establish a positive link between financial sector development and economic growth. Osisonwo (2017) examines the long run relationship between financial sector development and economic growth in Nigeria using an annual data for 1980-2014 and applying the unit roots test and ordinary least squares methods of estimations, finds out that private sector credit as a ratio to gross domestic product has a negative and significant relationship with economic growth.

Al Zubi,Al- Rjoub and Abu- Muhreb (2006) Examines the nexus between finance and Economic Growth in MENA countries for the period 1980-2011 and applying the panel cointegration analysis finds no significant long run relationship between financial sector development indicators and economic growth.

2-2 Relationship between Institutions and Economic Growth

A number of empirical studies on the nexus between institutions and economic growth has been conducted either using the time series or the panel data approach;

some of the studies are reviewed in this section of the paper. Some of the studies establish a positive links between institutions and economic growth (such as Okoh and Ebi, 2014; Olarinde and Ajimolobi, 2014 ;), while other studies finds a significant negative relationship between institutions and economic growth (such studies includes Folster & Henrekson,

Panahi et al (2014) examines the role of institutions in promoting growth in the Middle East and North African (MENA) Countries in the periods 2000-2009 and applying the static panel models of cointegration for the analysis, the study documents a significant positive relationships netween institutions and economic growth in the MENA countries. Garba Bello, Abdullahi & Abubakar (2016) examines the roles of institutions, natural resources and economic growth in Nigeria using annual time series data set and applying the Gregory and Hansen (1996) approach to cointegration accounting for structural breaks the study finds a significant positive long run relationship between institutions and economic growth. In a study of the long run and short run effects of institutions and economic growth, Olarinde and Ajimobi (2014) studied the nexus between the two variables by applying the ARDL approach to the time series data from 1980 to 2011 and applying the ARDL bounds test approach and documents a positive long run relationship between the institutions and economic growth. The Granger causality result shows a unidirectional causality from institutions to economic growth. However, the lacuna of the study is the failure to ascertain the presence of structural breaks in the series looking at the macroeconomic reforms that happened in the Nigerian economy, more so the analysis of the moderating effect of institutions will give more insight of its effects on economic growth.

Hussein (2023) examines the impact of institutional quality on economic growth in Sub-Saharan Africa using 31 countries from 1991 to 2015 and applying the two step system Generalised methods of moments approach of panel data analysis, the study finds that institutional quality as measured by political stability has a significant positive effects on economic growth in sub-Saharan Africa. Tiwari and Bharadwaj (2021) assess the impact of institutional quality on economic growth of BRICS countries with the use of panel data from 2002 to 2019 and applying static panel data analysis techniques of the pooled ordinary least squares and the fixed effects model, the study finds a significant positive relationship between institutions as measured by government effectiveness and control of corruptions and economic growth.

However, Wasurum, Amini &Leerah (2021) investigated the nexus between institutional quality and economic growth in Nigeria between 1996and 2019 using annual time series data and applied Johansen maximum likelihood approach to

cointegration, the study finds a negative significant relationship between institutional quality as measured by regulatory qualities and economic growth.

3. METHODOLOGY

This section of the study presents the sources of data, the variables definition and measurement as well the model specification as well as the estimation technique used for the study.

3.1 The Data

The data used for the study is obtained from the statistical database website of the Central bank of Nigeria. The study uses quarterly time series dataset from 2010Q1 to 20224.

3.2 Variable Definitions and Measurements

This section presents how each of the variables used in the estimation of the econometric model is defined and measured in the literature.

3.4. Dependent Variable

The dependent Variable used for the study is the Economic Growth and it is measured as the real Gross Domestic Product growth rate computed from both the nominal and rebased GDP at 2010 constant price is used for this study following the works of Handa and Khan, 2008; Al-Yousif,2002; and Mathew et al. 2016. The growth rate of the GDP is measured as follows:

$$GDPG_t = \frac{GDP_t - GDP_{t-1}}{GDP_{t-1}} X100\%$$

Where $GDPG_t$ is the GDP growth rate at year t, GDP_t refers to the GDP in year t and GDP_{t-1} is the GDP in the one lag period.

3.5. Independent Variables

The following are the independent variables used for the study and each of the predictor variables are measured as follows:

3.6. Financial Development

The variable financial development is measured as the growth rate of the ratio of broad money supply to the gross domestic product (M2/GDP). According to Mckinon (1973) financial development leads to theIncrease in the use of money for transaction purpose, that is, monetization and that monetization leads to financial development of the economy. This study following the works of Wang et al. (2015) measures the financial development as follows:

$$FDI_t = \frac{\left(\frac{M2}{GDP}\right)_t - \left(\frac{M2}{GDP}\right)_{t-1}}{\left(\frac{M2}{GDP}\right)_{t-1}} X100\%$$

Where FDI = Financial Development Index at period t; $\left(\frac{M2}{GDP}\right)_t$ *is the level of financial development at year t and* $\left(\frac{M2}{GDP}\right)_{t-1}$ *measures the level of financial development at one year lag period.*

4. Institutions

Contract intensive Money as a measure of the confidence people have in the workings of the system, contract rights, rule of law and property rights. This measure has been adopted following the works of Okoh and Ebi (2013); Olarinde and Omojalaibi (2014); and Tukur, Bello, Abdullahi and Abubakar (2016).

Contract Intensive Money (CIM) is measured as follows:

$$CIM_t = \frac{M2_t - C_t}{C_t}$$

Where CIM_t *is an index of institution, M2 is the broad money supply at period t and* C_t *is the currency in circulation outside the banking system. It measures the level of confidence people have in the financial system. Higher value of CIM indicates more confidence, more trust and peoples willingness to engage in a long term contract and a lower value of CIM indicates the opposite. The adoption of this proxy of institution is because its indicators (Confidence in the system, trust, security of property and rules of law) are factors that can influence economic growth of the country.*

5. Natural Resources Intensity

This variable is used as a control variable because Nigeria being an oil exporting country and oil been the major source of its foreign exchange is considered vital factor that can stimulate its economic growth. The variable is measured following the works of Garba et al 2016; Akpan and Chukwu (2014) as follows:

$$NRI_t = \frac{Oil\ Exports_t}{GDP_t}$$

Where NRT_t measures the natural resource intensity, Oil $Exports_t$ is the measure of total oil exports in period t and GDP_t is the nominal value of the Gross Domestic Product in time t.

Table 1:
List of Variables, its measurement and Data source

Variable	*Measurement*	*Source of Dara*
	Dependent Variables	
Economic Growth	*Growth rate*	*Central Bank of Nigeria*
Growth of primary sector	*Annual Growth rate of primary sector*	*Central Bank of Nigeria*
Growth of Secondary sector	*Annual Growth rate of secondary sector*	*Central Bank of Nigeria*
Growth of Tertiary sector	*Annual Growth rate of Tertiary sector*	*Central Bank of Nigeria*
	Independent Variables	
Financial Development	*Growth rate of M2/GDP*	*Central Bank of Nigeria*
Institutions	*Contract Intensive Money*	*Central Bank of Nigeria*
Natural Resources Intensity	*Natural Resources Intensity*	*Central Bank of Nigeria*

(Data from 1986-2022)

6. Models Specifications

The following are the models specified and estimated following the works of Lee and Wong (2005) and Wang et al, 2015 as follows:

$$GDPG_t = \lambda_0 + \lambda_1 FD_t + \lambda_2 INST_t + \lambda_3 NRI_t + \mu_t \quad ---------- (1)$$

Where $GDPG_t$ is the gross domestic product growth rate, FD_t is the financial development indicator and $INST_t$ is the institution proxied by the contract intensive

money, NRI_t is the measure of natural resources. λ_0 is the intercept and $\lambda_1 - \lambda_3$are the marginal effects of the independent variables on the dependent variables and μ_t is the error term.

To examine the moderating effects of institution on the nexus between financial development and economic growth, that is assessing the joint effect of institutions and financial development on economic growth the study specify and estimates the model below:

$$GDPG_t = \lambda_0 + \lambda_1 FD_t + \lambda_2 (INSTXFD) + \lambda_3 INST_t + \lambda_4 NRI_t + \mu_t - - - - - - (2)$$

Where: $(INSTXFD)_t$ is the interaction term between institutions and financial sector development

Considering the equation (1) the net effect of financial development on economic growth can be calculated as follows:

$$\frac{\partial GDPG_t}{\partial FD_t} = \lambda_1 + \lambda_2 \overline{INST}_t \text{----------} \quad (3)$$

Where: $\overline{INST}_t$ is the average value of institutions

However, if the marginal effect is positive ($\lambda_1 + \lambda_2 \overline{INST}_t$-) is an indication that more financial sector development and institutions facilitates economic growth and that a negative suggests the contrary. Moreover, if $\lambda_1$and λ_2 have a different sign, it indicates a threshold level exists beyond which institutions cannot accelerate economic growth (Olaniyi and Adeniji, 2020). Hence it would be essential to calculate the threshold level of institutions using the following equations.

Inst >-($\frac{\lambda_1}{\lambda_2}$) ---------- (4)

It is important to ascertain the significance of the marginal effects by calculating the t statistic and the standard error (Eighamusue, 2020). We use the coefficient covariance matrix to find the variance. Secondly, the standard error is calculated as the square root of the variance, while the marginal effect divide by the variance produces the t statistic. The marginal effect is significant if the t statistic is large.

7. Estimation Technique

This study applies the Autoregressive Distributed Lags Model (Bounds test) approach to test for cointegration developed by Pesaran et al (2021). The justification for the choice of this estimation is because of its advantages over the other methods. Firstly, the method can be applied irrespective of the order of cointegration of the variables, that is irrespective of whether the variables are stationary at level I(0) or after first differencing, I(1) or a mixture of both (i.e., I (0) or I (1) or both. Secondly, it has the advantage of producing a robust and reliable result irrespective of the size of the sample. Thirdly, the ARDL approach allows for the long run and short run estimates to be estimated simultaneously. Fourthly, the ARDL estimation technique allows for the use of different lag lengths for the variables used in the estimation and finally, it produces an unbiased parameter estimates and valid t statistic as it controls for endogeinity and autocorrelation.

The ARDL estimation technique is applied with the transformations of equations (2),(7),(9) and (11) into ARDL models as shown in equations (13),(14),(15) and (16) below:

$$\Delta GDPG_{i-1} = \beta_0 + \sum_{i=1}^{m} \beta_1 \Delta GDPG_{i-1} + \sum_{i=1}^{m} \beta_2 \Delta FD_{i-1} + \sum_{i=1}^{m} \beta_5 \Delta (FDXINST_{i-1} + \sum_{i=1}^{m} \beta_4 \Delta INST_{i-1} + \sum_{i=1}^{m} \beta_5 \Delta NRI_{i-1} + \theta_1 GDPG_{i-1} + \theta_2 FD_{i-1} + \theta_3 (FDXINST)_{i-1} + \theta_4 INST_{i-1} + \theta_5 NRI_{i-1} + \mu_i \text{ --- (5)}$$

It should be noted that the short run and long run coefficients $\beta_1 - \beta_5$ and $\theta_1 - \theta_5$ are the parameters of the explanatory variables

And the error correction term representation of equation (5) is presented below as:

$$\Delta GDPG_{i-1} = \beta_0 + \sum_{i=1}^{m} \beta_1 \Delta GDPG_{i-1} + \sum_{i=1}^{m} \beta_2 \Delta FD_{i-1} + \sum_{i=1}^{m} \beta_5 \Delta (FDXINST)_{i-1} + \sum_{i=1}^{m} \beta_4 \Delta INST_{i-1} + \sum_{i=1}^{m} \beta_5 \Delta NRI_{i-1} + \beta_6 ECM_{i-1} \pm ---- (6)$$

8. RESULTS AND DISCUSSION OF FINDINGS

8.1. Descriptive Statistics

The results of descriptive statistics and correlation matrix is presented in Table 1, the results show that the mean of Gross domestic product total, Gross domestic product in the agricultural, Industry and services sector stand as 28369.38,14614.13,17795.08 and 27498.68 respectively. While the mean values of financial sector development and institution are 0.833089 and 10.73076 respectively and the corresponding values of the standard deviation are 11352.15, 31430.53, 40459.96 and 57451.48 respectively and the corresponding standard deviations for

financial sector development and institutions are 0.07816 and 1.9229285 accordingly. The result of the standard deviations indicates the presence of wide variation between the variables and there exist dispersion of the variables from their average values. Similarly, the correlations matrix indicates a positive correlation between the variables and the gross domestic product total. It also reveals that institutions has a positive correlation with the financial sector development. The results of the correlations matrix further indicate a negative correlation between financial sector development (FD) and the rate of economic growth.

Table 1:
Descriptive Statistics and Correlations Matrix

	GDPG	***FD***	***INST***	***INF***	***NRI***
Mean	*28369.38*	*0.833089*	*10.72076*	*12.81122*	*23.0773*
Median	*25979.41*	*0.809416*	*10.39098*	*12.00000*	*22.9083*
Maximum	*57780.58*	*1.074544*	*16.19801*	*21.29885*	*57.4429*
Standard Deviation	*12583.48*	*0.702768*	*7.415460*	*7.822323*	*13.1018*
Skew ness	*11352.15*	*0.078716*	*1.929285*	*3.529415*	*0.5226*
Kurtosis	*0.666439*	*0.966414*	*0.444553*	*0.453572*	*2.3835*
GDPG	***1.000000***	*-0.379620*	*0.135806*	*0.129168*	*-0.0026*
FD	*-0.379620*	***1.000000***	*0.532435*	*0.453614*	*0.4969*
INST	*0.135806*	*0.532435*	***1.000000***	*0.540020*	*0.7582*
INF	*0.129168*	*0.453614*	*0.540020*	***1.000000***	*0.6926*
NRI	*-0.0026*	*0.4969*	*0.7582*	*0.6926*	***1.00000***

8.2. Unit Roots Test Results

The outcomes of the tests for unit roots are presented in Table 2. The results indicates that the dependent variable (Growth rate of the Gross domestic product is stationary at level. On the other hand, the independent variables are all stationary at their first difference values. This study therefore, it justifies the use of the autoregressive distributed lag models to test for the presence of cointegration among the variables.

Table2:
Unit Roots Tests results

	Augmented Dickey Fuller		***Phillips-Peron***		***Unit Root with Breakpoint Test***	
Variables	*I(0)*	*I(1)*	*I(0)*	*I(1)*	*I(0)*	*I(1)*
Growth rate of Gross Domestic Product	*-3.5615***	*-*	*-12.1145***	*-*	*-7.813****	*-*
Financial Development	*-0.4585*	*-3.4289***	*-4.1000**	*-*	*-3.9595*	*-3.181****
Institutions	*1.4843*	*-8.386****	*-0.1215*	*-9.436****	*-1.552*	*-9.906****
Inflation	*1.8002*	*-3.681****	*-1.000*	*-4.422***	*-3.1645*	*-4.373****
Natural Resources						

*Notes *** and ** indicates the level of significance at 1 and 5 percent, rejecting the null hypothesis that the series have unit roots.*

Test for Cointegration and results of the Estimates

The results of the Autoregressive distributed lag model (bounds test) is shown in Table 3. The results indicates that the variables are cointegrated as the value of the test statistic, the F value is greater than the upper bound value at 1 percent level of significance, thereby rejecting the null hypothesis which states that the variables are not having long run relationships. Therefore, it is necessary to establish the long run and short run impacts of the independent variables on the dependent variable which is economic growth in this study.

The ARDL estimation results is depicted in Table 3, the column 1(Model 1) shows that financial development has no significant impact on economic growth in the long run, but, in the short run the table shows a significant negative effect on economic growth. It shows that a 1 percent rise in financial sector development leads to a reduction in growth by 54 percent in the short run. The finding of this study concurs with the studies such as Akitola et al (2020) this is probably due to the fact that the financial development is mostly recorded in the banking sector and the funds are not channeled into investment that could spur the growth of the economy. Besides institutions have a significant positive relationship with economic growth in Nigeria. The transmission channel could be that better institutions such as good governance

could leads to growth rate in the economy. The finding of this study concurs the findings of studies such as who also document a positive nexus between institutions and economic growth similarly, inflation has a positive and significant positive relationship with economic growth in Nigeria this is in line with the empirical findings of Tiwari and Bharadwaj (2021) and Hussein (2023). However, natural resources have a significant negative effect on economic growth this conforms to the empirical findings of other studies such as Akpan and Chukwu (2014) and Baghebo and Atima (2014) and it differs from the findings of the works of. The findings suggest that the abundance of natural resources does not lead to the desired economic growth supporting the resource curse hypothesis in the country.

In column 2 of Table 3, we add the interaction term between institutions and financial development to establish the moderating effect, the estimation shows that the interaction term is positive and significant, while the coefficient of financial development is negative and significant, these suggest that financial sector development has an unfavorable effects on economic growth whereas, institutions reduces the unfavorable effects of financial sector development on the economic growth, therefore institutions have a favorable moderating effect. Moreover, since the coefficients of financial development and the interaction term have different signs, it therefore indicates the existence of threshold level beyond which financial development would not promote economic growth. To examine the total effect of the financial development and institutions on economic growth is it necessary to compute the marginal effects Therefore, the marginal effect of financial development on economic growth which is (33.8565) is positive, suggesting that financial development and institutions have the same effects on economic growth. The positive marginal effects of financial sector development further suggest that a simultaneous increase in both financial sector development and institutions accelerate economic growth in Nigeria.

In column 3, as a robustness check the study incorporates a structural break dummy to account for the presence of structural break as establish from the unit roots test for the presence of structural breaks using the Bai and Peron (2003) unit roots test for structural breaks. This is necessary as some studies such as Ehigiamusoe and Lean, 2018a, and Narayan and Smyth, 2008, highlighted that the neglect of structural breaks in macroeconomic variables could leads to establishment of deceptive link among the variables. The break date in the data set is identified as 2001Q3, the dummy variable takes the value of zero before the break date and 1 otherwise (Ehigiamusoe and Lean, 2018; wallack, 2003). The estimation results in column 4 in Table 3 is analogous to the results in Column 3 in terms of the sign of the coefficients and significance of the estimated parameters, although with slight difference in the values of the estimated

parameters. The coefficient of the break dummy variable is negative but statistically insignificant which shows that structural break has no significant impact on economic growth in Nigeria. This study corroborates the findings of Ehigiamosue and Babalola, 2021 and differs from the findings of Garba Bello, Abdullahi &Abubakar (2016) who finds a significant positive impact of structural break dummy on economic growth in Nigeria.

Robustness Checks

To check the robustness of the estimated models, some diagnostic tests have been conducted. The study conducts the test for serial correlation using the Breusch Godfrey LM test for the serial correlation and thee result for the test indicates absence of serial correlation in all the estimated models as the p values are all greater than the 5 percent level of significance. Secondly, a test for homoscedasticity of the residuals using the Breusch –Pagan godfrey test for hetroscedasticity and the study indicates that the residuals are homoscedastic in all the estimated results. Thirdly, the test for the normality of the estimated residuals using the Jacque-Bera statistic indicates that the residuals from the estimated models are normally distributed as the p values of all the models estimated are greater than the 5v percent level of significance. As a last diagnostic test, the study conducts stability tests using the CUSUM and CUSUMQ, the results depicted in Figure 1 shows that the models are stables as the red lines al falls within the border lines at 5 percent level of significance as suggested by Brown et al (1975).

Table 3:
Results of the ARDL Estimation

Dependent variable: Economic Growth measured by GDP growth rate			
Variables	*Model 1*	*Model 2*	*Model 3*
Bounds Test (F Value)	*21.8575*	*25.2593*	*23.6658*
Long Run Estimates			
Financial Sector Development(FD)	*0.4859(2.8519)*	*-4.51570(15.5467)****	*-4.48822(15.0968)****
Institution (INST)	*0.3349(0.1443)***	*-2.7235(1.005)****	*-2.5866(0.9775)***
Inflation (INF)	*0.1596(0.0590)***	*0.1439(0.0501)****	*0.1381(0.0492)***
Natural Resources (NRI)	*-0.0642(-0.6076)***	*-0.0461(0.0203)***	*-0.0435(0.0197)*
Interaction Term(FD x INST)		*3.5794(1.1829)****	*3.4944(1.1485)****

Dum (Structural Brak)			*-0.7297(0.4576)*
Error Correction Term	*-2.452(0.1987)****	*-2.552(0.1741)****	*-2.55(0.1656)****
Short Run Estimates			
ΔFD	*-54.2028(8.5449)****	*-158.613(4.6219)***	*-156.1202(34.9835)***
ΔINST	*-0.1030(0.3813)*	*-7.6948(0.5743)****	*-7.4866(2.3532)***
ΔINF		*0.0023(0.2410)*	*0.0064(0.2375)*
ΔNRI	*-0.0825(0.0526)*	*-0.0052(0.0431)*	*0.00018(0.0557)*
Δ(FD x INST)		*3.5794(1.1829)***	
Constant	*-3.1327*	*37.0048*	*94.1550*
Coefficient of Determination (R^2)	*0.978*	*0.9851*	*0.9864*
Diagnostic Tests			
Autocorrelation	*0.7918[0.4629]*	*0.8722[0.4299]*	*0.4433[0.6468]*
Homoscedasticity	*0.9785[0.4819]*	*0.7216[0.7187]*	*0.6345[0.8042]*
Normality	*0.1849[0.9116]*	*0.4078[0.8156]*	*0.5577[0.7566]*

4 .Conclusions and Policy Implications

This study investigates the moderating effect of institutions on the nexus between financial sector development and the economic growth in Nigeria. The study employs a quarterly data from 2010Q1 to 2022Q4 and using the autoregressive distributed lags bounds test approach to cointegration and the study finds that institutions positively moderates the link between financial sector and economic growth, in other words it has a positive impact on the economic growth in Nigeria, even though the coefficient of financial development has a negative effect which implies that in spite of the numerous financial sector reforms in the country it has not yet meaningfully translated to economic growth in the country, the implications of the findings of the study is that for the financial sector reforms impact to be felt in the economy sound institutions are needed as the coefficient of the institution and the interaction term of institution and financial development are all positive and statistically significant.

The study finds that with good institution in place in terms of good governance quality, control of corruption and rule of law the negative impact of financial sector development as found in this study can be transformed to meaningful economic growth and hence better living conditions for the citizenry. The study therefore recommends that for the financial sector reforms to meaningfully contribute towards the economic growth

of the country government needs to be serious about its fight against corruption and ensure the rule of law, good governance in the country.

This study has investigated the moderating effect of institutions on the relationship between financial sector development and economic growth nexus in Nigeria within the linear framework of the Autoregressive Distributed Lags Model bounds test to cointegration, the study suggests that a similar study be conducted in the country using the nonlinear framework such as the threshold regression analysis and the nonlinear Autoregressive Distributed Lags bounds test approach. Similarly, a comparative study can be conducted to compare the moderating effect of institutions on the financial sector development and economic growth in another developing country.

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