Finance-Growth Nexus: The Primal Case for the Role of Governance in Nigeria

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ABSTRACT

Over the years, divergent views on finance-growth nexus have shaken the confidence of policymakers in developing the essential blueprint of financial sector policies fundamental for overhauling the economic structures in most African countries. In view of this, this paper largely evinces the critical development challenge plaguing Nigeria in terms of building effective regulatory framework that could engender a developed and well-functioning financial system. With the use of ARDL bounds test approach and the pairwise Granger causality test, the joint effect of financial development and the quality of institutions on Nigerian economy is examined between 1984 and 2017. In the long run as well as in the short run, the study establishes that financial development has no substantial effect on economic growth in Nigeria. Further findings indicate that the quality of institutions in the country does not significantly affect the economy. Regarding the interaction term, evidence reveals that the joint effect of financial development and governance on the growth of the economy is adverse and insignificant. The implication of this is that pervasive weak institutions and ineffective financial system could be harmful to economic performance. The study suggests that building a robust structure through sustainable policy and regulatory measures would enhance the potential role and effectiveness of the financial sector in the economy, and thus engender entrenched modern finance frontier in Nigeria.

Keywords: *Financial development, Governance, Economic growth, Financial system, ARDL, Nigeria.*

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Highlights of this paper:

- The study assesses the long run and short run joint effect of financial sector development and governance on economic growth in Nigeria.
- It calibrates governance indicator into the model of finance-growth linkage.
- How the growth path is determined by the quality of institutions is empirically analysed in the study.

1. INTRODUCTION

Moving by the mainstream empirical postulation that the state of financial systems is central in development process, a well-developed financial system could exert an independent and causal influence in long run growth trajectory (Demirgüç-Kunt, 2008). Many economists (researchers) secure a common ground in the assertion that through the alleviation of market frictions, and thus the inducement of savings rates, investment levels, technological innovation and advancement, financial deepening would have a crucial impact on the acceleration of growth in the long run (Schumpeter, 1911; Goldsmith, 1969; McKinnon, 1973). Hence, financial sector development underpins improved economic performance. The bulk of evidence has showcased the critical role financial sector plays in facilitating speedy growth and enhanced social welfare in most economies, given that the development of the sector aids the catching up of the poor with the rest of the economy as it improves. These expositions remain instrumental in influencing the policy design towards the financial sector in developing countries. Consequently, the prevalence of shallow financial systems and pallid policies in most African countries (including Nigeria) has been in the forefront of policy debate in recent times.

In Nigeria, getting the significant policy decisions right has often been the central development challenge. This points to the importance of governance role in developing effective and inclusive financial systems. The pervasive poor regulatory framework could be accounted for the still-unfolding financial crisis in the country. It is widely recognized that finance thrives on sound economic environment and market discipline. Thus, weak governance may exacerbate the deterioration in business conditions and macroeconomic instability, and in turn harm the growth path. While the introduction of financial reforms are expected to foster developed and efficient financial systems, since the initiation of extensive financial reforms in 1986 in the country which was necessitated by the adoption of structural adjustment porgramme (SAP) in the period, the performance of the financial sector has been persistently shallow (Adeoye and Adewuyi, 2005). This concern has given rise to numerous financial reforms introduced by successive governments (such as pension fund policy in 2004; bank consolidation policy in 2005; insurance policy in 2007), yet the sector's contribution to the growth and development of the economy has been insignificant (Ayadi, 2009; Iheanacho, 2016).

Furthermore, Figure 1 depicts the trend of growth rates and financial development indicators (broad money (% of GDP) and domestic credit to private sector (% of GDP)). Statistical evidence shows that between 2000 and 2017, growth rates of GDP per capita, compared to the values of financial sector indicators, are largely poor. Accordingly, the trend indicates worse economic performance in recent years (2015 - 2017) with negative growth rates in spite of relatively higher values of both broad money (% of GDP) and domestic credit to private sector (% of GDP) in the period. This slightly negates the assertion that support the growth effect of finance in the economy (Akingunola, 2013; Ogwumike and Salisu, 2014) suggesting that the potential contribution of finance to growth path could be overrated. On the other hand, since Ayadi *et al.* (2008); Adeniyi *et al.* (2015) fail to confirm the existence of any appreciable influence of financial development on economic performance in Nigeria, assessment of finance–growth nexus, with simultaneous inclusion of governance indicator (law and order), remains an interesting empirical investigation in Nigeria's context given the increasing divergent views. In general, the question has been that if

financial development is crucial for economic performance, in what way can the financial sector contribute substantially to the country's growth trajectory, and how the development of the sector could be sustained?

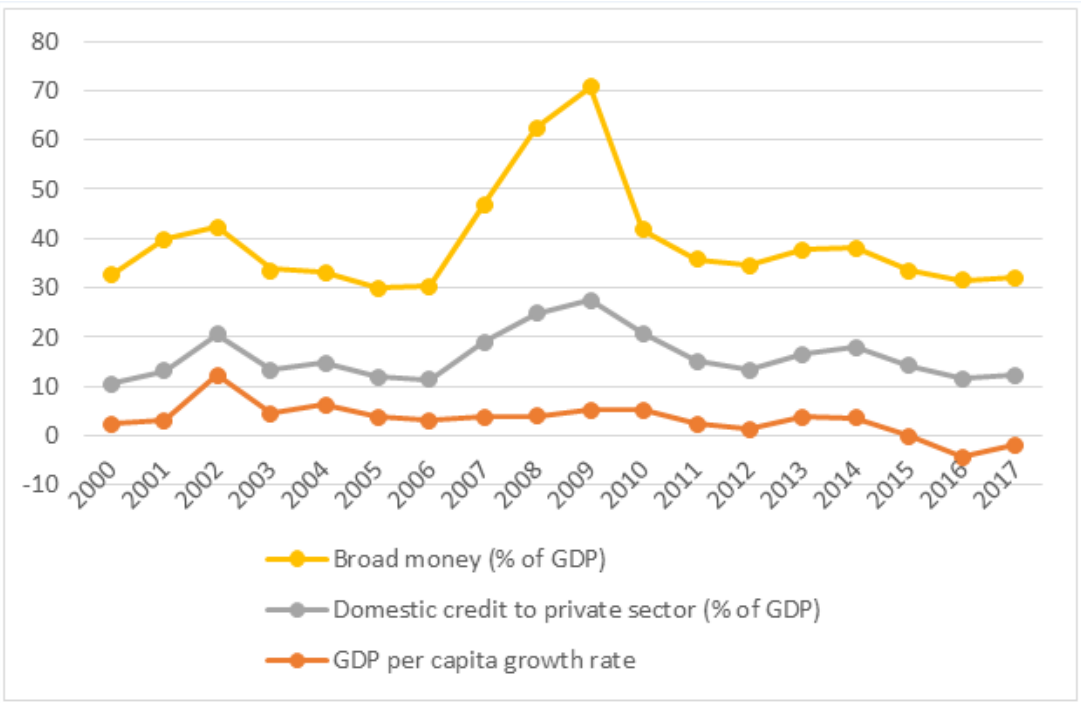


Figure-1. The trend of GDP per capita growth rate, broad money (% of GDP) and domestic credit to private sector (% of GDP) in Nigeria between 2000 and 2017.
Source: Authors' estimates based on data from World Bank (2018).

Essentially, these agitations spur the need for a new study. With the examination of the role of governance in the subject matter, a novel development sets to be added to the literature, as previous studies seem to have mainly focused on finance-growth nexus without taking into account the mediating impact of institutional quality on the economy. In view of the preceding elucidations, understanding the channel of finance-governance-growth linkage is critical to building sustainable policy measures and enhanced support for improved economic performance. Hence, the study's key objective is to assess the long run and short run joint effect of financial development and governance on economic growth in Nigeria. The rest of the study is organized as follows: The next section centers on the review of the literature. This is followed by the detailed accounts of the methodological approach employed, while results and discussion precede the concluding remarks.

2. LITERATURE REVIEW

2.1. Theoretical Review

Mainstream expositions on the link between finance and growth rest on three different theories supply-leading theory, demand-following theory and the reciprocal theory. The supply-leading theory is closely connected to the initial assertion championed by Schumpeter (1911) in that the financial sector is found to be significant in influencing the growth path through the provision of improved financial services. The theory recognizes financial development as the main determinant of economic performance. The proponents of this school of thought stress that successful innovation which induces increase in economic growth is mostly engendered by a well-functioning financial system (King and Levine, 1993; Bojanic, 2012; Khoutem *et al.*, 2014; Ductor and Grechyna, 2015). Given the significant role of financial intermediaries regarding information gathering and analysis, sharing of risk,

mobilization of fund and liquidity provision which are crucial to growth enhancement, Romer (1986); Pagano (1993) later support the incorporation of the endogenous growth theory into the finance-leading hypothesis.

In contrast, the demand-following theory emphasizes that a stable financial sector can only be achieved after the attainment of economic growth in any economy (Robinson, 1952). The view posits that finance depends on the real sector, and thus trailing behind growth. By responding and adapting to the development in the real sector, the financial sector is found to be following the real sector rather than influencing the pace in the real sector (Patrick, 1966; Gurley and Shaw, 1967; Gennaioli *et al*., 2012). The third category of the theories proposes a bi-directional relationship between financial development and economic growth. This theory is regarded as reciprocal theory of finance–growth nexus. It establishes the presence of feedback effects such that a cause and effect association exists between financial development and economic growth. The proponents affirm that a sound and efficient financial system enhances economic growth, while economic growth stimulates the development of financial undertaking and its efficiency (Wolde-Rufael, 2009; Odhiambo, 2010; Cecchetti and Kharroubi, 2012; Owen and Temesvary, 2014).

Another fundamental cause of growth could be economic institutions. Going by the theoretical assertion an "enabling environment" for the creation of wealth is formed by the legal and administrative organizations which underpin every segment of the society. Economic institutions are the critical factor in the development process (Ali, 2003). Basic economic freedom and private property rights are guaranteed by the prevailing governing rules and regulations (law and order). According to North (1990) institutions are the rules that determine human interaction and different performance characteristics. Following De Haan and Sturm (2000) a rise in economic freedom stimulates economic growth, although the level of economic freedom seems not to be related with growth. Also, in the work of Acemoglu *et al.* (2005) on the economic growth theory, inclusive political institutions and economic institutions (property rights) significantly shape growth trajectory in any economy. While the dominant view is that public institutions play a significant role in the allocative process, especially in the distribution of talent between entrepreneurship and rent seeking (Murphy *et al*., 1993; Baumol, 1996) the connection between institutions and economic growth has not been extensively explored in the literature, especially in Nigeria's context. Since the theoretical basis is firmly established, the assessment of governance role with the simultaneous incorporation of financial development indicators would offer substantial postulations in terms of the enrichment of literature.

2.2. Empirical Review

The growing interest among economists has resulted to the application of different techniques in gauging the finance-growth nexus. While authors scarcely consider the role of institutions in economic performance, the prevalence of divergent views necessitates the re-evaluation of the linkage between financial development and growth coupled with the examination of the joint effect of financial sector and governance in the economic development process. Essentially, this direction of empirical investigation in Nigeria's context is central to the understanding and adoption of appropriate systematic approach for strengthening the financial sector in most developing countries.

Setting the tone for sound understanding, Fry (1988); King and Levine (1993); Beck *et al.* (2000) among other studies have indicated that there exists a positive relationship between development of the financial sector and economic growth. Similarly, Djoumessi (2009); Elie (2015); Mandiefe (2015) corrobrate the argument that financial sector development positively influences growth in some sub-Saharan African countries such as Cameroon and South Africa. Focusing on 21 African countries, Seck and Nil (1993) reinforce that positive and significant association exists among these macroeconomic indicators: the real interest rate (financial liberalization measure) and real output with gross savings ratio, financial savings and gross investment representing the set of

conditioning. Using a sample of 24 countries, Charlier (2002) also argue in line with this conclusion. In addition, finance is found to be the mover of growth in Egypt, Morocco and Tunisia (Abu-Bader and Abu-Qarn, 2008).

Regarding country-specific study, some studies have shown the existence of positive association between financial development and economic growth. The main findings and techniques adopted by the studies include; using Cobb–Douglas production, simulation-based ARDL bound testing and Gregory and Hansen's structural break cointegration techniques, Uddin *et al.* (2013) for Kenya, a long run positive relationship exists; Applying ARDL model with the use of data between 1973 and 2008, Khoutem *et al.* (2014) for Tunisia, find that financial development is the prime driver of improved economic performance; using stock market turnover as a percentage of the GDP as the proxy of financial development, Umar (2010) for south Africa, posits that economic growth is enhanced by financial development. On the feedback effect, with the use of heterogeneous panel Granger causality framework with a sample of 17 countries, Fowowe (2011) reveals that there is bi-directional causality between financial development and growth in the countries. Analogously, Akinboade (1998) finds two-way causality in Botswana, while with the same set of data, Eita and Jordan (2007) show that there exists a unidirectional relationship (it is only finance that causes growth) irrespective of the financial development indicator used.

On the contrary, another set of studies indicate that in some countries, financial development adversely affects economic growth. For instance, Adusei (2013) offers empirical assertion that financial development impedes growth in an economy; Odhiambo (2009) using Granger causality test, establishes that money supply (M2) as a percentage of GDP negatively impacts economic growth in Kenya; Bernard and Austin (2011); Al-Malkawi *et al.* (2012) assert that financial development has an adverse effect on economic growth in certain countries. More specifically, applying annual data over the period of 1960–2010, through the financial development (FD) measures, Adeniyi *et al.* (2015) factored in threshold effects and find that financial development negatively influences growth while on accounting for threshold-type effects a sign reversal resulted. Also, Iheanacho (2016) confirms this conclusion. However, using the vector error correction model (VECM), Akingunola (2013) assesses the relationship between financial liberalization and economic growth in Nigeria. Although financial liberalization proxies are found to be insignificant in explaining economic growth, financial deepening indicators positively and significantly affect economic growth. Similarly, Ogwumike and Salisu (2014) reveal that financial intermediations — financial reforms, credit to private sector and stock market exert positive and significant influence on economic growth in Nigeria.

On the institutional relationship, De Haan *et al.* (2006) state that some economic institutions significantly influence economic process, and thereby inducing economic growth. In another study, Weede (2006) also argues that economic freedom has a positive effect on the growth rate of real income. Similarly, in the work of Heckelman (2000) using Granger causality tests, it is confirmed that the main direction of causality is from economic freedom to economic growth, although evidence of reversed causality is found in the analysis. Regarding political institutions, Fatás and Mihov (2005) posit that policy volatility has an adverse effect on economic growth. In line with this, Angelopoulos and Economides (2008) show that political uncertainty (cum weak regulatory framework) is detrimental to growth.

The preceding review has revealed that the international debate about the association between institutions and economic growth is tenable. However, evidence seems to pose a competing choice between the incorporation of the institutional measure (law and order) and the speed expansion of the debate in relation to finance-growth nexus in Nigeria. Hence, this influences the move to calibrate governance indicator into the model of finance-growth linkage in the study.

3. DATA AND METHODOLOGY

3.1. Data

In the study, GDP per capita, trade openness, inflation, law and order and two financial development indicators (broad money (% of GDP) and domestic credit to private sector (% of GDP)) are used. The data are secondary in nature, and cover the period of 1984-2017. The time period is chosen based on the availability of data, especially the governance indicator (law and order). Specifically, economic performance is measured by GDP per capita. Given that some macroeconomic measures could potentially affect the growth of the economy, both trade openness and inflation are incorporated in the model as control variables. The role of these variables in economic development process has been previously justified by Frankel and Romer (1999); Lucas (2007). Detailed description and definition of the data with their respective sources are presented in Table 1.

Table-1. Data description and definition.

Variable	Description and definition	Source
Dependent variable		
GDP per capita	Gross domestic product divided by midyear population.	WB (2018).
Independent variable		
Governance indicator		
Law and order	It measures perceptions of the extent to which agents have confidence in and abide by the rules of the society, and in particular, the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence (original scale: 6 points).	International Country Risk Guide (2018 edition)
Financial development indicator		
Broad money (% of GDP)	The sum of currency outside banks; demand deposits other than those of the central government; the time, savings, and foreign currency.	WB (2018).
Domestic credit to private sector (% of GDP)	The financial resources provided to the private sector by financial corporations, such as through loans, purchases of non-equity securities, and trade credits and other accounts receivable, that establish a claim for repayment.	WB (2018).
Control variable		
Trade openness	The sum of exports and imports of goods and services measured as a share of gross domestic product.	WB (2018).
Inflation	It represents the annual % change in the cost to the average consumer of getting a basket of goods and services that can be fixed or changed at defined intervals, such as annually.	WB (2018).

Source: Authors' computation.

3.2. Methodology

Following the work of Schumpeter (1911); McKinnon (1973); King and Levine (1993); North (1990) the model of finance-governance-growth nexus in the study is specified in a functional form as:

$$Y_t = f(FIN_t, LAW_t, TRP_t, INF_t) \quad (1)$$

Where Y represents GDP. FIN is the financial development indicators. LAW captures the law and order, while TRP & INF are trade openness and inflation respectively. t is the time period.

Given the mixed stationary feature of most variables in studies, ARDL bounds test approach developed by Pesaran *et al.* (2001) is adopted. This approach is applicable irrespective of the order of integration of the series except for I(2) variables. Also, it is suitable for small sample size as is the case in this study, suggesting that the problem of biasness often associated with small sample size can be circumvented (Narayan, 2005). Hence, following Pesaran *et al.* (2001) the ARDL model can be stated as:

$$\Delta Y_t = \alpha_0 + \beta_1 Y_{t-1} + \beta_2 FIN_{t-1} + \beta_3 LAW_{t-1} + \beta_4 TRP_{t-1} + \beta_5 INF_{t-1} + \sum_{i=1}^{n} \theta_i \Delta Y_{t-1} + \sum_{i=0}^{n} \gamma_i \Delta FIN_{t-1}$$

$$+ \sum_{i=0}^{n} \delta_i \Delta LAW_{t-1} + \sum_{i=0}^{n} \emptyset_i \Delta TRP_{t-1} + \sum_{i=0}^{n} \partial_i \Delta INF_{t-1} + \varepsilon_t \quad (2)$$

Where the differenced operator is Δ. β_1, β_2, β_3, β_4, β_5 are long run estimates, while θ_i, γ_i, δ_i, $\emptyset_i$ ∂_i represent short run estimates. In this type of ARDL model, the appropriate lag length is chosen automatically. The suitability of the calculation of F-statistic is mainly depended on the appropriate lag order selection of the series incorporated in the model. The null hypothesis of no cointegration among the series in Eq. (2) is; $H_0: \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = 0$; against the alternative hypothesis of the existence of cointegration is; $H_1: \beta_1 \neq \beta_2 \neq \beta_3 \neq \beta_4 \neq \beta_5 \neq 0$. In order to ascertain the cointegration status, two asymptotic critical values computed by Pesaran *et al.* (2001) are compared with the F-statistic. For cointegration to be established, F-statistics must be greater than the upper critical values, and that there is no existence of cointegration when it is lesser than lower critical values. On the other hand, if it falls within the bounds, the decision is inconclusive. Based on Pesaran *et al.* (2001) if cointegration is confirmed, this will lead to the formulation of error correction model (ECM) in the short run dynamics form as:

$$\Delta Y_t = \alpha + \sum_{i=1}^{n} \theta_i \Delta Y_{t-1} + \sum_{i=0}^{n} \gamma_i \Delta FIN_{t-1} + \sum_{i=0}^{n} \delta_i \Delta LAW_{t-1} + \sum_{i=0}^{n} \emptyset_i \Delta TRP_{t-1} + \sum_{i=0}^{n} \partial_i \Delta INF_{t-1} + \pi_i ECM_{t-1}$$

$$+ \varepsilon_t \quad (3)$$

Since broad money (% of GDP) and domestic credit to private sector (% of GDP) are used as financial development indicators, the analysis involves two different models[1]. π_i is the speed of adjustment parameters to equilibrium. Theoretically, they are expected to be negative and significant.

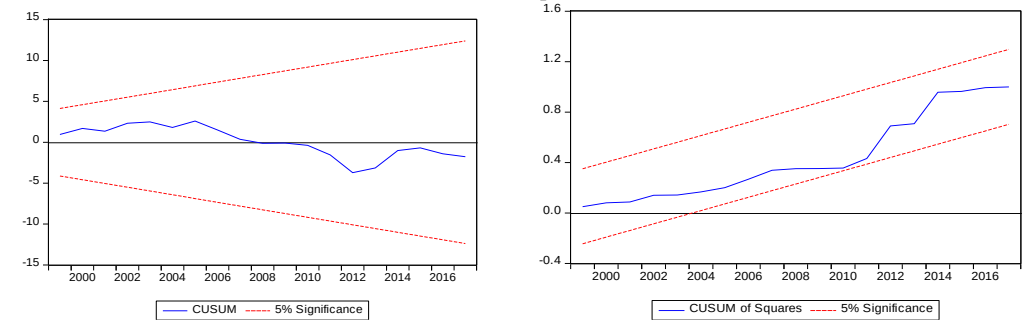
4. ESTIMATION RESULTS AND DISCUSSION

In an attempt to ascertain the order of integration of the series, stationarity properties are presented in Table 2. With the use of both augmented dickey-fuller (ADF) and phillips-peron (PP) unit root tests, results reveal that almost all the variables are stationary in their first difference (i.e. I (1)). Based on the tests, only broad money [% of GDP] (*M2*) is I (0) under ADF, while the same holds for trade openness (*TRP*) in PP category, suggesting that there is no existence of I (2) variables in the model. Given the theoretical ground that ARDL estimation technique cannot be applied when there is I (2) variable in the model, the tests affirm the suitability of ARDL model in this study. On the other hand, F-bounds test for cointegration reported in Table 3 shows evidence of long run relationship among the variables. The presence of cointegration among the series buttresses the assertion of earlier theories (supply-leading theory, demand-following theory and the reciprocal theory). Furthermore, the stability of the two models is tested following the presentation of cumulative sum of recursive residuals (CUSUM) and

[1] In the study, GDP per capita, broad money (% of GDP), domestic credit to private sector (% of GDP) and trade openness are in logarithmic form.

cumulative sum of squares of recursive residuals (CUSUMSQ) in Figure 2. With the falling of CUSUM and CUSUMSQ within the critical boundaries, it is confirmed that both ARDL models are stable in terms of their respective parameters. The diagnostic tests conducted also strengthen the validity and robustness of the estimates.

Model 1: M2 as independent variable.



Model 2: Pcredit as independent variable.

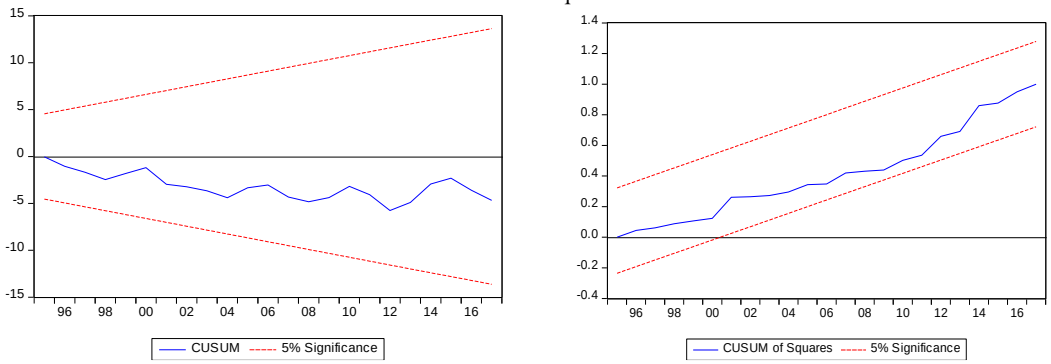


Figure-2. cusum (left) & cusumsq (right).

Source: Authors' computation.

Table-2. Unit root test.

Variable	Augmented dickey fuller (ADF)			Phillips perron (PP)		
	Level	First difference	Status	Level	First difference	Status
GDP (Y)	-0.23 (0.93)	-3.81** (0.01)	I(1)	-0.17 (0.93)	-3.74** (0.01)	I(1)
Law and order (Law)	-2.49 (0.13)	-3.49** (0.02)	I(1)	-1.88 (0.34)	-3.44** (0.02)	I(1)
Broad money (M2)	-3.74** (0.01)	-4.37*** (0.00)	I(0)	-2.53 (0.12)	-6.69*** (0.00)	I(1)
Private credit (Pcredit)	-0.71 (0.83)	-5.18*** (0.00)	I(1)	-1.12 (0.70)	-8.70*** (0.00)	I(1)
Trade openness (TRP)	-2.98* (0.05)	-7.34*** (0.00)	I(1)	-3.04** (0.04)	-7.34*** (0.00)	I(0)
Inflation (INF)	-1.50 (0.52)	-4.64*** (0.00)	I(1)	-2.52 (0.12)	-6.83*** (0.00)	I(1)

Note: ***represent 1%, **represent 5%, *represent 10%. Values in bracket are probability values, while the ones with no bracket are t-statistical values. The critical values of both augmented dickey fuller (ADF) and phillips perron (PP) technique are (-3.679322), (-2.967767), and (-2.622989) at 1%, 5% & 10% respectively.

Table-3. F-bounds test for cointegration.

Test statistic	Value	K
F-statistic (Model 1) (2, 1, 2, 1, 0, 1)	12.34	5

F-statistic (Model 2) (2, 1, 0, 0, 0, 0)	13.38	5
Significance	I(0) lower bound	I(1) upper bound
1%	3.41	4.68
5%	2.62	3.79
10%	2.26	3.35

Note: In the ARDL model, K is the number of independent variables.

Given the established nexus among the variables, ARDL long run estimates are reported in Table 4. Based on the results, when broad money [% of GDP] (M2) is used as the financial development indicator which is identified as model 1, no significant association exists between financial development (i.e. *M2*) and GDP per capita (Υ). This suggests that *M2* has no effect on the growth of the economy. This marries up with the findings of Lawal *et al.* (2016) who posit that the development of financial sector proxy by *M2* has no significant impact on Nigeria's economy. Abu-Bader and Abu-Qarn (2008) also argue in this direction, although not for Nigeria. In their study, it is emphasized that no no clear evidence of any relationship between *M2* (financial development measure) and the growth of MENA economies. In contrast, the estimated results are not in tandem with the findings documented by Khoutem *et al.* (2014) for Tunisia, and Umar (2010) for South Africa, in that financial development is viewed as the prime driver of economic growth. Regarding model 2, when domestic credit to private sector (*pcredit*) is used as financial development proxy, in the long run, the estimates also corroborate the results obtained in model 1 which suggest that financial development does not have any substantial influence on economic growth in Nigeria. The existence of an insignificant positive long run relationship between these financial development indicators and GDP per capita, which could be termed the restrained influence of the sector on the economy, calls for the need to put in place a firm and robust structure that would effectively stimulate the potential role of the financial sector in Nigeria's economic performance, and thus guarantees entrenched modern finance frontier in the country.

In relation to the effect of governance, findings indicate that the quality of institutions in Nigeria (proxy by law and order) has no significant effect on economic growth in the long run, implying that the nature of governance measures in the country cannot in any way enhance the improvement of the economy. In both models (1 & 2), these empirical postulations are consistently maintained. By and large, the results contradict the conclusion made by De Haan *et al.* (2006); Weede (2006) which stress that, in a state, economic institutions seem to substantially influence economic progress, and in turn induce the growth rate. However, the findings buttress the evidence established by Fatás and Mihov (2005); Angelopoulos and Economides (2008) that in a poor political environment with the high level of political uncertainty, like Nigeria, institutions could be detrimental to growth. On the main area of interest (the joint effect of financial development indicators and governance measure) depicting the interaction term, in the two models, results reveal that financial development and governance jointly have an insignificant adverse effect on the economy. The implication of this is that pervasive weak institutions and ineffective financial systems are harmful to the performance of Nigeria's economy. These findings largely evince the critical development challenge plaguing the country in terms of building an effective regulatory framework that could engender a developed and well-functioning financial system. Also, in the long run, on the control variables (trade openness [*TRP*] and inflation [*INF*]), the results show that *TRP*, with positive impact, is significant in explaining economic growth in Nigeria. However, *INF* is found to be negative while it is only significant in model 1. The existence of a significant positive relationship between Υ and *TRP* justifies the capacity or the instrumentality of external sector in stimulating the economy. It could be suggested that paying keen attention to external (trade) sector could substantially influence the growth trajectory. Hence, if better measures are in place, the necessary fund required to boost the economy can be realized through capital inflows. This is in line with the literature (Rajan and Zingales, 2003) which supports the view that trade openness positively affects economic growth.

Table-4. ARDL long run estimates.

Variable	Dependent variable : GDP (Y)	
	Model 1 (M2 as independent variable)	Model 2 (Pcredit as independent variable)
TRP	2.28** [2.49]	1.25** [2.93]
INF	-0.02** [-2.80]	-0.003 [-0.89]
LAW	1.58 [0.77]	0.44 [0.55]
M2	2.21 [1.30]	
PCREDIT		1.64 [1.41]
LAW*M2	-0.87 [-1.17]	
LAW*PCREDIT		-0.62 [-1.39]

** indicates 5% level of significance, while figures in parentheses are t-values.

Table-5. ARDL short run estimates.

Variable	Dependent variable : GDP (Y)	
	Model 1 (M2 as independent variable)	Model 2 (Pcredit as independent variable)
Constant	0.20** [2.71]	0.14** [2.67]
ECT (-1)	-0.05*** [-9.67]	-0.08*** [-9.89]
ΔTRP	0.11*** [7.26]	0.10*** [7.43]
ΔINF	-0.001** [-2.78]	-0.0002 [-0.94]
ΔLAW	0.07 [0.85]	0.04 [0.54]
ΔM2	0.11 [1.46]	
ΔPCREDIT		0.13 [1.43]
ΔLAW*M2	-0.04 [1.44]	
ΔLAW*PCREDIT		-0.05 [-1.46]
Diagnostic test		
Durbin-Watson	1.94	2.12
Breusch-Godfrey serial correlation test	0.37	0.10
Ramsey reset test	0.26	0.93
Normality test	0.25	0.55

** & *** indicate 5% and 1% level of significance respectively, while figures in parentheses are t-values.

Focusing on the short run estimates, in Table 5, the estimates of the main variables (financial development indicator, law and order and the interaction variables) of interest are similar to the results obtained in Table 4 for long run estimates. These findings depict that, in the short, the same effects also hold, and that the seemingly related policy measures could be effective in both periods. Analogously, for control variables (*TRP & INF*), the signs of the estimated parameters are retained. While *TRP* is significant in both models, *INF* only finds to be significant in model 1.

Table-6. Pairwise Granger causality tests (Lags: 2).

Null hypothesis:	Obs	F-statistic	Prob.
LAW does not Granger cause LOGGDP	32	0.94936	0.3995
LOGGDP does not Granger cause LAW		0.09656	0.9083

LOGM2 does not Granger cause LOGGDP	32	0.16058	0.8525
LOGGDP does not Granger cause LOGM2		0.40110	0.6735
LOGPCREDIT does not Granger cause LOGGDP	32	1.17498	0.3241
LOGGDP does not Granger cause LOGPCREDIT		1.05172	0.1638
M2*LAW does not Granger cause LOGGDP	32	0.57713	0.5683
LOGGDP does not Granger cause M2*LAW		0.21835	0.8052
PCREDIT*LAW does not Granger cause LOGGDP	32	0.41966	0.6615
LOGGDP does not Granger cause PCREDIT*LAW		0.38490	0.6842

Source: Authors' computation.

These results are in line with the previous section. Overall, the estimated parameters of the error correction term (*ECT)* with significant levels validate the theoretical position of expected negative significant values. This confirms the existence of a stable long-run association which implies the presence of a long-run cointegration among the series. Given the pairwise Granger causality tests in Table 6, results indicate that both financial development indicators and governance measures do not Granger cause economic growth. Similarly, GDP per capita does not Granger cause financial development and law and order in the models. This could be attributed to the elucidations and expositions made previously. In sum, since finance thrives on sound economic and regulatory environment, the study establishes that developing effective and inclusive financial system would accelerate the growth of the economy.

5. CONCLUDING REMARKS

Over the years, divergent views on finance-growth nexus have shaken the confidence of policymakers in developing the essential blueprint of financial sector policies fundamental for overhauling the economic structures in most African countries. In view of this, this paper largely evinces the critical development challenge plaguing Nigeria in terms of building effective regulatory framework that could engender a developed and well-functioning financial system. With the use of ARDL bounds test approach and the pairwise Granger causality test, the joint effect of financial development and the quality of institutions on Nigerian economy is examined between 1984 and 2017. In the analysis, GDP per capita employed as the proxy for economic growth, while domestic credit to private sector (% of GDP) and broad money (% of GDP) are used as financial development indicators. Law and order accounts for the quality of institutions, whereas trade openness and inflation serve as the additional variables.

The empirical findings reveal why the financial system reforms and development in the financial sector do not reflect in the growth rate of Nigeria's economy. No matter how well-intended, this points to the folly in the country's governance and policy reforms. Although literature is occupied with documenting cases of positive and negative influence of financial sector development on economic performance, in the long run as well in the short run, the study establishes that financial development has no substantial impact on economic growth in Nigeria. Similarly, findings indicate that the quality of institutions in the country does not significantly affect the economy. Regarding the interaction term, evidence reveals that the joint effect of financial development and governance on the growth of the economy is adverse and insignificant. The implication of this is that pervasive weak institutions and ineffective financial systems could be harmful and detrimental to economic performance. Furthermore, the existence of insignificant effect of financial development and institutional measure on GDP per capita could suggest the restrained influence of the financial sector and poor political environment, coupled with the high level of political uncertainty, on the economy.

The paper further confirms the capacity of the external sector in stimulating the economy, underscoring that paying keen attention to the external (trade) sector could stimulate the growth trajectory. Hence, better policy measures are identified as key determinants of economic performance. Following this assertion, the study suggests that building a robust structure through sustainable policy and regulatory measures would enhance the potential

role and effectiveness of the financial sector in the economy, and thus engender entrenched modern finance frontier in Nigeria.

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