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Abstract

Despite the massive resources emanating from oil wealth, Nigeria has been unable to achieve long-term growth stabilisation, and the implications have been more injurious than ever imagined. The problems of bad leadership, wrong policy measures, among other contending issues, have been attributed to this growing menace. This has led to critical thinking at virtually all level of social gatherings as to how the institutions can be best harnessed for macroeconomic stabilisation in Nigeria. In evaluating its objectives, this study employs the two-step Engle and Granger estimation procedure to analyse time-series data on price instability index and institutional quality index to account for the variations in macroeconomic instability as induced by institutional frameworks. Findings reveal that rule of law, control of corruption, government effectiveness and political stability and the absence of violence have a significant but negative relationship with macroeconomic instability in Nigeria in the short run. Based on findings from the study, the government should create an enabling environment for the society to engage its leadership challenges to be able to stamp out impediments that will deter its ability to stabilize its macroeconomic objectives.

Keywords: Institutional Framework, Macroeconomic Stabilization, ECM, Nigeria.

JEL Codes: C32, EO2

1.0 Introduction

The literature on growth outcomes as induced by the institutional quality has grown tremendously, but its relationship with macroeconomic instability remains a gap in extant literature. The consequences of sustained growth regimes remained unaccomplished in Nigeria. Equally, the underlying causal relationship that exists between institutional quality and macroeconomic instability remains grossly understudied in the extant literature, particularly Nigeria. Macroeconomic stability acts as a buffer against currency and interest fluctuations in the global market. It is a necessary, but insufficient requirement for growth. Efficient interaction between critical macroeconomic variables is needed for the growth regimes to be sustainable. Exposure to currency fluctuations, substantial debt burdens, unmanaged inflation and most importantly, institutional deficiency can cause economic crises at the detriment of the output of the nation. The International Monetary Fund (IMF), African Union (AU) and the World Bank, among others, place great emphasis on macroeconomic stability. Low and stable inflation indicates healthy demand in the marketplace; however, high or unstable inflation threatens growth. Stable institutional environments promote sustainable growth and development while unstable institutional environment cause panic and disharmonies growth processes and outcomes. There is overwhelming evidence that in the absence of macroeconomic stability, growth will be anaemic or, at best, volatile (The Global Competitiveness Report, 2017).

The consequences of corrupt institutions have left Nigerians walloping in intergenerational poverty which has led us to the brink of war. The height of this menace as evident in the fight against corruption by the President Muhammad Buhari led administration and quest to end terrorism in the North East has led to critical thinking with diverse researches and proposition been made about the short term and long-term implications of institutions mismanagement and macroeconomic instability in Nigeria.

It has been established that strong institutions (the rule of law, regulatory quality, political stability and absence of violence, control of corruption, government effectiveness and voice and accountability) are the central indicators of macroeconomic stability across countries (World Governance Indicator WGI, 2015). Since macroeconomic instability refers to phenomena that make the domestic macroeconomic environment less predictable, it then becomes essential to closely monitor its evolutions because unpredictability hampers resource allocation decisions, investment, and growth process in the country. Questions are being asked as to which of these macroeconomic indicators drives one another. Could weak institutions drive macroeconomic instability through various leakages in the economy? Alternatively, could macroeconomic instability be responsible for weak institutions and vice-versa. The answers remain elusive.

Nigeria, where the endemics of corruption, terrorism among many other leading societal problems, remains ambiguous, the role of institutions in attaining macroeconomic stability cannot be overemphasised. Without a well-defined institutional framework and also the channels of underlying causal relationships been adequately defined, macroeconomics stability seems unattainable. Siba (2008); Ali and Rehman (2015); Ifere, Okoi and Christian (2015) argued that the inability of Sub-Saharan Africa countries to attain the status of a developed nation is rooted in their institutional failures. Regardless of how sound macroeconomic policies are, its role in a society characterised by a weak institution will be trivial (Ifere, Okoi & Christian, 2015). It then becomes appropriate in contemporary ages to avail policymakers and the society at large a robust and comprehensive study that point to the effect of institutional led macroeconomic stability in Nigeria.

It is against this background that this study proposes a framework that examines the roles of institutions towards achieving macroeconomic stability that the society desire. It also seeks to unravel the underlying causal structure that exists between institutional quality and indicators of macroeconomic instability in Nigeria.

2.0 Literature review

The literature on institutional quality and growth outcomes have grown tremendously but its impact on macroeconomic instability remains grossly understudied in Nigeria and beyond. This study attempts to narrow the deficiency in extant literature by offering timely research on the subject matter. An appraisal of recent study as shown chronologically; Zhuang, Dios and Lagman-Martin (2010) appraised the role of governance and institutional quality. They highlighted the nexus among growth outcomes and disparities in income distribution in some of Asia developing regions. Findings reveal that developing Asian regions with strong institutional qualities like government effectiveness, regulatory quality, and the rule of law scores over the global means (after controlling for per capita income) in 1998 grew faster on average during 1998-2008 (by 1.6, 2.0, and 1.2 percentage points annually, respectively) than those economies scoring below the global means. Based on this, they argued that improving governance in these dimensions could be used as potential entry points of development strategies for many countries in the region.

Basu and Das (2010) used the Li-Racine (2004) generalised kernel estimation methodology to examine the relationship between institutions, based on data for 102 countries from 1980 to 2004. Their results indicated that the effect of institutional quality on development was heterogeneous across countries and concerning time. Their results also revealed that institutions had a positive impact on the level of development.

Valeriani and Peluso (2011) also had similar results in their study. However, their findings also revealed that difference in the impact of institutional quality on developing and developed nations was with respect to the size of the impact, as opposed to its direction. Their results revealed that the number of veto players had a more significant impact on economic growth in developed countries, while higher civil liberties had a larger growth impact in developing countries.

Haghighi, Sameti and Isfahani (2012) analyzed the effect of macroeconomic instability on the economic growth in Iran. They employed time-series data on macroeconomic instability and growth indicators from 1974 to 2008. Using Vector Error Correction Modeling techniques, they found that economic growth in Iran has an along-term relationship with the macroeconomic instability. In other words, changes in macroeconomic instability indicators will be associated with the increase (decrease) of economic growth in the long run.

Bartlett, Cuckovic, Jurlin, Nojkovic and Popovski (2013) carried out a study to appraise the institutional reform-economic growth link in the neighbouring countries of the European Union. The findings of their study revealed that level of political stability, government accountability, degree of press freedom and effectiveness of efforts towards the reduction of the level of corruption are critical determinants of the macroeconomic effectiveness policies.

Iyoboyi and Pedro (2014) analyzed the nexus between institutional capacity and macroeconomic performance using the VARtechnique. The results of the generalized impulse response function showed that one standard deviation innovation on institutional capacity reduced macroeconomic performance, while variance decomposition revealed that a substantial amount of the changes in macroeconomic performance in Nigeria macroeconomic performance is not due to changes in institutional capacity.

Ali and Rehamn (2016) appraised the detriments of macroeconomic instability on the gross domestic product of Pakistan from 1980 to 2012. Using a constructed macroeconomic instability index consisting of the inflation rate, unemployment rate, trade deficit and budget deficit, they employ the Autoregressive Distributed Lag (ARDL) model and the VECM to account for short-run and long-run dynamics of their models. They also adopt Granger causality to explain causal relationships inherent in the model. Findings reveal that macroeconomic instability has a deep-rooted and detrimental impact on the gross domestic product of Pakistan. Hence, for achieving the desired level of gross domestic product, Pakistan should make macroeconomic environment stable.

Olayungbo and Adediran (2017) examine the effects of oil revenue and institutional quality on growth outcomes in Nigeria. Time series data from 1984 to 2014 was analyzed using the ARDL model. Findings show the existence of long-run equilibrium among oil revenue, institutional quality, and economic growth. The short-run analysis indicates that institutional quality measured by corruption index promotes economic growth, while institutional quality retards economic growth in the long run. Also, oil revenue promotes economic growth in the short run and reduces it in the long run, thereby confirming the existence of the resource curse hypothesis in Nigeria. The impulse response analyses further support the ARDL results. They concluded that institutional quality is essential in explaining the relationship between oil revenue and economic growth in Nigeria.

3.0 Methodology

3.1 Model Specification

The study follows an endogenous growth model as in Mankiw, Romer and Weil (1992). The endogenous growth model is specified thus;

$$Y = AK^{\alpha}L^{1-\alpha} \quad \textbf{(1)}$$

Equation (1) shows a Cobb–Douglas function where Y represents the total production in an economy. A represents total factor productivity, K is capital, L is labour, and the parameter measures the output elasticity of capital. For the particular case in which, the production function becomes linear in the capital and does not have the property of decreasing returns to scale in the capital stock, which would prevail for any other value of the capital intensity between 0 and 1. However, since our focus is on the institutional led growth, the model includes indices of institutional quality as factors that explain macroeconomic instability in Nigeria. This study is a prototype of Olayungbo and Adediran (2017). The functional relationship is specified thus;

$$MI = f(RULE_{LAW}, REG_{QUALITY}, CONT_{CORRP}, GOVT_{EFF}, VOI_{ACC}, POL_{ABVIO}) \textbf{(2)}$$

Where MI represents macroeconomic instability proxied with price instability index (CPI), $RULE_{LAW}$ (the rule of law) which gives the perceptions of the extent to which agents have confidence in and abide by the rules of 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, $REG_{QUALITY}$ (regulatory quality) captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development, $CONT_{CORRP}$ (control of corruption) captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests, $GOVT_{EFF}$(government effectiveness) captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies, VOI_{ACC}(voice and accountability) captures perceptions of the extent to which a country's citizens can participate in selecting their government, as well as freedom of expression, freedom of association, and a free media, POL_{ABVIO} (political stability and the absence of violence) measures perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism.

Restating the model in an econometric form:

$$MI_t = \beta_0 + \beta_1 RULE_{LAW_t} + \beta_2 REG_{QUALITY_t} + \beta_3 CONT_{CORRP_t} + \beta_4 GOVT_{EFF_t} + \beta_5 VOI_{ACC_t} + \beta_6 POL_{ABVIO_t} + \varepsilon_t \quad \textbf{(3)}$$

Where $\varepsilon_t$represents error term and $\beta_0, \beta_1, \beta_2, \beta_3, \beta_4 \beta_5 and \beta_6 are parameter estimate$.These variables are log-linearised to adjust for disparities in units and measurements

$$lnMI_t = \beta_0 + \beta_1 lnRULE_{LAW}{}_t + \beta_2 lnREG_{QUALITY}{}_t + \beta_3 lnCONT_{CORRP}{}_t + \beta_4 lnGOVT_{EFF}{}_t + \beta_5 lnVOI_{ACC}{}_t + \beta_6 lnPOL_{ABVIO}{}_t + \varepsilon_t \quad \textbf{(4)}$$

3.2 Data sources and measurements

Our study used time series data for macroeconomic instability (measured with price instability index) and indicators for institutional quality in Nigeria (the rule of law, regulatory quality, control of corruption, government effectiveness, political stability and the absence of violence, voice and accountability) from 1996 through 2015. The data are mainly obtained from the CBN statistical bulletin various issues up until 2015 and World Bank Database (WorldGovernance Indicator, 2015).

3.3 Estimation Technique

In accounting for the short-run and long-run dynamics of institutional framework and macroeconomics instability in Nigeria, the study made use of a 3-prong econometric procedure. First, is the pre-estimation evaluation. These are the preliminary evaluation of the data using the descriptive statistics method in order to help show, describe and summarize the data in a meaningful way and also to know if the data are normally distributed through their averages and Jarque-Bera values (Gujarati and Dawn, 2009). Secondly, the Augmented Dickey-fuller (ADF) unit root tests were deployed to ascertain the order of integration of the variables. This test of the time series data is required because a non-stationary regressor invalidates many standard empirical results. The presence of a stochastic trend is determined by testing the presence of unit roots in time series data. Then, the Johansen co-integration test is applied to establish whether there is a long-run relationship between the variables will be performed. The primary step in the Johansen cointegration test is to obtain the optimal lag length because the Johansen cointegration test is sensitive to lag length. If the lag length is too much, the test will give a spurious result. The optimal lag length was determined by the Schwarz Information Criterion (SC) (Koehler and Murphree, 1988). The Error Correction Model (ECM), a test for the short-run relationship between variables is then conducted to adjust for the short-run dynamics of the model. The Granger causality test was carried to determine the direction of causality that exists between the institutional framework and macroeconomic instability. The third phase is post estimation. In order to confirm the robustness and validity of the regression model, some post estimation tests were conducted. These are the Breusch-Godfrey Serial Correlation to test for the presence of serial correlation, Breusch Pagan Heteroscedasticity to test for heteroskedasticity and Cusum stability test to test the structural stability of the model.

4.0 Result and Interpretations

4.1 Descriptive Statistics

Table 1: Descriptive Statistics of the Data Set

	$lnMI$	$lnRULE_{LAW}$	$lnREG_{QUA}$	$lnCONT_{CORRP}$	$GOVT_{EFF}$	$lnVOI_{ACC_t}$	$lnPOL_{ABVIO}$
Mean	6.435040	5.861527	8.058416	6.064924	6.005985	5.642822	3.582273
Median	7.028379	5.554199	8.340277	6.740165	7.232390	6.135136	5.814642
Maximum	9.633174	9.343824	11.45259	9.312545	14.72658	12.90268	15.22128
Minimum	2.014903	3.456632	4.546799	1.791759	3.257319	4.007931	2.442738
Std. Dev.	2.655374	1.575209	2.285007	2.567785	1.313406	0.992423	1.354046
Skewness	0.407074	0.323187	0.137135	0.362894	1.078180	-0.249117	0.761622
Kurtosis	1.756841	2.254129	1.731731	1.718485	2.541244	2.362006	1.983658
Jarque-Bera	3.220411	1.420597	2.455442	3.163197	6.277947	0.846396	4.331247
Probability	0.199847	0.491498	0.292960	0.205646	0.143327	0.654949	0.114678

Source: Authors computation (E-views), 2017

Table 1 shows the mean and median of all the observations in the data set lie within the maximum and minimum values indicating a high tendency of normal distribution. All the variables are positively skewed. The kurtosis statistics show that all the variables were platykurtic, suggesting that their distributions were flat relative to normal. The Jarque-Bera statistics shows that the series is normally distributed since the p-values of all the series are not statistically significant at 5% level. Thus, informing the acceptance of the null hypothesis that says each variable is normally distributed.

Table 2: Correlation Matrix of the Data Set

	MAC_INST	*RULE_LAW*	*REG_QUA*	*CONT_COR*	*GOVT EFF*	*VOI_ACC*	*POL STAB*
MAC_INST	1						
RULE_LAW	-0.801822	1					
REG_QUA	-0.841476	-0.820874	1				
CONT_CORR	0.538657	0.471148	0.844117	1			
GOVT_EFF	0.741235	0.112225	0.512355	0.546622	1		
VOI_ACC	0.894521	0.845121	0.756231	0.852223	0.562222	1	

POL_STAB	0.412455	0.742551	0.654213	0.456622	0.785442	0.765522	1

Source: Authors computation, 2017

Furthermore, studies have argued that testing of the correlation among the variables of estimates would make the researchers detect whether the variables have high multicollinearity among themselves. As a result, the parameter estimates may contradict what the theory says due to unexpected effect of multicollinearity among the independent variables Hamsal, (2006); Agung, (2009); Oseni (2016). However, Iyoha (2004) argued that multicollinearity among variables occur when the result of the correlation coefficient is above 0.95.

In line with this explanation, the study presents the results of the correlation analysis of the set of variables employed in Table 2 above. The table shows that the correlation coefficients among the variables are below 0.95, indicating that there is no tendency for multicollinearity to occur among the independent variables.

4.2 Time Series Properties of the Variables

The ADF test is used to test for stationarity of the data. The ADF test consists of estimating the following regression.

$$\Delta Y_t = \alpha + \beta_t + \delta Y_{t-1} + \sum_{i=1}^{m} \varphi i \Delta Y_{t-i} + \varepsilon_t \quad \textbf{(5)}$$

Where α represents the drift, *t* represents deterministic trend and m is an optimal lag length ample enough to ensure that ε_t is a white noise error term.

Table:3 Unit Root Test: Augmented Dickey-Fuller Test (ADF)

Variables	*Level* *T-Stat*	*Critical Value @ 5%*	*First Difference* *T-Stat*	*Critical Value @ 5%*	*Order of Integration*
$\boldsymbol{lnMI}$	-1.304641	-2.485522	-4.898565	-2.971853	I(1)
$\boldsymbol{lnRULE_{LAW}}$	-1.026062	-2.855222	-5.592401	-2.879542	I(1)
$\boldsymbol{lnREG_{QUALITY}}$	-1.552906	-2.963972	-7.220743	-2.777895	I(1)
$\boldsymbol{lnCONT_{CORRP}}$	-1.237807	-2.785662	-5.784555	-1.945778	I(1)
$\boldsymbol{lnGOVT_{EFF}}$	-1.542010	-2.702211	-7.655221	-4.555627	I(1)
$\boldsymbol{lnGOVT_{EFF}}$	-1.487529	-2.632455	-6.782222	-2.222344	I(1)
$\boldsymbol{lnPOL_{ABVIO}}$	-1.793222	-2.789994	-3.654122	-0.782244	I(1)

Source: Authors computation (E-views), 2017

The study used Augmented Dickey-Fuller to ascertain the order of integration of the variables. It is observed that all the variables are stationary at first difference at 5% significance level.The appropriate modus operandi of analysis that captures the combination of I(1) stationary variables, according to Johansen (1999) is the ECM technique. The primary form of the ECM model is given as:

$$\Delta lnMI_t = \beta_0 + \beta_1 \Delta lnRULE_{LAW}{}_t + \beta_2 \Delta lnREG_{QUALITY}{}_t + \beta_3 \Delta lnCONT_{CORRP}{}_t + \beta_4 \Delta lnGOVT_{EFF}{}_t + \beta_5 \Delta lnVOI_{ACC}{}_t + \beta_6 \Delta lnPOL_{ABVIO}{}_t + ECM + \varepsilon_t \quad \textbf{(6)}$$

Where Δ is the first difference operator while other variables remain as defined earlier. The Error Correction Mechanism will indeed tell how much deviation from the long run is being corrected in the short run. In order words, it gives the speed of adjustment from long-run equilibrium to the short run.

4.3 Optimal Lag Length Selection

The implication of the lag length selected explains the effect of the outcome of the previous year on the current year. The selection of an optimal lag length was essential before carrying out a Johansen co-integration test, the result of which is presented in Table 4.

Table 4: Optimal Lag Length Selection Criteria

Lag length	LogL	LR	FPE	AIC	SC	HQ
0	-130.3963	NA	0.000123	8.023310	8.292668	8.115169
1	64.80295	310.0223*	1.09e-08*	-1.341350*	0.544154*	-0.698339*

Source: Authors computation (E-views), 2017

Notes * 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

The result in Table 4 portrays different lag length criterion (LR, FPE, AIC, SC and HQ). The Schwarz information criteria depicting lag order length of (1) for the model is selected. After establishing the lag order length, the co-integration, and long-run equation results was estimated and explained in the next section.

4.4 Co-Integration Test

Johansen Co-Integration Test

The result of the Johansen Co-integration for both the Trace Statistic and Maximum Eigen Value is reported in Table 5. With the hypothesized level of acceptance is 5 percent,

Table 5: Result of Johansen Co-integration test based on Trace Statistic and Max Eigenvalue

		Trace Statistic			Max. Eigen Value		
No. of CE(s)	Eigenvalue	Trace Statistic	0,05 Critical Value	Prob.	Max-Eigen Value	Critical Value	Prob.**
None *	0.74	138.42	95.75	0.00	44.52	40.10	0.01
At most 1 *	0.69	93.91	69.82	0.00	38.61	33.88	0.01
At most 2*	0.53	55.29	47.86	0.01	25.50	27.58	0.09
At most 3*	0.42	29.80	29.80	0.05	18.17	21.13	0.12
At most 4	0.21	11.63	15.50	0.18	7.86	14.26	0.39
At most 5	0.11	3.76	3.84	0.05	3.76	3.84	0.05

Source: Authors computation (E-views), 2017

Notes: Trace test indicates 4 cointegratingeqn(s) at the 0.05 level
Max-eigenvalue test indicates 2 cointegration at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

The result simply means that there is a long-run relationship between the regressed and the regressorsbased on the rejection of the null hypothesis at 5% level of significance. The determination of the short run association is computed in the next section.

4.5 Error Correction Model

Table 6: Short - run Estimation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.144023	0.043916	3.279479	0.0029***
$\partial(lnRULE_{LAW})$	-0.119305	0.066871	-1.784115	0.0331**
$\partial(lnREG_{QUALITY})$	-0.176324	0.072101	-2.445524	0.1913
$\partial(lnCONT_{CORRP})$	-0.451744	0.101465	-4.452222	0.0294**
$\partial(lnGOVT_{EFF})$	-0.874411	0.225389	-3.879562	0.0475**
$\partial(lnVOI_{ACC})$)	0.695522	1.232559	0.564291	0.1494
$\partial(lnPOL_{ABVIO})$	-0.755222	0.150915	-5.004291	0.0129**
ECM(-1)	-0.459100	0.129109	-3.555899	0.0014***
R-squared	0.716278			
Adjusted R-squared	0.653229			
F-statistic	11.36061			
Prob(F-statistic)	0.000003*			
Durbin-Watson stat	1.887587			

Source: Authors computation (E-views), 2017
*(1%)**(5%) ***(10%)respectively

Table 6 represents the result of short-run estimates by using the Error Correction Model (ECM). The estimated coefficient of the error correction vector is 0.4591. This means that the error correction term **ECM(-1)** is the speed of adjustment correcting back at the rate of 45.91 per cent annually. The negative sign and the significant probability signify the existence of co-integration among the variables. This shows that approximately 46% of the previous year's disequilibrium in the economy is corrected in the short run which implies that adjustment of the deviation of the explanatory variable back to normality is very high. The result of the short run in Table 6 indicates that rule of law, control of corruption; government effectiveness and political stability and absence of violence have a negative but significant relationship with macroeconomic instability in the short run. The Durbin Watson value of1.88 indicates no serial autocorrelation among the explanatory variables in the model. The F-statistics of 11.36061 is statistically significant at 1 per cent level, indicating that the explanatory variables are jointly significant.

4.6 Granger Causality Test

To model the direction of causality that exist between institutional framework and macroeconomic stability in Nigeria, the functional relationship is specified below;

$$MI_t = \sum_{i=1}^{m} \alpha_i MI_{t-i} + \sum_{j=1}^{n} \delta_j INST_{t-j} + \varepsilon_{1t} \quad \textbf{(7)}$$

$$INST_t = \sum_{i=1}^{m} \gamma_i MI_{t-i} + \sum_{j=1}^{n} \psi_j INST_{t-j} + \varepsilon_{2t} \quad \textbf{(8)}$$

Where $INST$ (institutional framework) is an index of governance and MI is macroeconomic instability. ε_{1t} and ε_{2t} are the disturbances which are assumed to be orthogonal. In this framework, there are four possible hypotheses.

Case 1: Unidirectional causality from MI to INST. This is indicated if $\sum \alpha_i \neq 0$ *and* $\sum \delta_j = 0$

Case 2: Unidirectional causality from INST to MI. This is indicated if $\sum \gamma_i = 0$ *and* $\sum \psi_j \neq 0$.

Case 3: Bilateral causality. This is indicated if $\sum \alpha_i \neq 0$ *and* $\sum \delta_j \neq 0$.

Case 4: No causality. This is indicated if $\sum \alpha_i = 0$ *and* $\sum \delta_j = 0$.

Table 7: Granger Causality Test Result

Null Hypothesis	**F-Statistic**	**Prob.**	**Granger Causality**
$lnRULE_{LAW}$ does not Granger Cause $lnMI$	2.15914	0.3433	No Causality
$lnMI$ does not Granger Cause $lnRULE_{LAW}$	0.00341	0.4139	
$lnREG_{QUALITY}$ does not Granger Cause $lnMI$	0.44726	0.5093	No Causality
$lnMI$ does not Granger Cause $lnREG_{QUALITY}$	2.94988	0.0973	
$lnCONT_{CORRP}$ does not Granger Cause $lnMI$	0.44726	0.0093	Unidirectional Causality
$lnMI$ does not Granger Cause $lnCONT_{CORRP}$	2.94988	0.0973	$lnCONT_{CORRP} \rightarrow lnMI$
$lnGOVT_{EFF}$ does not Granger Cause $lnMI$	0.44726	0.5093	No Causality
$lnMI$ does not Granger Cause $lnGOVT_{EFF}$	2.94988	0.0973	
$lnVOI_{ACC}$ does not Granger Cause $lnMI$	0.44726	0.5093	

$lnMI$ does not Granger Cause $lnVOI_{ACC}$	2.94988	0.0973	No Causality
$lnPOL_{ABVIO}$ does not Granger Cause $lnMI$	0.44726	0.5093	No Causality
$lnMI$ does not Granger Cause $lnPOL_{ABVIO}$	2.94988	0.0973	

Source: Authors' computation (E-views), 2017

Result from the granger causality test was shown in Table 7. It reveals that unidirectional causality from control of corruption to macroeconomic instability in Nigeria. Invariably, the ability of successive government of the federation to control inflation will ensure the nation moves closer to attaining macroeconomic stability and vice-versa.

Table 8: Serial Correlation Test

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.845890	Prob. F(3,25)	0.4433
Obs*R-squared	2.236642	Prob. Chi-Square(3)	0.3268

Source: Authors' computation (E-views), 2017

Given the probability value of 32.68 percent, we fail to reject the null hypothesis and conclude that our short run model is free from serial correlation.

Table 9: Heteroscedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	3.029755	Prob. F(6,27)	0.0214
Obs*R-squared	13.68061	Prob. Chi-Square(6)	0.3334

Source: Authors' computation (E-views), 2017

The p-value (0.3334) of Obs* R-squared showed that we cannot reject the null hypothesis. This implies that residuals have a constant variance which is desirable. That is, residuals are homoskedastic.

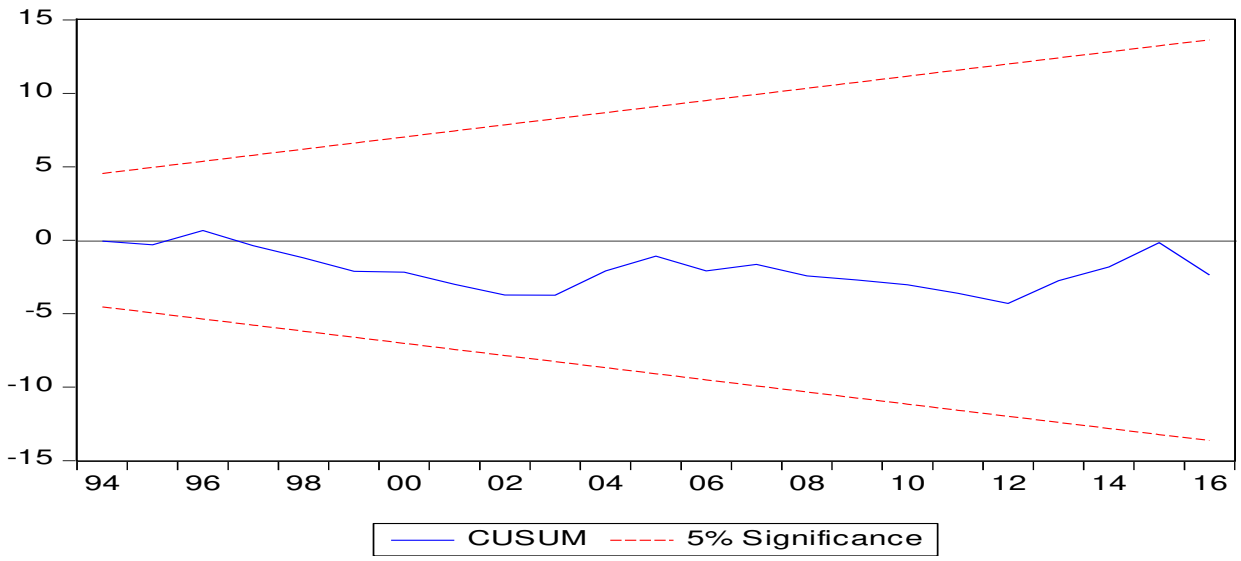

Fig.1: CUSUM Stability Test

Source: Authors' computation (E-views), 2017.

The above figure shows that the CUSUM line is within the critical bounds of 5 percent level of significance which indicates that the model has structural stability.

5.0 Conclusion

The study investigates macroeconomic instability as induced by institutional frameworks in Nigeria from 1996 to 2015 (19 years). In evaluating its objectives, the paper adopts Error Correction Modeling techniques to account for the dynamics of the model and also prevent the variables from converging to their long-run characteristics by gradually adjusting it back to their short-run equilibrium positions. The empirical result indicates that rule of law, control of corruption; government effectiveness and political stability and absence of violence have a negative but significant relationship with macroeconomic instability in the short run. The findings of the study align with the findings of Zhuang, Dios, and Lagman-Martin (2010); Ali and Rehamn (2016); Olayungbo and Adediran (2017) who found a linear relationship between institutional framework and macroeconomic instability. It is therefore recommended that the society should do more to embrace strong institutions that will promote inclusiveness and their instrumental value as a means of toward better growth performance and equal income distribution.

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