

Transparency, Governance and Fiscal Sustainability Nexus: The Nigeria Scenario

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Abstract

The problem of fiscal unsustainability has become pronounced in Nigeria. The role of policy makers and the availability of essential information on the economy seem to be major causes of this ominous predicament. This paper aimed at investigating the causal relationship between transparency, governance and fiscal sustainability in Nigeria from 1996 to 2021, using a vector auto regression framework. The empirical results confirm a cointegration relationship between transparency, governance and fiscal sustainability. The flow of causality between control of corruption and fiscal sustainability appears to be mixed. At 1 lag, control of corruption granger causes fiscal sustainability, while at 2 lags, fiscal sustainability granger causes control of corruption at 5% and 10% significance levels. Results of the impulse response functions suggest that one standard deviation innovation on fiscal sustainability reduces fiscal deficit in the medium and long term, while results of the variance decomposition indicate that a significant variation in Nigeria's fiscal sustainability is not attributable to changes in the political stability. It is recommended that for fiscal sustainability to be improved and sustained, mechanisms which deliberately seek to enhance improved level of fiscal discipline in the country should be employed. It is also imperative for more institutionalized policies that can improve transparency and promote inclusive governance that can curb fiscal indiscipline like budget deficit in view of stimulating fiscal sustainability in Nigeria.

Keywords: *Transparency, Governance, Fiscal Sustainability and Vector Autoregressive Model*

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Background to the Study

Transparency connotes honesty, clarity and lack of corruption. Where a society cherishes and operates transparently, there exist trust among the members, institutions are respected and non-transparent actions, attitudes and activities are easily identified and thwarted. A situation where non-transparent activities are odious and limited creates a fertile ground for economic growth and development. Obscured and non-transparent activities like bribery, nepotism, embezzlement of public funds for private purposes and misappropriation of allocations by government officers have had serious negative effects on nations both in the short and long run (Mauro, 2002). Unfortunately, literature on how transparency affects governance, fiscal sustainability and subsequently economic growth especially since 2000 is scanty. Ironically, many professionals have focused investigative efforts mainly on the impact of non-transparency (or corruption) on different aspects of social life in the hope that an exposition of the odiousness of the menace will either discourage their perpetrators or motivate relevant government agencies to more vigorously pursue the war against corruption nationally and globally. This reasoning has being proved faulty (Kaufmann, 1997) as corruption across nations seems to be blossoming as studies on corruption increases. It is therefore imperative to re-focus intellectual efforts to positives (like transparency) that would stimulate economic growth rather than negatives (like corruption) that inhibit growth of economies. There is a hunger for transparency in governance - business dealings and government policies. Actually, the fight against corruption is a call for the establishment of more transparent governance systems and institutions. This is why international agencies like Transparency International (TI) calculate corruption of nations by indices that precisely identify how transparent a nation is (but not directly how corrupt a nation is).

The fight against corruption and the call for revival of transparency is a very old human desire. In the old governments of Babylon and Talmud, as well as during the old Roman kingdom, governments entreated people of influence and affluence to be compassionate and transparent, and less corrupt as they relate to others (Microsoft Incorporated, 2004). The present-day welfare systems of United States and Canada evolved from a 17th century British legal act known as the Poor Laws which had denounced non-transparent and corrupt treatment of the under-privileged by the well to do in the society (Sen, 1976).

In Nigeria, the pursuit for transparent attitudes, behaviours and policies has been paramount, manifesting in formation of government agencies like National Orientation Agency (NOA) in 1993 with the main objective of ensuring that government policies and programmes are transparent i.e. better understood by the general public (<https://www.noa.gov.ng>). It is also in recognition of the role of transparency in effective and efficient governance for economic growth that decrees like Code of conduct bureau that stipulated public declaration of assets before assumption of public offices was enacted in 1979 (<https://lawsofnigeria.placing.org>). Programmes like War Against Indiscipline (WAI) were primarily launched to ensure a transparent culture oppose to indiscipline and corruption.

According to Transparency International (TI) 2020, Nigeria has been poor at the fight for the establishment of transparency. For the third consecutive year, Nigeria dropped in the 2021

Corruption Perceptions Index (CPI). The country scored 24 out of 100 points in the 2021 index, thus ranking 154th out of the 180 countries surveyed. In 2019, Nigeria was ranked 146, with a total score of 26 (out of 100). In 2017 and 2018, the country maintained a CPI score of 27, ranking 148 and 144 respectively. The country's transparency levels have been decreasing and the corruption levels increasing over time.

The Nigerian government has been unable to meet targeted revenue generation and expected expenditure resulting to the inability to pay for capital development and salaries of civil servants. The fiscal non sustainability has resulted to very high debt burden of N42.8 trillion (USD103.3 billion) as at June 2022. This huge burden constitutes 20.3% of Nigeria's nominal GDP. (<https://fiscaldata.treasury.gov>nigeria>). As at July 2022, the EU asserted that “A staggeringly high 118.9 % debt service/revenue ratio in January – April is the world's worst and underlines unsustainable fiscal policy” (<businessday.ng>article>nigerias-debt>, 2022). It is unarguable that Nigeria is broke and fiscally unsustainable as her debt service exceed revenue at any period since 2021 (<punching.com>wbankproject>102>, 2022).

It is obvious that lack of transparency has existed side by side with increased corruption, governance issues, unfavorable business environment and fiscal unsustainability in contemporary Nigeria. The policies implemented seems to yield minimal results and hence the need for investigation of the causal relationships between transparency, governance and fiscal sustainability. This will reveal the causal base (point of origin) and transmissions channels (direction of movement) between relevant variables. These facts are indispensable for policy formulation, enhanced transparency, improved governance and subsequently guarantee fiscal sustainability. In pursuit of this objective, this study is structured in 5 sections. Section 2 treats the review of literature. Section 3 presents the methodology of the study. Section 4 presents the data and its interpretation, while section 5 presents the conclusion.

Literature Review

The Concept of Transparency

The Oxford Advanced Learners' Dictionary (2001) asserts that transparency implies a human character of something such as glass that allows you to see through it. Administratively and in financial matters, this could mean a system or project that has no hidden processes or motives. Achegbulu, Audu & Agbaji (2007) opined that an administrative or managerial process can be termed transparent only when it is free of ambiguity and, is well known and trusted by the public. Transparency International sees transparency as lack of *shady* activities that reduces information asymmetry or obstruct free flow of correct information at the right time which would enhance right investment decisions. Masry (2015) agrees with TI and clarify that the core of what transparency hangs on availability of the right information at the right time. For the purpose of this study, the definition of TI is employed and for the numeric value, the TI's corruption perception Index (CPI) which measured how uncorrupted or transparent a country is will subsequently be employed in the technique of analysis.

Concepts of Fiscal Sustainability and Governance

This study, like many others agree with the World Bank (2020b) definition of fiscal sustainability (also called public finance sustainability) as the ability of a government to

continue its current spending, tax and other policies in the long run without threatening government solvency or defaulting on some of its liabilities or promised expenditures. Put in different words by OECD iLibrary (2021), fiscal sustainability is the ability of a government to maintain public finances at a credible and serviceable position over the long term. Fiscal sustainability can be evaluated to ascertain the appropriateness of public finance policy by an analysis of government's budget and its debt repayment obligations projected into the future. For the concept of governance, there seems to be so many common issues of agreement by many authors -that governance *refer to structures and processes that are designed to ensure accountability, transparency, responsiveness* (<https://www.ibe.unesco.org>). These structures and processes normally assume the nature of norms, values or rules of conducting public affairs.

Theoretical Framework

The concept and role of transparency is rooted in normative economics and found expression in every positive economic analysis. The ethical postulation of what should be in the society for growth and development to occur rest on transparency and could be termed *ceteris paribus* or taking all situations as normal. In this light, transparency becomes the base of all economic theories and projects. Lack of transparency produces socially abhorrent anti-economic growth attitudes and activities like bribery, nepotism and misappropriation of funds which results to poor economic growth and low welfare of a people (Mauro, 2002).

All schools of thought from classical to neoclassical premise economic growth analysis on this key normative perspective of *ceteris paribus*. *Ceteris paribus* assumes the absence of all forms of exceptions or extremes that deviate from normal expectations. The society must be operating on normal expectation i.e. transparent level in all economic endeavours for the basic laws and theories of economics to succeed. For instance, *ceteris paribus*, the national output (Q) can be express as a function of labour (L) and capital (K) i.e.

$$Q = f(L, K) \dots\dots\dots (1)$$

However, if extraneous factors like a dishonest labour character of stealing public property (corruption) exist, this generally accepted model will not be effective in the growth paradigm. For instance, in fiscal sustainability (Fs) analysis, many independent variables counts but all of them must exist on the basis of *ceteris paribus* or transparency (Tr), hence:

$$Fs = f (Tr) \dots\dots\dots (2)$$

Transparency has a systemic influence passing through all independent variables to determine the degree, speed or the extent of fiscal efficiency in a country. It is therefore plausible to forecast the level of fiscal sustainability (FS) through the level of transparency prevalent in a country.

Contemporary Transparency Trend in Nigeria

The past decade showed the transparency rating as very dismal in Nigeria. In 2016, Nigeria was ranked among the least 10 countries in the world with the poorest business environment. By 2017, the country moved up marginally from 170 to 169 in the doing business report. (World Bank, 2020). The World Economic Forum's Global Competitiveness Index (GCI) for

2017-2018 placed Nigeria rising two ranks up from its previous 127th in 2017 to 125th position in 2018. This served as a global discouragement to especially international investors (World Economic Forum, 2018). In 2020, Nigeria ranked 131 on the Global Ease of Doing Business index, up from 145 in 2019 (World Bank, 2020).

Realizing the bottlenecks and bureaucratic constraints to doing business in Nigeria, the Nigerian government established Presidential Enabling Business Environment Council (PEBEC) in July 2016 to improve the situation. This effort has been ineffectual as transparency has remained low, with an accompanying persistent corruption and fiscal unsustainability (Daka, 2017).

Contemporary Fiscal Sustainability Trend in Nigeria

Over the years, Nigeria has failed to sustain her public finances resulting into failure in major sectors like health and education. Attempts to ensure fiscal sustainability has led Nigeria to the development of Nigeria Economic Sustainability Plan (NESP) on March 30, 2020 (Nigeria, 2020). The NESP is a 12-month short term economic framework designed to stifle excessive expenditure and guarantee fiscal sustainability. It is however ironic that a whopping 2.3 trillion-naira expenditure structure is allocated to this exercise (Nigeria, 2020). The FGN seems to have lost coherent ideas and plans that would guarantee fiscal sustainability.

Empirical Literature Review

At the international plane and on general perspective, Burnside (2022) treated the definitional and conceptual issues associated with fiscal sustainability. International Monetary Fund (IMF) (2021) insists that fiscal sustainability must prevail for macroeconomic stability to ensure, and sustainable growth guaranteed. Carstens (2005) emphasized that transparency serves to achieve accountability as it guarantees right and timely information. Transparency stifles social instability and creates the right environment for fiscal sustainability and economic growth.

In same general perspective, Balassone, Franco and Zotteri (2002), analyzed the interaction between fiscal rules applying to European Union (EU) member states and fiscal decentralization – an application that could serve as a model for other regional economic groups like ECOWAS. In a similar direction, Fatás (2018), presents and discusses alternative frameworks for fiscal policy formulation that could stimulate growth sustainability. Others like Abdullah, Mustafa and Dahalan (2012) and Milas (2010), have also extended the analysis to the sustainability of fiscal policy in general. Again, for countries with strong economic similarities, Afonso and Sousa (2008), assessed potential interaction between fiscal and monetary policies of US, UK, Germany and Italy and discovered that government spending shocks have small effects on GDP and leads to crowding out effect.

For country specifics, Lang (2011) discovered that transparency is a major determinant of the level of international investment in equity capital of the US. Similar studies on Iran by Noori and Khatibi (2013) and Ahmadi (2015) using survey technique and quantitative approach revealed that transparency was indispensable to the required stimulation and growth of the Iranian Stock Exchange.

For Nigeria, Babalola (2015), examined the short and long run impact of fiscal policy on economic development between 1981 and 2013 using annual time series data sourced from World Development Indicators (2014) and the Central Bank of Nigeria (2014). The result showed that government recurrent expenditure and government investment have significant positive impact on economic growth in both the short and long run within the period under consideration. Saibu (2018) examine fiscal sustainability in comparison with macroeconomic performance in Nigeria from 1961 to 2016. He employed dynamic OLS (DOLS) regression for testing the sustainability of the fiscal stance for the government. The empirical results indicate weak response of economic performance to fiscal sustainability.

Audu (2020), analyze the relationship between transparency and the financial market performance in Nigeria from 2009 to 2018. The result obtained reveal a positively high relationship between transparency and financial market performance. Also, transparency had a moderate effect on the performance of the financial market in Nigeria. Since the corruption perception from TI was the main index considered, he concluded that individuals are influenced also by the level to which they perceive transparency in Nigeria. A major weakness of this study is the recommendations which called for a review of Nigerian anti-corruption laws. This is alien to the study because it never treated the performance of the anti-corruption agencies in Nigeria.

For empirics on governance in Nigeria, there are generally two viewpoints; those who researched on bad governance like Muktar, Abdullahi and Ishaq (2017) and Coker (2014); and those who researched on good governance like Mercy (2015) and Anyadike and Ikechukwu (2014). The common agreement among all these authors is that bad governance contributes to odious economic consequences like fiscal unsustainability, poverty and poor economic growth.

The Gap in Literature Review

There is scarcity of existing literature on a single study that evaluates the causality between transparency, governance and fiscal sustainability in Nigeria. It is possible that this may be the cause of policy failures as the direction of movement of the variables and the possibility of forecasting which variable flows into another are essential elements of policy formulation and implementation. This study solves this problem by the causality approach employed.

Methodology

The study adopts annual data for the period of 1996 to 2021 using secondary sources such as World Bank development indicator database (World Bank, 2021), Governance indicators (World Bank, 2021) such as political stability, accountability and voice, and control of corruption. Transparency was sourced from the transparency international (TI, 2021). The fiscal sustainability was proxy by movement capital expenditure which was from the World Bank (2021).

Model Specification

A VAR model is developed to capture the relative interaction of the concern variables. The reduced form VAR model in the study consist of five variables which can be represented as a

system of equations as follows:

$$\begin{aligned}
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 &= + + + + + + \text{-----}(3) \\
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 &= + + + + + +
 \end{aligned}$$

Where FST = fiscal sustainability, CONCORP = control of corruption = POLST= political instability, VACCT = voice and accountability, and TRASP = transparency.

Causality test procedure in the study is captured in the following specifications. Where the variables are previously defined.

Model Estimation Procedure

Three-unit root tests were used i.e. the Augmented Dickey-Fuller (ADF), the Phillips-Perron (PP) and the Kwiatkowski-Phillips-Schmidt-Shin (KPSS). The choice of the three-unit root tests is to allow for robustness and comparison.

Results and Discussion

Table 1: The Unit root Test Result

Variable	ADF		PP		KPSS	
	Constant	Constant & trend	Constant	Constant & trend	Constant	Constant & trend
FST	-1.292475	-2.227213	-1.283084	-2.229808	0.685713*	0.092696*
POLST	-3.353729	-3.277271	-3.323388	-3.242754	0.182343*	0.177108**
VACCT	-0.879430	-3.283167	-1.162363	-2.932083	0.446417***	0.132559***
CONTCORP	5.017554*	3.875871	-0.433204	-2.385749	0.590366**	0.184264*
TRASP	-2.011351	-2.982748	-1.932763	-3.093706	0.713004	0.079854
ΔFST	-5.410113**	-1.368468*	-5.398833*	-5.302444*	0.133555	0.099187
ΔPOLST	-7.744261***	-5.873281*	-12.36261*	-16.19401**	0.258525	0.193846
ΔVACCT	-4.546189*	-4.843779*	-4.258314*	-4.332540*	0.305672	0.162838
ΔCONTCORP	-6.484565*	-4.467543*	-8.898694*	-13.64556*	0.500000	0.275471
ΔTRASP	-5.644086*	-5.5122137*	-5.645819*	-5.513303*	0.172160	0.061591

Note: For ADF and PP, the null hypothesis is that the variable has a unit root whereas for KPSS, the null Hypothesis is that the variable is stationary. *, **and *** denote order of integration at 1%, 5% and 10% respectively. Source: Authors' computations.

The result of stationarity test is in table 1. For ADF, all the variables are stationary at first difference except for CONTCORP which is stationary at levels. For PP test, all the variables are stationary at first difference. For the KPSS test, evident is in favor of stationarity at first difference for all the variables. On the whole, it is plausible to conclude that the variables used in the study have a unit root.

Table 2: Johansen Co integration Test Results:

VAR = (RGDP,DRBC,DLSE,AMTL BBSP), Lag = 1

Null	Alternative	5%			1%				
		Trace	Critical value	Maximum eigenvalue	Critical value	Trace statistics	Critical values	Maximum Eigenvalue	Critical value
$r=0$	$r \geq 1$	94.31600**	69.818889	51.7750**	33.87687	94.31600*	76.07341	51.07750*	38.7734
$r \leq 1$	$r \geq 2$	43.23850	47.85613	19.69141	27.58434	43.23850	54.4655	19.69141	32.2433
$r \leq 2$	$r \geq 3$	23.54709	29.79707	12.09847	21.13162	23.54709	35.6544	12.09847	25.5222
$r \leq 3$	$r \geq 4$	11.44862	15.49471	9.872300	14.26460	11.44862	20.0411	9.872300	18.6344
$r \leq 4$	$r \geq 5$	1.576319	3.841466	1.576319	3.841460	1.576319	6.65432	1.576319	6.65221

R indicates the number of co integrating vectors. *, ** indicate statistical significance at 1% and 5% respectively

Granger Causality

Result in table 2 suggest that the maximal eigen values and the trace statistics indicates that the hypothesis of no co integration among the variables is rejected at 1% and 5% significance levels respectively, as there is at least one co integrating vector among the variables of interest. Due to the existence of long-term equilibrium relationships among non-stationary variables in the system, an unrestricted VAR system in the levels is adopted. The next thing to do is examine the causality result.

Reference to the causality results in Table 3: The results indicate that POLST does not granger causes fiscal sustainability and vice versa. Unidirectional causality runs from VACCT to fiscal sustainability. Unidirectional causality exists from TRASP to fiscal sustainability. The flow of causality between CONCRP and fiscal sustainability appears to bidirectional, in that at 1 lag, CONCRP granger causes real fiscal sustainability, while at 2 lags, and fiscal sustainability granger causes CONCRP at 5% and 10% significance levels respectively.

In addition, causality flows from VACCT and POLST and from POLST to CONCRP. There is independence in the causality between POLST and TRASP. There is bidirectional causality between VACCT and CONCRP. VACCT granger causes CONCRP and CONCRP also granger causes VACCT. Overall, the result tends to indicate that fiscal unsustainability is induced or influence by POLST, TRASP and VACCT, while CONCRP does not tend to influence the fiscal sustainability in Nigeria.

Table 3: Granger Causality Test Results.

Null hypothesis	F- Statistics (P-Value)		Decision	Conclusion
	1 lag	2 lags		
POLS does not granger cause FST	0.12939(0.7214)	0.07719(0.9259)	Accept	Independent
FST does not granger caused POLST	0.24827(0.6216)	0.29781(0.7446)	Accept	
VACCT does not granger cause FST	0.26752(0.6085)	0.34893(0.7083)	Accept	Unidirectional
FST does not granger cause VACCT	4.13846(0.0500)	3.19568(0.0550)	Reject	
TRASP does not granger cause FST	0.02464(0.8762)	0.68465(0.5120)	Accept	Unidirectional
TRASP does not granger caused FST	8.75708(0.0057)	4.12830(0.0261)	Reject	
CONCORP does not granger cause FST	4.82403(0.0352)	3.15409(0.0571)	Reject	Unidirectional
FST does not granger cause CONCORP	2.75297(0.1065)	1.07294(0.3548)	Accept	
POLST does not granger cause TRASP	1.34302(0.2548)	0.62361(0.5428)	Accept	Independent
TRASP does not granger cause POLST	2.75772(0.1063)	0.69014(0.5093)	Accept	
VACCT does not granger cause POLST	1.86754(0.1810)	0.92357(0.4081)	Accept	Unidirectional
POLST does not granger cause VACCT	3.60481(0.0664)	2.36124(0.1116)	Reject	
CONCORP does not granger cause	0.00127(0.9718)	0.42672(0.6565)	Accept	Independent
TRASPTRASP does not granger cause CONCRP	0.16604(0.6863)	0.38910(0.6819)	Accept	
VACCT does not granger cause TRASP	1.11209(0.2993)	0.60524(0.5525)	Accept	Independent
TRAP does not granger cause VACCT	1.51368(0.2273)	1.03062(0.3691)	Accept	
POLS does not granger cause CONCRP	10.4525(0.0028)	5.73058(0.0078)	Reject	Unidirectional
CONCRP does not granger cause POLS	2.29640(0.1392)	0.19443(0.8243)	Accept	
VACCT does not granger cause	4.75482(0.0364)	2.32242(0.1154)	Reject	Bidirectional
CONTRPCONTRP does not granger cause VACCT	0.05564(0.8150)	0.03162(0.9659)	Reject	

In other to examine the time path of the variables, the impulse response functions (IRFs) and the variance decomposition (VDs) are next reported. With the impulse response functions, the impact of a one-time shock to a variable can be traced on all variables in the VAR framework over the future time horizon. The variance decomposition provides a means of capturing the percentage variation in the fiscal sustainability accounted for by POLST, VACCT, TRANSP and CONTCRP, recalling that a VAR model is useful in establishing dynamic relationships among economic variables (Sims 1980).

Impulse Response Function

It was observed that there exist immediate responses of FIS, POLST, VACCT, TRANSP and CONTCRP to their own shocks. Own shocks of POLST and TRANSP tend to die out after the tenth year, while those of FIS, POLST and VACCT tend to continue after the tenth period. The response of FIS to a standard deviation shock in POLST indicates that it is positive up to the 9th period, and thereafter becoming negative (figure 2). This is consistent with theory in that apriori, the fiscal sustainability is expected to be positively correlated with POLST. The coefficient from the estimated VAR equation is statistically significant at the 5% level.

Response of FIS to POLST tends to be negative from the beginning of the horizon and rising slowly up to the 5th period while its positive effect begins to be felt from around the 6th period and from there it continues to rise. This is also consistent with the theory. However, it must be noted that Political stability should be positive or negative depending on the perception of

economic agent. In the case of an increase in the political instability, it is expected that expected political activities in the country during the period of investigation are to be increased as economic agents will have access to financial service which tend to increase the level of economic performance in the country. Implying that a decrease in political instability will result to the excludability of fiscal indiscipline in the country. The impulse response function is indicative of the tendency for economic agent in Nigeria to engage in fiscal culture in the real faces of economic situations. The coefficient of POLST in the estimated VAR equation for FIS indicates that it is negatively signed and statistically significant at 10% level.

The response of FIS to one standard deviation shock in TRANSP shows that it is initially zero, rising up to just 2nd period, before declining and becoming negative up to the 10th period. Aprior, the level of transparency is expected to be negatively correlated with the level fiscal sustainability, as a rise in level of transparency in the country will lead to a reduction in the fiscal unsustainability in the country that is, when there is transparency in the country on fiscal parameters, fiscal sustainability can be guaranteed. This does not seem to be the case in terms of short-term level of transparency in the country. If needs to be is recalled that there has been series if loopholes and underground economy that has endangered the fiscal sustainability in the country, this is largely due to non-transparent of the various institutions that are meant to uphold the level of integrity in the country, the recent whistle blower promulgation was an indelible milestone to salvage the endemic situation but to a large extend this could not stand the test of time as government has renege on the promises made on the blowers. Hence, the result becomes plausible. In effect it implies that a rise in the level of transparency is not necessarily a significant factor determines the level of fiscal sustainability in the country Nigeria. This is indicative by the non-statistically significant coefficient of the VAR model.

The response of FIS to CONTCRP indicates an immediate positive effect which continues up to the 10th period, indicating that control of corruption seems to have an immediate positive impact on fiscal sustainability in the short, medium and long terms. Although control of corruption is expected to a positive relationship with the fiscal sustainability in the country, in that arise the control of corruption will increase the level of fiscal sustainability in the country which tends to boost the fiscal culture in the country. As predicted earlier, the result of the present study tends to indicate that fiscal sustainability is statistically significant and positively related to function of 1- lagged control of corruption. The coefficient from the estimated VAR equation is statistically significant at the 10% level.

Variance Decomposition

This estimates the results of the contribution of each variable to its own shock in explaining the proportion of forecast error variance at the end of 10 years horizon. The results of the variance decomposition indicate that 62% for FIST, 78% for POLST, VACCT 35%, TRANSP 47% and CONTCRP 38% respectively are due to their own shocks. It follows that POLST is the most exogenous variable in the VAR system, in that at the end of 10years forecast horizon, revealed that instability of political terrain has greatly affected our fiscal discipline to a large extent, implying that political instability has endangered our fiscal culture, Fiscal sustainability (FIS), transparency (TRANSP), and voice and accountability (VACCT)

accounted for only 1%, 6%, 10% and 5% respectively. Fiscal sustainability (FIS) only account for 1% of the variation in Political instability (POLST). While POLST explains 8% of the variation in fiscal sustainability.

The contribution of its own shock and the shocks of other variables in the system for Fiscal sustainability is presented in table 4.1. The results indicate that from the 1st through the 10th period, own shocks of FIS continue to decline. It is noteworthy that up to the 10th period, variation in FIS accounted for the shocks in control of corruption (CONTCRP) continues to increase. The conclusion that can be reached is that fiscal sustainability is influence by the other variables in the system, and hence FIS is highly endogenous variable.

On the part of the transparency (TRANSP), 47% is due to his own shock from voice and accountability (VACCT), Political instability (POLST), control of corruption (CONTCRP) and Fiscal sustainability (FIS) are 5%, 18%, 8% and 22% respectively. Similarly, at the end of the 10-year horizon, control of corruption account for 39% in its own shock, while shocks from fiscal sustainability (FIS), political instability (POLST), voice and accountability (VACCTT) and transparency (TRANSP) accounted for 28%, 12%, 2% and 19% respectively.

For the most exogenous variable in the VAR system (POLST), 1%, 6%, 10% and 5% in its variation at the end of the 10years forecast horizon are accounted for by level of transparency (POLST), Fiscal sustainability (FIS), voice and accountability (VACCT),; while transparency (TRANSP), 22%, 18% 5% and 8% in its variation is accounted for fiscal sustainability , political instability (POLST), voice and accountability (VACCT) and level of control of corruption (CONTCRP).

Other post estimation tests

Misspecification tests for serial correlation, normality and heteroskedasticity were carried out on the estimated model. The Lagrange Multiplier tests show that there is no serial correlation at the chosen lag 1, in that the LM statistic of 18.61669 and its associated probability value of (0.4164) indicate the non-rejection of the null hypothesis of no serial correlation of the residuals. In addition, the model passes the normality test through the Jarque-Bera (JB) statistics which at four components and 2 degree of freedom is 0.224296 with a probability value of (0.8939), indicating that the residuals are multivariate normal. It must be remembered that the failure of normality test is not a serious problem under the Johansen cointegrating framework, as no assumption about the distribution error term is made under the procedures of reduced rank simultaneous least squares (Gonzalo, 1994). The estimated model also passes the residual heteroskedasticity tests both with and without cross terms, with the Chi-square and its related probability value of the former being 124.6596 (0.1569) while the value of the latter is 95.1833 (0.6204), indicating that the residuals are homoskedastic. The loading factor in the estimated model is negative and statistically significant and thus follows a priori expectations.

Conclusion

This paper has empirically investigated the causal relationship between transparency and governance for fiscal sustainability in Nigeria between 1996 to 2021, using a vector auto regression (VAR) framework. The empirical results showed that the hypothesis of no cointegration among the variables is rejected at the 1% and 5% significant level respectively using Johansen procedure. The result of the granger causality suggests that unidirectional causality runs from VACCT to fiscal sustainability. Unidirectional causality TRANSP to fiscal sustainability. The flow of causality between CONTCRP and fiscal sustainability appears to be mixed, in that at 1lag, CONTCRP granger causes Fiscal sustainability, while at 2 lags and fiscal sustainability granger causes CONTCRP at 5% and 10% significance levels respectively. In addition, causality flows from TRANSP and POLST and from CONTCRP to VACCT there is independence in the causality between VACCT and POLST the causality between CONTCRP and TRANSP is bidirectional. CONTCRP granger causes TRANSP while TRANSP granger causes CONTCRP. Overall, the result indicated that political instability, voice and accountability and transparency are significant variables explaining fiscal sustainability in Nigeria, while in the sort run control of corruption does not influence fiscal sustainability. All of these are consistent with the impulse response function result and the variance decomposition of the reduced VAR. Transparency and good governance that can curb fiscal unsustainability are suggested recommendations.

References

- Abdullah, M. D. (2012). *An empirical study of fiscal sustainability in Malaysia*, www.semanticscholar. Downloaded on 2nd November, 2022.
- Achegbulu, J. O., Audu, M. I. & Agbaji, J. S. (2007). Transparency in the management of public finance in Nigeria, *Journal of Economics and Management Studies*, 2(1), 43-54
- Afonso, A. & Sousa, R. M. (2008). *Macroeconomic effects of fiscal policy*, 2008/56 ISEG – Lisbon school of economics, universidade de Lisboa(yr)
- Ahmadi, F. (2015). *The relationship between transparency and capital market efficiency in Iran exchange market*, Available online at www.worldscientificnews.com from World Scientific news
- Ang, J. B. & McKibbin, W. J. (2007). Financial linearization, financial sector development and growth- evidence from Malaysia, *Journal of development Economics*, 84,215-233.
- Anyadike, N. & Ikechukwu, E, (2014). Effective leadership for good governance in Nigeria; addressing the interface. *IOSR Journal of Humanities and Social Science*, 19(1), 69-74
- Audu, S. I. (2020). National transparency and the performance of the financial market in Nigeria. *IJBFR* 8(1), 10-14

- Balassone, F., Franco, D. & Zotteri, S. (2002). *Fiscal rules for sub-national governments: What lessons from EMU Countries?* Paper prepared for the Conference on “Rules-Based Macroeconomic Policies in Emerging Market Economies” jointly organized by the IMF and the World Bank, Oaxaca - Mexico, February 14-16.
- Burnside, C. (2022). *Fiscal sustainability in theory and practice*, Retrieved from <https://elibrary.worldbank.org>
- Carstens, A. (2005). *The role of transparency and accountability for economic development in resource-rich countries*, An address of the Deputy Managing Director of the International Monetary Fund at the Regional Workshop on Transparency and Accountability in Resource Management in CEMAC Countries Malabo, Equatorial Guinea, January 27.
- Coker, C. (2014). Bad governance: The bane of peace, security and sustainable development in Nigeria, *International Journal of Development and Sustainability* 3(4), 1121 – 1146
- Daka (2017). *Osibanjo launches 60 day action plan on ease of doing business*, Retrieved from <https://guardian.ng/business->
- Horby, A. S. (2001). *Oxford advanced learners' dictionary*, Oxford University Press, 6thEd.
- International Monetary Fund (2021). *Fiscal sustainability*, <https://www.imf.org> Courses
- Kaufmann, D. (1997). *Corruption: The facts: A foreign policy workshop papers*, Washington, 114-131.)
- Kauffman, D., Kray, A. & Mastruzzi, E. (2010). *The world governance indicators: A summary of methodology, data and analytical issues*, World Bank policy research working paper 5430
- Lang, M. (2011). *Transparency and liquidity uncertainty in crisis periods*, Retrieved from <https://econpapers.repec.org>
- Masry, M. (2015). Measuring transparency and disclosure in the Egyptian stock market, *Journal of Finance and Bank Management*. 3(1), 25-36
- Mauro, P. (2002). The effects of corruption on growth, investment, and government expenditure: a cross sectional analysis," in *Corruption and the Global Economy*, Kimberly Ann Elliot (ed), (Washington, DC, USA).
- Mercy, A. (2015). the effects of corruption on good governance in Nigeria, *International Journal of Development and Sustainability* 4(3), 292 – 307

- Milas, C. (2010). Testing the opportunistic approach to monetary policy, *The Manchester School*, 28(2), 110–125.
- Microsoft Incorporated (2004). *Encarta, a special documentary of Microsoft incorporation*, USA
- Muktar, J., Abdullahi, A. & Ishaq, M. (2017). Bad governance and insecurity in Nigeria, *International Journal of Trends in Scientific Research and Development* 2(1)349–355
- Nigeria (2020). What you need to know about the Nigeria economic sustainable plan” Retrieved from statehouse.gov.ng
- Noori, F. & Khatibi, R. (2013). *The impact of liquidity and transparency in financial markets*, <https://www.semanticscholar.org>
- Olufemi, M. S. (2018). Public spending, fiscal sustainability and macroeconomic Performance in Nigeria, *NDIC Quarterly* 33 (3&4), 33-48
- Saibu, O. M. (2018). Public spending, fiscal sustainability and macroeconomic Performance in Nigeria, *NDIC Quarterly* 33 (3&4), 33-48
- Sen, A. (1976). *Poverty: An ordinal approach to measurement*, New York: Business International Corporation.
- Sim, C. (1980). Macroeconomic and reality, *Econometrical*, 48(1), 1-48.
- The World Economic Forum's Global Competitiveness Index (GCI). Retrieved from <https://www.weforum.org>
- Transparency International (TI) (2020). *Corruption perception index* retrieved from, <https://www.transparency.org>
- Voleslang, T. & Perron, P. (1998). Additional test for a unit root allowing for a break in the trend function at unknown time, *International Economic Review*, 39, 1073-1100. <http://dx.doi.org/10.2307/2527353>
- World Bank (2020). *Doing business report*, Downloaded from <https://fitchsolutions.com/>
- World Bank (2020b). <https://documents1.worldbank.org>
- World Bank, (2021). *The world development indicators*, The World Bank group.

Webography

<https://lawsfnigeria.placing.org> (retrieved August 10th, 2022)

<https://fiscaldata.treasury.gov>nigeria> (retrieved August 10th, 2022)

<https://www.noa.gov.ng> (retrieved Sept. 6th, 2022)

<https://elibrary.worldbank.org>doi> (retrieved Sept. 6th, 2022)

<https://www.ibe.unesco.org> (retrieved Sept. 6th, 2022)

<businessday.ng>article>nigerias-debt>, (retrieved Oct. 26th, 2022).

<punching.com>wbankproject>102>, (retrieved Oct. 26th, 2022)

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