Effective Governance and Economic Development Issues in Nigeria's Fiscal Federalism

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Abstract

The study examined Effective Governance and Economic Development issues in Nigeria's Fiscal Federalism. This is on the premise that the issue of fiscal federalism has been contentious since pre-colonial period to the present day in all its ramifications; from jurisdiction and derivation, to the allocation to federating units. Unfortunately, these have been without recourse to the issues of effective governance and economic development of the country that should be at the core of the matter. The study adopted an ex-post facto research design and obtained data from secondary sources namely Central Bank of Nigeria, National Bureau of Statistics and World Bank publications. It employed the Econometric Structural Vector Autoregressive estimation technique for analysis. Findings of the study revealed that revenue allocation and expenditure by the federating units led to economic growth, but this did not transmit to economic development, the alleviation of poverty and the control of unemployment due to ineffective governance. So, the study makes the following recommendations; Poor leadership in the country can be strengthened by proper enforcement of rules by institutions and agencies of state in the country. Revenue and expenditure allocation to the tiers of government should be transparently accounted for. Also, efforts at increasing social investments should be enhanced and financial inclusion should be prioritized.

Keywords: Governance; Economic Development; Fiscal Federalism; Revenue
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1.1 Introduction

Nigeria is identified with three tiers of government, a federal government at the centre, thirty- six states government, seven hundred and seventy-four local government areas and a federal capital territory in Abuja. Administrative power and functions of governance are shared along these tiers of government through constitutional provisions. Amongst other issues in the country, the issue of fiscal federalism has always been a contentious one, even though this has been spelt out in the exclusive and concurrent powers of the federation units in Schedule 4, Constitution of the Federal Republic of Nigeria (FRN) 1999. The issue is in all of its ramifications, ranging from jurisdiction and derivation to allocation to the federating units, including on-shore and off-shore dichotomy.

With the adoption of regionalism in 1946, a decentralized fiscal structure was evolved. And before the introduction of a republican constitution in 1963, fiscal arrangements were influenced by political and constitutional factors. Several commissions were created to renew existing fiscal arrangements and make appropriate recommendations (Ekpo and Ndebbio, 1996). These were (i) Sir Sydney Phillipson; 1947, (ii) Hick & Phillipson; 1951, (iii) Chick Commission; 1954, (iv) Ransman Commission; 1957, (v) Binns Commission; 1964, (vi) Dina Commission; 1968, (vii) Aboyade Technical Committee; 1977, (viii) Okigbo Committee; 1981, and (ix) Danjuma Commission; 1989. New formula was also introduced in 1990 and 2000 (Dunmoye, 2002). These bodies came up with their own distinct contending criteria as to how the revenue in the country was to be shared. However, it needs to be pointed out that none of their recommendations were completely accepted and adopted by government. With the commencement of democracy in 1999, the 1999 constitution of the Federal Republic of Nigeria, under the third schedule, provides for the establishment of a body known as the Revenue Mobilization Allocation and Fiscal Commission (RMAFC) to handle revenue mobilization and allocation matters in the country (FRN, 1999).

The problem is despite the contention that this has turned out to be and all efforts made to resolve it, the issues rages on; there are agitations for increase in the present 13% per cent based on the derivation principle which was recommended by the Aboyade technical commission, there is the resource control agitation in the South- south region which is the region producing crude oil for Nigeria, upon which the nation depends on for revenue and foreign exchange. Other parts of the country are equally demanding for increased allocations and for more financial support from the federal government. The debate and agitations on Nigeria's fiscal relations hinges strongly on who owns what and who gets what of the national cake, meanwhile development issues like the provision of public goods and services remains abysmal amidst the much that have been derived, allocated and spent, such that Nigeria ranks very low on most development indices like effective governance, human development index, poverty and unemployment (UNDP, 2018; TI, 2018; WB, 2016). Hence, this paper examined governance and development issues in Nigeria's fiscal federalism.

The major contribution being that most studies on this subject matter concentrated on the allocation to the various tiers of government using mainly descriptive statistical tools, Ordinary Least Squares estimation technique (Akinlo, 1999: Akinjuobi and Kalu, 2009: Usman, 2011). This paper examined it using a more robust technique (Structural Vector Auto regression) that takes cognizance of shocks prevalent in revenue generation in Nigeria, as a result of the reliance on volatile oil revenue. Also, it examined the role of effective governance in the utilization of fund

for economic development that is measured by the United Nation's Human Development Index (HDI) and Dudley Seer's economic development variables that was not done by extant studies.

The remainder of this paper is organized as follows; Section two deals with the review of relevant literature. Section three is about the methodology of the research. Section four presents and analyze the data obtained and finally, Section five draws the conclusion and makes recommendations

2.0 Literature Review

2.1.1 Governance

According to Ohiomu and Dibie (2014), Governance generally, implies the process by which decision making and the process by which decisions are implemented or not implemented. Governance is the manner in which power is exercised in the management of a country's economic and social resources for development. It is essentially a political process whereby decision and policies are taken for the benefit of the citizenry. According to UNESCAP (2018), governance is the process of decision-making and the process by which decisions are implemented (or not implemented). In short, governance refers to tradition and institution that determine how authority is excised in a particular country. This includes:

(i) The process by which government are selected, held accountable, monitored and replaced;
(ii) The capacity of government to manage resources efficiently and formulate implement and enforce sound policies and regulations; and
(iii) The respect of citizens and the state for the institutions that govern economic and social interactions among them.

Viewed in this context, governance could be good or bad depending on the manner and method of governing. Effective governance describes how public institutions conduct public affairs and manage public resources. The UNDP (2012) defines good governance as striving for rule of law, transparency, equity, effectiveness/efficiency, accountability, and strategic vision in the exercise of political, economic, and administrative authority. Governance as pointed out by the UN Human Development Report (2004) has two faces. The first is the leadership which has responsibilities derived from the principles of effective governmental organizations. The second is the governed, that is, the citizens who are responsible for making relevant inputs to the socio-economic and political affairs of their society. Simply put, governance is a relationship between rulers and the ruled, the state and society, the governors and the governed. Good governance is about leadership and people-focused political institutions, working with the people to empower them to reach the highest points of their productive and creative abilities.

2.1.2 Economic Development

Economic Development, according to Arowolo (2011) could either be positive or negative signifying human or inhuman conditions of life. In its positive notation, it means progress, advancement, and improvement, but when it is taken negatively, it amounts to retrogression or non-development. Also, Ibezim (1999) further explains, economic development does not only involve physical and financial progress but also improvements in the political and social aspects of society. In Seer (1972)'s view, the questions to ask about a country's economic development are: What has been happening to unemployment? What has been altered from an almost elusive preoccupation with aggregate economic growth to a much broader interpretation that encompasses

the Seer variables and also, life expectancy, level of educational attainment and standard of living measured in terms of real income that are parameters of United Nations Human Development Index (HDI).

2.1.3 Fiscal Federalism

In Nigeria, certain basic principles are used for revenue allocation. This can be subsumed under three broad headings namely: (a) Derivation (b) Need and (c) National interest/even development. Others, but with less emphasis are (i) population (ii) geographical peculiarities (iii) absorptive capacity, (iv) internal revenue efforts (v) equality of States (vi) continuity (vii) fiscal efficiency (viii) national minimum standards for national integration (ix) Land mass and (x) financial comparability (Dunmoye, 2002)

2.2 Theoretical Framework

In a federating system, one of the greatest challenges is that of sharing formular as regards to the fiscal resources generated and jointly owned by the federating units. Public finance departments are usually involved in the sharing of fiscal resources between three levels of government. That is, federal, state and local government areas as is the case with Nigeria. The pre-occupation of public finance experts in this connection has been the examination of the extent to which the important principles of horizontal equity and efficient allocation of resources are fulfilled in the context of fiscal federalism. Arising from the above point and from the numerous problems of fiscal federalism, this study is anchored on Buchanan's Fiscal Residuum Theory. Buchanan (1951) believes that a more meaningful approach to the problems of fiscal federalism is that one should take into account, the overall fiscal pressures on an individual. According to Buchanan, the measurement of this in terms of the Residuum Theory is to determine the balance between the contributions made and the value of the public services returned to the individual. Given the state of income distribution, he thinks that the Fiscal Residuum should be negative for low income individuals or states and positive for high income individuals or states. For the achievement of horizontal equity between individual, the necessary and sufficient condition according to Buchanan is that their fiscal residual be equal. The relevance of this theory to this study is seen in Nigerian case where some states are poor in revenue generation for the nation, while some are very rich in generating revenue for the nation, especially the oil states. Going by residuum perspectives, it could be seen that some poor states in the country can be having some weight of tax burden, but going by the unconditional equalization theory, all the federating states can share equality in fiscal federalism and this will enhance equal development.

2.3 Empirical Review

Numerous studies have been carried out to determine the role of government in the economic growth process of a country. Woller and Phillips (1998) could not find a robust relation between economic growth and decentralization, using a sample of a few developing countries. However, in Nigeria a cross-sectional analysis on the expenditure responsiveness of states to federal allocation during the civilian era by Akinlo (1999), through the use of OLS technique found that the state government's fiscal expenditure was stimulated by federal grants during the period of analysis. Similarly, Aigbokhan (1999) also employed the OLS technique to investigate the fiscal decentralization on economic growth in Nigeria and found evidence of which concentration ratio of both expenditure and revenue. It also finds evidence of mismatch in spending and taxing responsibilities with states being higher hit. Yilmaz (2000) on the impact of fiscal decentralization

on macroeconomic performance for the period 1971-1990, realized that decentralization of expenditures to the local level increases the growth of real GDP per capita in unitary states more strongly than in federal states. In a cross-country evidence on the relationship between fiscal decentralization, inflation and Growth, Martinez-Vazquez and McNab (2002) found that the decentralization of revenue significantly reduces the growth of real GDP per capita of developed countries, but not of the developing and transition countries.

Jimoh (2003) utilizes a causality test using Error Correction Model (ECM) to ascertain the long-run causal relationship and short-run dynamics of the impact of the extent of decentralization of government expenditures and/or revenue allocation on the levels of economic activities in Nigeria. He found that more decentralized governance especially in terms of increased local governments and increased transfer of revenues to lower tiers of government would stimulate economic activities and/or economic growth in Nigeria. Akinjuobi and Kalu (2009) focus on the role of financing sources of Nigerian state governments in the financing of their real asset investment. Using OLS technique, the study finds that Federal allocation and stabilization funds are significant in the financing of real asset investment at both 5% and 1% level of significance. Internally Generated Revenue (IGR), Loans (LNS), Grants (GT) and Value Added Tax (VAT) are found insignificant in the financing of the real asset investments of Nigerian state governments for the period 1984-2008.

The impact of revenue allocation formula of individual federating units on economic growth of Nigeria is also demonstrated in the study of Usman (2011), utilizing OLS technique he found out that both shares of federal government and local governments revenue from the federation account contribute to economic growth process in Nigeria. The study finds no contribution of share of states revenue from federation to economic growth process in Nigeria, which is contrary to the findings of the studies of Akinlo (1999) and Akujuobi and Kalu (2009). Usman (2011) uses the growth rate of shares of the federating units from federation account as proxies and finds direct relationship between revenue allocations to federal, states, and local governments and economic growth process in Nigeria. Dang (2013) adopts the preliminary test of time series data, and ECM and Pair-wise Granger Causality test to ascertain the causal relationship and the direction of causality between revenue allocations and real GDP in Nigeria. The result shows that that the lag values of all the independent variables (revenue allocations to federal government, states, and local governments) jointly impact on RGDP of Nigeria for the period 1993 to 2012, with only revenue allocation to states showing a negative significant result. This study uses time series data and both descriptive statistics and an econometric tool (SVAR) within the VAR framework to model the relationship between total federally collectible revenue (TGR) and real gross domestic product (GDR), effective governance (EGI), economic development (HDI), national poverty index (NPI) and unemployment rate (UEM) in Nigeria.

There are recent developments and improvements in econometric methodology that has posted good results for estimating linkages like the Structural Vector Autoregressive Regression (SVAR) used in this study. It produces relatively better and robust results (CBN, 2014). In addition, the SVAR is theoretically suitable and offers the benefit of identifying shocks that are inherent and common in the Nigerian system. In doing this, (SVAR) at a glance can concisely reveal the linkages of sectors in an economy.

3.1 Methodology

The study is an ex-post facto research method set to examine total federally collectible revenue growth rate (TGR) effect on real economic growth rate (GDR), effective governance index (EGI), human development index (HDI), national poverty index (NPI) and unemployment rate (UEM) in Nigeria for the period from 1990 to 2023. These are variables germane for examining economic growth and economic development of a country. TGR was used because it is the major contentious element in federal federalism in the country from which government expenditure for economic growth and development is made by the various regions, states and local government areas. These secondary data were obtained from the Annual Statistical Bulletin of the Central Bank of Nigeria, the National Bureau of Statistics Annual Abstract of Statistics and the World Bank indicators. These data were analyzed using descriptive and analytical statistical tools. Given the secondary source of data mentioned above, the specific kinds of data used for the study includes the following:

(i) Total Federally Collectible Revenue Growth rate (TGR)
(ii) Real Gross Domestic Product Growth rate (GDR)
(iii) Effective Governance Index (EGI)
(iv) Human Development Index (HDI)
(v) Nigeria's National Poverty index (NPI)
(vi) Composite Unemployment Rate (UEM)

To avoid spurious regression results and analysis, the Augmented Dickey Fuller (ADF) unit root test was used to determine the level of stationarity of the time series data. Other applicable pre-estimation and post estimation tests like Lag length selection criteria, Johansson cointegration test, Heteroscedasticity, Autocorrelation and Multicollinearity were conducted to ensure that results obtained do not suffer from wrong specification, non-normality, serial correlation and collinearity. Also, Descriptive statistics and econometric Structural Vector Autoregressive Regression (SVAR) was used for estimation on the platform of Econometric views 9.0 and used for the analysis.

3.2 Specification of Model

This paper estimate a multivariate autoregressive model and used a structural vector autoregressive model (SVAR) to evaluate TGR effect on governance and economic development variables in the economy as stated by Seer (1972). The model is given as follows:

$$Ax_t = \alpha_0 + C(L)x_{t-i} + B\varepsilon_t \quad . \quad . \quad .$$

Where:

x_t	=	vector of endogenous macroeconomic variables
x_{t-i}	=	vector of the lagged values of endogenous variables
ε_t	=	vector of random error of disturbance terms for every variable that captures exogenous factors in the model
C(L)	=	matrix polynomial in the lag operator *L* of length *p*
A	=	a matrix of $n \times n$ dimension
n	=	number of variables
B	=	a column vector of dimension $n \times 1$, which contains the contemporaneous response of the variables to the innovations or disturbances.

The SVAR model used for this study is stated as follows:

$$Ax_t = \begin{bmatrix} 1 & 0 & 0 & 0 & 0 & \beta_{16} \\ 0 & 1 & 0 & 0 & 0 & \beta_{26} \\ 0 & 0 & 1 & 0 & 0 & \beta_{36} \\ 0 & 0 & 0 & 1 & 0 & \beta_{46} \\ 0 & 0 & 0 & 0 & 1 & \beta_{56} \\ \alpha_{61} & \alpha_{62} & \alpha_{63} & \alpha_{64} & \alpha_{65} & 1 \end{bmatrix} \begin{bmatrix} GDR \\ EGI \\ HDI \\ NPI \\ UEM \\ TGR \end{bmatrix}.$$

Where :

GDR = Real GDP growth rate**; EGI** = Effective Governance index; **HDI** = Human Development index; **NPI** = National Poverty index; **UEM** = Unemployment rate; **TGR** = Total federal government collectible revenue growth rate; $\boldsymbol{\alpha}$ = Parameter estimates (forward linkages) from TGR to the independent variables $\boldsymbol{\beta}$ = Parameter estimates (backward linkages) from the independent variables to the dependent variable.

4.0 Data Analysis, Results and Interpretation

4.1.1 Descriptive Statistics

The data were subjected to descriptive statistics to examine their means, minimum and maximum values over the period as well as to examine their spread. The summary statistics of the variables used in the study are presented in Table1.

Table 1: Descriptive Statistics of Variables

	TGR	GDR	EGI	HDI	NPI	UEM
Mean	29.53655	4.858621	0.966207	0.424828	60.15172	12.23793
Median	11.17000	4.600000	0.980000	0.460000	58.60000	12.70000
Maximum	127.8300	10.20000	1.200000	0.530000	70.20000	27.40000
Minimum	0.000000	1.300000	0.680000	0.240000	50.40000	1.900000
Std. Dev.	8.218710	2.432457	0.148165	0.091715	5.672655	7.771441
Skewness	0.208742	0.325388	-0.550904	-0.964429	0.297968	0.242298
Kurtosis	2.208454	1.913373	2.705436	2.614241	2.049168	1.915898
Jarque-Bera	1.114285	1.938490	1.571739	4.675405	1.521559	1.703882
Probability	0.228520	0.379369	0.455723	0.096549	0.467302	0.426586
Observations	34	34	34	34	34	34

Source: *Author's extract from E-views 10, June 2024*

The result in Table 1 shows that between 1990 and 2023, the mean values of TGR, GDR, EGI, HDI, NPI and UEM over the period are 29.53, 4.85, 0.96, 0.42, 60.15 and 12.23 respectively while their respective maximum values were 127.83, 10.20, 1.20, 0.53, 70.20 and 27.40 respectively. The corresponding minimum values are of 0.00, 1.30, 0.68, 0.24, 50.4 and 1.9 respectively.

The standard deviation of TGR, GDR, EGI, HDI, NPI and UEM showed -8.21, 2.43, 0.14, 0.09, 5.67 and 7.7 respectively. These low standard deviations imply that the data for the variables are not widely dispersed from their respective average (mean) values. The skewness, kurtosis and Jarque-Bera statistics tests for the normality of data indicate the following; Skewness of between 0 and 1 except for all the variables and kurtosis of between 0 and 3 implying that most of the series are normally distributed, while the probability of the Jarque-Bera statistics of greater than 0.05

implies the acceptance of the null hypothesis that the series are normally distributed for all the variables. Variables TGR, GDR, NPI and UEM are skewed to the right since their values are greater than 0. Similarly, the result for all the variables had kurtosis less than 3 indicating a platykurtic shape implying that distributions are flat.

Although the error terms in our sample follow the normal distribution at the 5% level of significance, but keeping in mind that the JB test is a large-sample test, our sample of 31 observations may not necessarily be large. Normality is also not necessary to obtain many of the results used in multivariate regression analysis as it is possible to relax this assumption and still retain most of the statistical results obtained.

4.2 Empirical Results

4.2.1 Unit Root Test

The unit root was conducted to examine the stationarity of the data time series and the ADF test was employed. It is important because it enhances validity of results and is also a prerequisite for further analytical tools. The full result of the stationarity test is presented in table 2;

Table 2: Stationarity Test Result

Variables	ADF Test Levels	5% Critical Value	Order of integration	ADF test 1st Difference	Order of Integration
TGR	-2.09	-2.97	NS	-5.46	I(1)
GDR	-2.29	-2.97	NS	-6.69	I(1)
EGI	-2.55	-2.97	NS	-7.27	I(1)
HDI	-3.23	-2.97	NS	-3.23	I(1)
NPI	-1.56	-2.97	NS	-4.84	I(1)
UEM	-1.66	-2.97	NS	-4.55	1(1)

Source: *Author's extract from E-views 10 June (2024)*
NS means *Not stationary*

The result reveals that all the variables are stationary only at 1st difference 1(1). This is substantiated by the ADF test statistic in comparison to the critical values – with the former greater than the latter (taking absolute values) at 5% significant level.

4.2.3 Cointegration Test

The result of the Stationarity test necessitated the examination for long run co-integration among the variables using the Johansen Cointegration test. The result is presented in table 3:

Table 3: Cointegration Test Result

Null Hypothesis	Trace Statistic	0.05 Critical Value	Null Hypothesis	Max-Eigen Statistic	0.05 Critical Value
r = 0*	144.36	95.75	r = 0*	55.05	40.07
r ≤ 1*	89.30	69.81	r ≤ 1*	39.56	23.87
r ≤ 2*	49.74	47.85	r ≤ 2	27.09	27.58
r ≤ 3	22.64	29.79	r ≤ 3	12.81	21.13
r ≤ 4	9.83	15.49	r ≤ 4	7.09	14.26
r< 5	2.73	3.84	r < 5	2.73	3.84

Source: *Author's extract from Eviews 10 (2024)*

Note: r represents number of cointegrating vectors. Trace statistic indicates 3 cointegrating equations while Max-Eigen statistic also indicates 1 cointegrating equations. * denotes rejection of the hypothesis at the 0.05 level.

4.2.4 Lag selection criteria

An optimal lag of 2 was chosen as the lag length selection criteria determined by the Akaike Information Criterion, Schwarz Information Criterion and the Hannan –Quinn information criterion respectively tested at 5% level.

4.3.1 Structural VAR Estimates

The main purpose of structural VAR (SVAR) estimation is to obtain non-recursive orthogonalization of the error terms for impulse response analysis. This alternative to the recursive Cholesky Orthogonalization requires the user to impose enough restrictions to identify the orthogonal (structural) components of the error terms. The result obtained is presented in the matrix below, which shows the various parameter estimates in relation to each other.

Estimated Contemporaneous Structural Parameters

The SVAR result for this study is presented below:

$$Ax_t = \begin{bmatrix} 1 & 0 & 0 & 0 & 0 & 31.94 \\ 0 & 1 & 0 & 0 & 0 & -0.21 \\ 0 & 0 & 1 & 0 & 0 & -0.00 \\ 0 & 0 & 0 & 1 & 0 & -0.01 \\ 0 & 0 & 0 & 0 & 1 & 0.92 \\ 2.82* & -.50* & -14.97* & -82.60* & 0.79 & 1 \end{bmatrix} \begin{bmatrix} GDR* \\ EGI \\ HDI \\ NPI \\ UEM* \\ TGR \end{bmatrix}$$

Source: *Author's extract from E-views 10 June (2024).*

Note: *Number of restrictions are derived using the formula* $(n^2 - n)/2$*, where n is the number of variables in the SVAR model. (*) indicates significance of parameter estimate*

The result shows that the model is just identified. The likelihood ratio test of over-identified restrictions can be rejected at conventional significance level. The likelihood ratio test shows that the *p* value of obtaining a chi-square value of as much as 485.92 is statistically not different from zero, leading to the rejection of the hypothesis that the model is over-identified. To this effect, table 3 reports the estimated contemporaneous coefficients in the structural model and confirms the significance of parameter estimates as obtained from the model. From the matrix above, GDR, EGI, HDI, NPI and UEM have either positive or negative forward or backward linkage with TGR given their statistical significance.

TGR, GDR and UEM exert a bi-directional positive effect on each other, with that between TGR and GDR more than proportionate. This indicates that government revenue collected and expended on the economy by the three tiers of the government has contributed to economic growth in Nigeria, which has also contributed to an improved revenue generation and expenditure of the tiers of government. Interestingly, there is a positive effect on UEM, which although was less than proportionate may be an indication of leakages in the economic growth within the system due to ineffective governance, corruption and diversion of public resources. The table shows TGR has a significantly negative effect (-0.50) on effective governance in the country. This may be exhibited in corruption that is said to be rife in the country, with the implication of negating economic

development. And the result obtained seems to indicate this, as there is a bi-directional positive effect between TGR and GDR and ineffective governance undermines the flow of economic growth to economic development which has resulted in high levels of inequality and deepened poverty levels in Nigeria, leaving the country in the lower rung of economic development. So it is not surprising that the result shows bi-directional, more than proportionate negative effect of TGR on HDI and NPI.

4.3.2 Impulse Response Function of TGR

Impulse response functions (IRFs) show the effects of shocks on the adjustment path of the variables in the VAR model. In essence, IRFs show how these variables react to different shocks in the model.

Table 5: Impulse Response Function for TGR on other Sectors

Period	TGR	GDR	EGI	HDI	NPI	UEM
4	0.114	0.127	0.028	-0.061	0.033	-0.055
	(0.066)	(0.077)	(0.050)	(0.07)	(0.038)	(0.036)
7	0.162	0.006	0.046	-0.031	0.066	-0.010
	(0.094)	(0.087)	(0.051)	(0.09)	(0.049)	(0.030)
10	0.165	0.027	0.024	-0.066	0.064	-0.023
	(0.123)	(0.084)	(0.053)	(0.10)	(0.059)	(0.034)

Source: *Author's extract from Eviews 10 Output, June (2024)*

Table 5 above shows the representation of the responses of TGR to impulses from GDR, EGI, HDI, NPI and UEM. TGR responds positively to its own shock in all the selected periods resulting from innovations within the economy. GDR and UEM response are positive, while that of EGI, HDI and NPI were negative to impulses from TGR all through the periods selected for the study.

4.3.3 Variance Decomposition Analysis

While impulse response functions trace the effects of a shock to one endogenous variable on to the other variables in the VAR, variance decomposition separates the variation in an endogenous variable into the component shocks to the VAR. The summary of the variance decomposition of TGR is presented in table 6:

Table 6: Variance Decomposition Analysis

Variance Decomposition of TGR							
Period	**S.E.**	**TGR**	**GDR**	**EGI**	**HDI**	**NPI**	**UEM**
1	0.133	100.00	0.00	0.00	0.00	0.00	0.00
4	0.346	63.19	24.40	2.77	4.02	1.95	3.72
7	0.464	64.80	17.14	3.65	5.28	6.54	2.57
10	0.571	68.26	11.62	3.54	6.20	8.22	2.13

Source: *Author's extract from Eviews 10 Output, June 2024*

Table 6 displays separate variance decomposition for each endogenous variable. The variance decomposition results reported within a 10-year horizon as presented in Table 4 shows that 68.26 per cent of innovations in TGR are explained by its own past values, only 11.62 per cent of the

innovations is due to GDR shocks. Other variables exert only minimal shocks to it. Since errors of other variables can explain some of the forecast error variance of the TGR at all forecast horizons, then AGR cannot be assumed to be exogenous

4.4.1 Post Estimation Tests

The tests for serial correlation, multicollinearity and heteroscedasticity under the VAR framework were conducted as highlighted in section 3. The serial correlation test for the model indicates that there is absence of serial correlation and is shown in Table 7:

Table 7: **Serial Correlation Test Result**

Lags	LM-Stat	Prob.
1	25.8658	0.8941
2	18.4555	0.9932

Source: *Author's extract from Eviews 10 Output, June 2024*

The null hypothesis of no serial correlation is accepted. The test for the presence or absence of heteroscedasticity is shown in Table 8:

Table 8: **Heteroscedasticity Test Result**

Chi-square	Prob.
566.49	0.2634

Source: *Author's extract from Eviews 10 Output, June 2024*

The result reveals that the disturbances of μ_i exhibit the equal variance assumption of homoscedasticity. This is because the probability of obtaining a chi-square value of 566.49 or greater is statistically different from zero.

Table 9: **Multicollinearity Test Result**

	TGR	GDR	EGI	HDI	NPI	UEM
TGR	1.000000	0.317862	0.502844	0.272954	0.549527	0.585627
GDR	0.317862	1.000000	0.376351	0.456282	0.002723	0.340363
EGI	0.502844	0.376351	1.000000	0.646886	-0.050782	0.611946
HDI	0.272954	0.456282	0.646886	1.000000	0.108281	0.663678
NPI	0.549527	0.002723	-0.050782	0.108281	1.000000	-0.102700
UEM	0.585627	0.340363	0.611946	0.663678	-0.102700	1.000000

Source: *Author's extract from Eviews 10 Output, June 2024*

From the correlation matrix above, we can confirm that there is no pair-wise correlation coefficient that is in excess of 0.80 (Gujarati and Porter, 2006). Hence, the variables cannot be said to be collinear. GDR is 0.31, EGI is 0.50, HDI is 0.27, NPI is 0.54 with UEM having 0.58. Therefore we conclude there is no multicollinearity among the regressors.

5.1 Conclusion and Recommendations

The study examined the effect of TGR on effective governance and economic development in Nigeria. The findings of the study as indicated by the SVAR estimates confirms the significance of parameter estimates that GDR, EGI, HDI, NPI and UEM have linkages with TGR, some are unilateral while others bilateral, positive or negative for the period of the study. The same result

was obtained from the Impulse Response Function (IRF) which indicated that TGR responds to its own shocks resulting from innovations within the economy and to the other variables stated for the model. GDR and UEM were positive to impulses from TGR for the selected periods and EGI, HDI and NPI responses were negative. The Forecast Error Variance Decomposition (FEVD) analysis further buttressed this assertion as the errors of all the variables explain some of the forecast error variances of TGR at all the forecast horizons selected, so it cannot be assumed exogenous. The result indicates that TGR has strong forward linkages with the other variables, and on the other hand, the backward linkage from the other sectors to TGR is weak. This is evident by the significance level of the parameter estimates in the Structural VAR result.

Given the results of the study, we can conclude that the agitation for federal federalism in Nigeria that have witnessed so many adjustments in the jurisdiction, allocation and spending power in the various tiers of government in the country and which has resulted in economic growth have not engendered economic development, alleviated poverty and reduced unemployment due to ineffective governance embedded in corruption and diversion of public resources to private use. So the contestations in fiscal federalism may not entirely be to spur economic development, but to fester the nest of political leaders and their cronies in government, hence the country remains in the lower rung of economic development in the global space. This has increasingly created room for agitations, vices, insurgency and insecurity that is prevalent in the country today. It is in line with these findings that the study makes the following recommendations.

1. The potentials for economic development is available in the economy given the positive more than proportionate effect of TGR on GDR, but this has been undermined by ineffective governance exhibited by poor leadership which can be strengthened by proper enforcement of institutions by agencies of state in the country. This can be done by strict adherence to the incentive and sanctions system in place in the country.
2. The increasing level of revenue and expenditure allocation to the tiers of government must be put into drivers of growth and development in the country. This should be in education, health and social infrastructure like innovative technology, better power, transport and communication facilities that will create an environment of ease of doing business and citizens can be empowered to take advantage of opportunities that is created in the country. This will improve life expectancy, literacy rate and household income that are necessary to improve standard of living in the country.
3. The increasing level of unemployment that is deepening poverty level in the country can be controlled by channeling growth drivers in the economy from both the real and services sectors to create a wholesome environment that throws up employment and income opportunities to the people. Efforts at increasing social investments should be enhanced and financial inclusion should be prioritized to provide other financial services and credit to those who have the capacity to change their status and create opportunities of employment and income for others in order to reverse the trend of unemployment and poverty in the economy.

References

Aigbokhan, B.E., 1999. Fiscal federalism and economic growth in Nigeria. In: Fiscal Federalism and Nigeria's Economic Development 1999. Proceedings of the annual conference of the Nigerian Economic Society. Nigerian Economic Society, Ibadan, pp. 333-352.

Akinjuobi, E. & Kalu, I., 2009. State government finances and real asset investment: The Nigerian experience. *African Journal of Accounting, Economics, Finance and Banking Research*, 4, p.9.

Akinlo, A., 1999. A cross-sectional analysis of the expenditure responsiveness of states to federal allocations during the civilian era in Nigeria. Paper presented at the 1999 annual conference of *Nigerian Economic Society*, p. 42.

Arowolo, D., 2011. Fiscal federalism in Nigeria: Theory and dimensions. *Afro Asian Journal of Social Sciences*, 2(2.2), pp. 1-11.

Buchanan, J.M., 1951. Criteria for government expenditure: Comment. *The Journal of Finance*, 6(4), pp. 440-442.

Central Bank of Nigeria, (various years). Annual Statistical Bulletin. Lagos: CBN Press.

Dang, D.Y., 2013. Revenue allocation and economic development: An empirical study. SAGE, p. 2.

Dunmoye, A., 2002. Resource control: Which way forward? *Newsletter of the Social Science Academy of Nigeria*, 5(1).

Ejeh, A.W. & Orokpo, O.F.E., 2014. *Research Centre for Management and Social Studies*, 2(1), pp. 37-45.

Ekpo, A. & Ndebbio, J., 1996. Fiscal operation in a depressed economy: Nigeria, 1960–90. Research Paper No. 44, AERC, Nairobi, Kenya.

Ewetan, O.O., 2012. Fiscal federalism in Nigeria: Theory and practice. *International Journal of Development and Sustainability*, 1(3), pp. 1075-1087.

Federal Government of Nigeria (FGN), 2010. Constitution of the Federal Republic of Nigeria (1999) as amended. Federal Ministry of Information and National Orientation, Abuja.

Ibezim, E.U., 1999. Political economy: Issues and problems in contemporary society. Onitsha: Hybrid Publishers Ltd.

Kaufmann, D., Kraay, A. & Mastruzzi, M., 2008. Governance matters VII: Aggregate and individual governance indicators 1996-2007. *Policy Research Working Paper Series*, 4654. The World Bank.

Martinez-Vazquez, J. & McNab, R.M., 2002. Cross-country evidence on the relationship between fiscal decentralization, inflation, and growth. In: National Tax Association (ed.), Proceedings of the 94th Annual Conference on Taxation, Washington D.C., pp. 42-47.

National Bureau of Statistics (NBS), (various years). Annual Abstract of Statistics, Abuja.

Ohiomu, S. & Dibie, K.E., 2014. Good governance as a panacea for rapid economic transformation and sustainable development in Nigeria. *International Policy Brief Series - Education & Science Journal*, 4(1), October. Available at: www.internationalpolicybrief.org.

Omotoso, F., 2010. Nigerian fiscal federalism and revenue allocation formula for sustainable development in Niger Delta. *Medwell Journals; The Social Sciences*, 5(3), pp. 246-253.

Saibu, M. & Adedokun, S., 2006. Fiscal federalism and the growth of the Nigerian economy.

Seer, D., 1969. The meaning of development. *International Development Review*, 11(4), pp. 3-4.

Seers, D., 1972. What are we trying to measure? *The Journal of Development Studies*, 8(3), pp. 21–36. https://doi.org/10.1080/00220387208421410.

Transparency International, 1996-2012. Reports on corruption.

UNESCAP, 2009. What is good governance? Available at: http://www.unescap.org/pdd/prs/ProjectActivities/ongoing/gg/governance.asp [Accessed 10 June 2024].

United Nations Development Program, 2015. Human Development Report. New York: Oxford University Press.

Usman, O., 2011. Fiscal federalism and economic growth process in Nigeria. *European Journal of Business and Management*, 3(4), pp. 1-3.

Woller, G.M. & Phillips, K., 1998. Fiscal decentralization and LDC economic growth: An empirical investigation. *Journal of Development Studies*, 55, pp. 139-148.

World Bank Group, 2016. World governance indicator. Available at: http://data.worldbank.org/indicator/NY.GNP.PCAP.PP.CD.

Yilmaz, S., 2000. The impact of fiscal decentralization on macroeconomic performance. In: National Tax Association (ed.), Proceedings of the 92nd Annual Conference on Taxation, Washington D.C., pp. 251-260.