An Analysis of the Effect of Fiscal Decentralisation on Economic Growth in Nigeria

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Abstract
The study analyses the effects of fiscal decentralization on the growth of the Nigerian economy from 1970 to 2009. Conflicting findings from empirical works on the subject prompted this study. A Barro type growth model, used by Aigbokhan (1999) was adopted and used in the study. Three measures of fiscal decentralization were defined and built in the model. Ordinary Least Square Method was applied to estimate the parameters of the model. The result shows that the variations in economic growth in the country are sufficiently explained by the variables in the model. From the three measures of fiscal decentralization used in the study, the result indicated that lower levels of governments depend heavily on the federal government for revenue. We recommend a constitutional amendment to devolve some of the high revenue yielding sources to the lower levels of government to improve their internal revenue base and for the government to strengthen measures for fighting corruption in public offices.

Keywords: Decentralization, Centralization, Economic Growth, Nigeria

Introduction
Decentralization suggests that the power which was held by the centre moves elsewhere and in literature, it takes different forms. These are: political decentralization, administrative decentralization, economic decentralization, structural decentralization and fiscal decentralization. Fiscal decentralization involves the existence in one country of more than one level of government, each with different expenditure responsibilities and taxing powers. The analysis of fiscal decentralization in relation to economic growth started with the pioneer publications of Tiebout (1956), Musgrave (1989) and Oates (1972). The main issues of concern regarding fiscal decentralization and economic growth are tax jurisdictions, expenditure responsibilities and resource allocation. These are areas that have attracted discussions and analyses in different parts of the world. Within the European Union (EU) member countries for instance, the intensive debate is on the reform of their public administration and the reallocation of public responsibilities between their tiers of governments (Markus, 2004).

Generally, empirical studies on fiscal decentralization and economic growth cover cross-country studies, mixed set of developing countries, set of least developed countries, individual country studies and the empirical results vary greatly within and across nations. In Nigeria, the current structure of fiscal arrangements consists of 36 states, a Federal Capital Territory (FCT) and 774 local government areas. The present structure evolved through many regime changes (between military and civilian), institutional changes and changes in some main political and economic events. Given the present fiscal arrangements in Nigeria, it is not clear empirically how it affects economic growth. Where as Chete (1998) found two fiscal decentralization indicators – sub-national fiscal autonomy and sub-national spending share to exhibit positive correlation between fiscal decentralization and economic growth, Aigbokhan (1999), obtained a negative impact of fiscal decentralization on economic growth in Nigeria. An empirical study of fiscal decentralization in relation to economic growth in Nigeria therefore becomes imperative.

Theoretical considerations
In this section, the conventional fiscal decentralization theory of Musgrave,(1989) and Oates(1972) is reviewed.
Musgrave (1989) suggests that public economic policy has three main functional objectives; (i) to maintain high and stable levels of employment and output- stabilization, (ii) to attain a desired distribution of income and wealth and (iii) to establish an efficient allocation of resources. The mainstream economists, drawing on the standard Musgrave model provide direction for sharing these functions among different levels of government.

Stabilization function entails the maintenance of full employment with stable prices. The primary responsibility for stabilization has conventionally been assigned to the central government. Smoke (2001) advanced three reasons why this function is assigned to the central government: (i) because of the obvious problems that would result if sub-national jurisdictions had independent control over their own money supplies. (ii) That local economies were considered highly open, so that the effects of local fiscal policy would be dissipated into other areas. (iii) Deficit finance policies at the local level have not been considered desirable because of concern that repayment would involve substantial real income transfers to creditors external to debtor jurisdictions. On the revenue side, the types of revenue sources considered most appropriate for local governments tend to be income inelastic, thereby constraining the ability of local governments to pursue developmental programmes effectively.

Given the changes in international macroeconomic environment, there is increasing recognition that decentralized levels of government can play a more important stabilization role in industrialized economies. Gramlich (1987) argued in the case of United States that the macroeconomic developments and large federal deficits of the 1980s (financed by externally held debt) have constrained the ability of the federal government to pursue countercyclical policy. He also demonstrated that state governments successfully played a greater stabilization role in the 1970s and the 1980s. It is not difficult, however, to justify stabilization as primarily a central government’s function in developing countries. First, macroeconomic fluctuations can be particularly severe in emerging economies, especially in agricultural countries subject to substantial and unpredictable climate variations and countries heavily dependent externally for basic production inputs, manufactured goods and credit. Under such conditions, stabilization policies must be planned and coordinated centrally.

The scope of an active redistributive function depends essentially on the existing degree of mobility of individuals and other economic resources. The fiscal federalism theory places principal responsibility for distribution with the central government. First, only the central government is in a position to redistribute resources from wealthier to poorer jurisdictions. Second, differential local redistribution programmes would be expected to create problems if factors of production were mobile. Wealthy residents and businesses might move out of a jurisdiction practicing redistribution, while poor individuals eligible for benefits would try to move in, thereby undermining the redistributive base. Third, local governments tend to have access to revenue sources that are not easily levied in a way that is progressive with respect to income. Although there have been challenges to the conventional recommendation that distribution be centralized, it is still generally accepted that decentralized governments are typically more constrained than the central government in altering the distribution of income.

The prescribed role of decentralized levels of government in the allocation function is substantial because demand for many public services is not likely to be uniform in a locality. Welfare gains would thus be enhanced through decentralization because residents in different jurisdictions could choose the mix of public goods and taxes that best conforms to their preferences. In the absence of a market and competitive pricing for public services, community-wide demand would be articulated through the collective decision-making process that is, voting. In this framework, decentralization is desirable not only because of preference differentiation, but also because expenditure decisions are tied more closely to real resource costs in smaller jurisdictions. In addition, when there are large numbers of decentralized governments, there is likely to be greater experimentation and innovation in the provision of local public goods, potentially leading to improvements in overall resource productivity.

Extensions of the logic of preference variation suggest that in a system where there are opportunities for mobility, people will move to an area where a local government provides their preferred mix of public services. This produces a market-like solution to the local service provision problem. Equilibrium occurs when people distribute themselves across differentiated communities in such a way that there is no incentive for anyone to move; everyone is satisfied with the services being provided in the jurisdiction in which they reside. There are important exceptions to the general rule of decentralizing to maximize allocative efficiency. Certain capital-intensive services, such as electric utilities and transportation systems, may exhibit economies of scale in production. In these cases, it is more efficient to provide services on a larger scale and over a wider area. In addition, the provision of some services, such as water and roads, may generate inter-jurisdictional externalities.
In such cases, resource allocation is more efficient when the service provision area is drawn such that externalities are internalized.

**Theoretical and Empirical Model**

Since previous studies indicate mixed results, the analytical framework of this paper is built on existing models with modifications. After Che (1998) and Aigbokhan (1999) and given the economic, political and institutional changes in the Nigeria, there need to empirically analyze the impact of fiscal decentralization on economic growth of the nation. The three approaches generally employed by authors in empirical works are: the growth model with different levels of government spending, informal growth regressions and cross-country growth accounting. Considering the three broad categories of models employed by researchers in this field of study, the growth model with different levels of government is the most appropriate for this paper on broader terms. Specifically, modifications are necessary to suit the Nigerian situation. This is particularly so because of the sources and the quality of available data which defines the needed variables.

We therefore adopt a Barro-type endogenous growth model, used by Aigbokhan (1999) for the study. The model assumes two sectors for an economy. These are the Private sector (P) and the public sector (G) and their output depends on labour (L) and Capital (K). Also, the output of G exercises some externality on the output in P. The production functions of the two sectors are stated as follows:

\[ G = g(L_g, K_g) \]

\[ P = p(L_p, K_g, G) \]

The subscripts g and p denote the public and private sectoral inputs respectively. Total inputs therefore are represented as

\[ L_T = L_p + L_g \]

\[ K_p = K_p + K_g \]

The total output (Q) comprises of output from P and G. Therefore;

\[ Q = P + G \]

Equation 5 implies that

\[ Q = L_T + K_T + G \]

\[ Q = p(L_p, K_p, G) + g(L_g, K_g) \]

Further more, the model assumes a federal state where G comprises of three levels, implying by extension that public spending is undertaken by three levels of governments. These are the federal (f), state(s) and local (m). Therefore,

\[ Q = f + s + m \]

The nature of intergovernmental fiscal arrangements would influence the output of G. By dividing G into three or introducing fiscal decentralization into the model, equation 8 becomes

\[ Q = L + K + G \]

\[ Q = L + K + FD \]

Where FD represents fiscal decentralization and equation 10 is stated on the ground that the size of G depends to some extent, on fiscal decentralization. The structural form of the basic growth equation takes the form:

\[ Q = \alpha_0 + \alpha_1 L + \alpha_2 K + \alpha_3 FD + \varepsilon \]

Where \( \alpha_0 \) is the constant term which incorporates the influence of technical progress on growth and \( \varepsilon \) is the error term.

An operational measure of fiscal decentralization is the share of decentralized expenditures and revenues of lower levels of governments in the country’s total fiscal activities. The methods of measurement however differ among scholars. Zhang and Zou (1996) measured it as the ratio of total expenditures of lower levels of governments in the nation to total central spending, while as Ebel, (2002) estimated it as the ratio of total sub-national governments own-source revenues over total national (federal plus sub-national) expenditures. Deducing from the forgoing, three measures of fiscal decentralization are used in this study. These are:

(i) Sub-national own source (internally generated) revenue as a ratio of total central (federal) revenue (FD_1).

(ii) Sub-national expenditures as ratio of total federal expenditures (FD_2).
(iii) Sub-national own source as a ratio of total federal expenditures (FD_3).

From the above measures, empirical models are specified as follows:

\[ Q_p = \beta_0 + \beta_1 L + \beta_2 K + \beta_3 FD_1 + \mu \]  
\[ Q_\alpha = \alpha_0 + \alpha_1 L + \alpha_2 K + \alpha_3 FD_2 + \mu \]  
\[ Q_\delta = \delta_0 + \delta_1 L + \delta_2 K + \delta_3 FD_3 + \mu \]

It is important to examine whether the results from the above models could be sensitive to other conditioning factors. Government investment ratio(R), defined as the ratio of total government investment to GDP was used. That was considered necessary since Nigeria depends heavily on oil revenue and the Nigerian government plays a leading role in the economy, therefore, her investment should naturally enhance economic growth. Therefore the basic equations are re-specified with R as a determining factor.

\[ Q_\gamma = \phi_0 + \phi_1 L + \phi_2 K + \phi_3 FD_1 + \phi_4 R + \mu \]  
\[ Q_\chi = \chi_0 + \chi_1 L + \chi_2 K + \chi_3 FD_2 + \chi_4 R + \mu \]  
\[ Q_\eta = \eta_0 + \eta_1 L + \eta_2 K + \eta_3 FD_3 + \eta_4 R + \mu \]

It is true that states and local governments’ creation affect government revenue and expenditure. The creation of additional states and local governments demands for more states and local government headquarters. These increase both capital and recurrent expenditures of governments, which also affect decentralization variables and subsequently impact on economic growth. As a result, the scope of the study is divided into two parts and equations 12 to 17 re-estimated to examine the impact of fiscal decentralization on growth within these periods. Part one is from 1970-1990, comprising 21 states and 449 local government areas, while part two is from 1991-2009, with 36 states, Federal Capital Territory (FCT) and 774 local government areas.

The variables of the model are defined as follows;

i) Aggregate output (Q) is the gross domestic product at current market prices.

ii) Gross fixed capital formation is used for capital. Its annual changes are taken as net investment.

iii) To obtain data for labour force in Nigeria is sometimes difficult. Aigbokhan (1999) used population figures as proxy for labour force. This approach includes the dependent population which is outside the labour force and could likely be misleading since it contains a high proportion of the total population. For this study, we add to the workers involved in trade disputes the registered unemployment data for professional/executive and lower grade workers to obtain data for labour force from 1970-2002. From 2003-2009, labour force figures are obtained directly from CBN Annual Report and Statement of Account, 2009.

iv) The revenue figures for states and local governments are from internally generated revenue. It reflects the tax assignments such governments have access to. For the federal level of government, it is the total federally collected revenue.

v) Government Expenditures (GE) are total expenditures by states and local governments, while for the federal; it is the direct federal expenditure. Transfers to sub-national governments are however excluded.

vi) FD_1, FD_2, and FD_3, remain as defined earlier.

The study uses secondary time series data, sourced mainly from CBN Annual Statistical Bulletin and Annual Reports & Statement of Accounts (various years) and the National Bureau of Statistics’ Annual Abstract of Statistics (various years). The Ordinary Least Square (OLS) method was applied to estimate the parameters of the models. Before the estimation of the models, the unit root test, using Augmented-Dickey-Fuller test was conducted.

**Results**

(i) Unit Root Test Results

The variables tested are those specified and defined in the equations. These are GDP, Labour (L), Capital (K), FD_1, FD_2, FD_3, and R. The results are summarily presented in Table 1 below.
Table 1: Test of Stationarity of Fiscal Decentration on Economic Growth.

**ADF-TEST**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Order of Integration</th>
<th>Critical Values</th>
<th>Computed values($t^*$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>Level</td>
<td>-3.6358 (1%)</td>
<td>4.67555</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-2.9499 (5%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-2.6133 (10%)</td>
<td></td>
</tr>
<tr>
<td>(K)</td>
<td>1 (1)</td>
<td>-3.6576 (1%)</td>
<td>4.02723</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-2.9591 (5%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-2.6181 (10%)</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>1 (1)</td>
<td>-3.6496 (1%)</td>
<td>-5.62800</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-2.9558 (5%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-2.6164 (10%)</td>
<td></td>
</tr>
<tr>
<td>FD1</td>
<td>1 (1)</td>
<td>-3.6422 (1%)</td>
<td>-4.94566</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-2.9527 (5%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-2.6148 (10%)</td>
<td></td>
</tr>
<tr>
<td>FD2</td>
<td>1 (1)</td>
<td>-3.6422 (1%)</td>
<td>-6.55311</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-2.9527 (5%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-2.6148 (10%)</td>
<td></td>
</tr>
<tr>
<td>FD3</td>
<td>1 (1)</td>
<td>-3.6422 (1%)</td>
<td>-4.94566</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-2.9527 (5%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-2.6148 (10%)</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>1 (1)</td>
<td>-3.6422 (1%)</td>
<td>-4.89917</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-2.9527 (5%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-2.6164 (10%)</td>
<td></td>
</tr>
</tbody>
</table>

Source: Computed by Authors

Note: If $t^* \geq ADF(\text{critical values}) \rightarrow$ Unit root exists
If $t^* \leq ADF(\text{critical values}) \rightarrow$ Unit root does not exist

As shown in the Table 1 above, GDP is stationary at level, implying that the series need not to be differenced. The rest of the variables, are all of order 1 (1) as indicated. They are differenced once in other to avoid the tendency of having spurious regression problem in the estimated equations.

(ii) Regression Results

This section presents the results of the regression equations. In the presentation, the first three equations are presented and interpreted, and the next three, containing variable R are presented and interpreted.

\[ GDP = -99954 - 0.078L + 19.28K + 275512FD1 \]
\[ (-0.541) (-0.492) (33.87) (-0.257) \]
\[ R^2 = 97\%, \quad DW = 1.17 \quad N = 34 \]

\[ GDP = -51646 - 0.0885L + 19.38K - 37497FD2 \]
\[ (-0.452) (-0.615) (30.84) (-0.415) \]
\[ R^2 = 97\% \quad DW = 1.26 \quad N = 34 \]

\[ GDP = -999538 - 0.078L + 19.28K + 275512FD3 \]
\[ (-0.541) (-0.492) (33.87) (0.251) \]
\[ R^2 = 97\% \quad DW = 1.17 \quad N = 34 \]

The results presented indicate that the variations in economic growth in Nigeria are sufficiently explained by the variables in the model. This is shown from the adjusted R square of 97% common to the three equations. While the coefficients of capital have positive signs as predicted by theory, and are statistically significant, labour shows negative impact on growth within the period under review. All the coefficients of labour in the three equations are negative and are statistically weak.

The three measures of decentralization are represented by FD1, FD2 and FD3. From the results presented, their coefficients have varied pattern. FD1 have positive relation between decentralization and economic growth.
However, the coefficient is statistically weak, given its t-ratio. FD2 which reflects another measure of fiscal decentralization shows a negative relation, meaning that decentralization did not enhance growth. The coefficient of the third measure, represented by FD3 is positive but statistically weak.

As pointed out earlier in the definition of variables, the quality of data used appears problematic. Under normal circumstances, the contribution of labour to growth should not be contrary to theoretical postulations. The challenge we have is that there is no standard time series data on total labour force or employment in the country. The problem of unreliability of data could be responsible for the negative coefficients of labour in the estimated results.

The results in the next set of equations is as presented:

\[
Q = -147250 - 0.0698L + 19.36K + 177507FD1 + 234033R
\]

\[
(-0.698) (-0.044) (32.42) (0.157) (0.49)
\]

\[
\overline{R}^2 = 97\% \quad DW = 1.16 \quad N = 34
\]

\[
Q = -115258 - 0.074L + 19.46K - 36987FD2 + 245578R
\]

\[
(-0.68) (-0.50) (29.11) (-0.40) (0.52)
\]

\[
\overline{R}^2 = 97\% \quad DW = 1.24 \quad N = 34
\]

\[
Q = -180740 - 0.50L + 19.339K + 636983FD3 + 96932R
\]

\[
(0.93) (-0.32) (32.56) (0.53) (0.18)
\]

\[
\overline{R}^2 = 97\% \quad DW = 1.15 \quad N = 34
\]

The results are presented with government investment ratio (R) as an additional factor. The adjusted R square is the same (97%) in the three equations. Labour still indicates negative relation with growth, -0.0698, -0.074 and -0.05 from the three equations. Their respective t-ratios show that the coefficients are statistically weak. Capital indicates positive relation from the three equations. The coefficients of the variable from the equations are statistically significant. The decentralization coefficients show similar pattern with the previous results. The coefficients of FD1 and FD2 maintain negative signs and still statistically weak. The variable R is positive in the three equations, implying that the ratio of government investment to GDP contributes positively to economic growth. The coefficients are, however, not statistically significant.

The results generally show that economic growth in Nigeria decreases with increased decentralization within the period covered by the study.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Equation 1</th>
<th>Equation 2</th>
<th>Equation 3</th>
<th>Equation 4</th>
<th>Equation 5</th>
<th>Equation 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>23615.1 (0.73)</td>
<td>15636 (0.64)</td>
<td>19868 (0.63)</td>
<td>35619 (0.84)</td>
<td>533331 (1.23)</td>
<td>35619 (0.84)</td>
</tr>
<tr>
<td>L</td>
<td>-0.021 (-1.09)</td>
<td>-0.005 (-0.25)</td>
<td>-0.022 (-1.09)</td>
<td>-0.023 (-1.14)</td>
<td>-0.0008 (-0.04)</td>
<td>-0.02 (-1.14)</td>
</tr>
<tr>
<td>K</td>
<td>12.39 (6.72)</td>
<td>13.31 (8.61)</td>
<td>12.59 (7.10)</td>
<td>11.99 (5.67)</td>
<td>12.26 (6.67)</td>
<td>11.99 (5.67)</td>
</tr>
<tr>
<td>FD1</td>
<td>-125717 (-0.90)</td>
<td></td>
<td>-131594 (-0.87)</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>FD2</td>
<td>-44829 (-0.95)</td>
<td></td>
<td></td>
<td>-72930 (-1.34)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FD3</td>
<td></td>
<td>-117616 (-0.80)</td>
<td></td>
<td>-35658 (-0.57)</td>
<td>-72364 (-1.05)</td>
<td>-35658 (-0.57)</td>
</tr>
<tr>
<td>R</td>
<td></td>
<td></td>
<td></td>
<td>-35658 (-0.57)</td>
<td>-72364 (-1.05)</td>
<td>-35658 (-0.57)</td>
</tr>
<tr>
<td>$\overline{R}^2$</td>
<td>79%</td>
<td>79%</td>
<td>79%</td>
<td>78%</td>
<td>79%</td>
<td>78%</td>
</tr>
<tr>
<td>DW</td>
<td>1.71</td>
<td>1.11</td>
<td>1.43</td>
<td>1.59</td>
<td>1.34</td>
<td>1.58</td>
</tr>
<tr>
<td>F</td>
<td>25.15</td>
<td>25.29</td>
<td>24.83</td>
<td>17.91</td>
<td>19.37</td>
<td>17.91</td>
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<tr>
<td>N</td>
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<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
</tbody>
</table>

Note: t-ratios are in parentheses
Source: Computed by Authors

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The results of the first part of the scope of the study are presented in Table 2. The table shows the variables of the models and the six equations. The coefficients of the variables are reported with their respective t-ratios in parenthesis. The adjusted R square is 79% for each of the six equations, implying that 79% of the variations in economic growth are explained by the variables in the models. The signs of the coefficients of labor from the six equations are negative and statistically insignificant. For capital, the signs from the six equations are positive and statistically significant. The coefficients of FD1, FD2, FD3, and R are all negative. These results clearly indicate that fiscal decentralization negatively impacts growth from the specified period.

Table 3: Regression Results of Fiscal Decentralization on Economic Growth (1991-2009).

<table>
<thead>
<tr>
<th>Variables</th>
<th>Equation 1</th>
<th>Equation 2</th>
<th>Equation 3</th>
<th>Equation 4</th>
<th>Equation 5</th>
<th>Equation 6</th>
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<td>Constant</td>
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<td>-1614524</td>
<td>-897405</td>
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</tr>
<tr>
<td></td>
<td>(-0.071)</td>
<td>(-0.43)</td>
<td>(-0.07)</td>
<td>(-0.87)</td>
<td>(-0.99)</td>
<td>(-0.88)</td>
</tr>
<tr>
<td>L</td>
<td>-0.18</td>
<td>-0.20</td>
<td>-0.18</td>
<td>-0.44</td>
<td>-0.30</td>
<td>-0.44</td>
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<tr>
<td></td>
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<td>(-0.34)</td>
<td>(-0.33)</td>
<td>(-0.71)</td>
<td>(-0.55)</td>
<td>(-0.71)</td>
</tr>
<tr>
<td>K</td>
<td>20.4</td>
<td>20.2</td>
<td>20.4</td>
<td>18.31</td>
<td>20.11</td>
<td>18.31</td>
</tr>
<tr>
<td></td>
<td>(8.82)</td>
<td>(12.46)</td>
<td>(8.82)</td>
<td>(5.65)</td>
<td>(12.29)</td>
<td>(5.65)</td>
</tr>
<tr>
<td>FD1</td>
<td>-3992027</td>
<td>-62963</td>
<td>-3992027</td>
<td>10466737</td>
<td>-86518</td>
<td>10466737</td>
</tr>
<tr>
<td></td>
<td>(-0.28)</td>
<td>(-0.40)</td>
<td>(-0.278)</td>
<td>(0.49)</td>
<td>(-0.54)</td>
<td>(0.49)</td>
</tr>
<tr>
<td>FD2</td>
<td>-3992027</td>
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<td>9437501</td>
<td>6364598</td>
<td>9437501</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-0.28)</td>
<td>(0.93)</td>
<td>(0.93)</td>
<td>(0.91)</td>
<td>(0.93)</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td></td>
<td>94%</td>
<td>94%</td>
<td>94%</td>
<td>94%</td>
<td>94%</td>
</tr>
<tr>
<td>DW</td>
<td>1.24</td>
<td>1.47</td>
<td>1.24</td>
<td>1.34</td>
<td>1.50</td>
<td>1.34</td>
</tr>
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<td>F</td>
<td>65.78</td>
<td>66.35</td>
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Note: t-ratios are in parentheses

Source: Computed by Authors

The results of the impact of decentralization on growth between 1991-2009 as presented in Table 3 is not too different from the results in Table 2. The coefficients of labor are negative in all the six equations and are statistically weak. Those of capital are positive and the magnitudes of the coefficients are higher than those from 1970-1990. The adjusted R square is as high as 94% for all the equations except equation 4 which has the adjusted R square of 95%. The coefficients of fiscal decentralization variables in the first three equations are all negative, implying that decentralization within this period contributes nothing to growth. When R was included as a determining factor (Equations 4-6), the results tended to be slightly different. While FD2 remains negative, FD1 and FD3 are positive, though the coefficients are statistically weak. Unlike the results from 1970-1990, the coefficients of R in the results in Table 3 are positive, meaning that this ratio contributes well to economic growth within this period. On the general note, it is clear that in the period from 1991-2009, fiscal decentralization did not contribute positively to economic growth in Nigeria.

Other Contributory Factors to Negative Growth

Certain factors which are not directly captured in the fiscal decentralization model have contributed directly or indirectly to the regression results obtained. Theoretically, the quality of governance and corruption affect economic growth. It was observed that where fiscal matters are decentralized; corruption rises while quality of government diminishes, leading to a decrease in economic growth. In literature, it is accepted that corruption retards growth, but as for the level of government that is considered more corrupt is an issue of disagreement. Prud’homme (1995) and Tanzi (1995) for instance, argued that corruption is likely to be more at sub-national levels than at national levels. According to them, the absence of armed length relationship is assumed to be more pronounced at lower levels than at the national. On the other hand, Susan (2006) opined that by virtue of their limited powers, it is difficult for local officials to engage in enormous corruption schemes; where as a corrupt minister of a central government may be able to do massive harm.
In Nigerian situation, the menace of corruption is at all levels of government. However, because of their limited fiscal assignments, sub-national governments may have limited resources at their disposal to engage in massive corruption as to have a noticeable impact on growth. Evidences from activities of the anti-corruption organizations in the country indicate that, officials at the national level usually engage in more massive corrupt activities that would have substantial impact on growth. The extent and the dimension are however, subject to empirical investigation. So, corruption is a contributory factor for the observed negative impact of fiscal decentralization on economic growth in Nigeria.

The issue of quality of governance is also pronounced in the country. It is obvious that the federal government attracts more qualified manpower as she offers better careers and remunerations. The scarcity of local skilled manpower may constrain the positive effect of decentralization. That, according to Aigbokhan (1999) accounts for the weakness in public expenditure systems in Nigeria. At the lower levels of governments, budget offices lack skilled manpower that is capable of forecasting expected revenue and spending as well as budgetary classification which allow the controlling authorities to determine whether funds are usually spent as budgeted or not.

In addition, the nature of decentralization practiced in Nigeria could account for its negative impact on growth. The administrative decentralization carried out through continued state and local government creation is not matched by corresponding fiscal decentralization. It is noted also that the administrative infrastructure is not sufficiently developed to accommodate the intended administrative decentralization. All these have accounted for the negative impact of decentralization on economic growth in Nigeria.

Conclusion and Recommendation

Three different measures of fiscal decentralization were used in the study.

\[ \text{FD}_1 = \text{Sub-national own revenue as ratio of total federal revenue}, \]
\[ \text{FD}_2 = \text{Sub-national expenditure as ratio of total federal expenditure and} \]
\[ \text{FD}_3 = \text{Sub-national own source as ratio total federal expenditure}. \]

The summary of the results revealed that \( \text{FD}_1 \) has positive impact on economic growth in the country in the period under review, but it is statistically insignificant. That is true since the internally generated revenue of the sub-national governments is low. The reasons are the low revenue yielding sources of the lower levels of governments, institutional provision which makes high revenue yielding sources exclusive reserve of the Federal Government, corruption and no aggressive efforts by the sub-national governments to improve their internally generated revenue. Due to these reasons, the internally generated revenue of the sub-national governments is low, hence, the insignificant contribution to economic growth. \( \text{FD}_2 \) from the estimated results is negative and statistically insignificant. By this result, the indication is that, sub-national expenditures are so huge in relation to the available resources. That accounts for the almost total dependence of the lower levels of governments on the Federal Government. That also explains why, once allocations from the Federal Account delays, the functioning of lower levels of governments are distorted. It implies also that there is a serious mismatch between fiscal responsibilities and resource allocations at the lower levels of governments in Nigeria. \( \text{FD}_3 \) also has its coefficient statistically insignificant, meaning that this measure of fiscal decentralization too does not contribute to economic growth of the country.

These results generally show that, fiscal decentralisation has negative impact on economic growth in Nigeria in the period under review. Even when the period was divided into two, from 1970-1990 and 1991-2009, findings in the two sub-periods are still same, that fiscal decentralization do not contribute significantly to economic growth in the country.

Based on the above, we recommend that some of the high revenue yielding sources be devolved to lower levels of governments to improve on their internal revenue earnings. That is a constitutional issue but it has to be done to address the almost total dependence of the sub-national governments on the federally collected revenue. We also recommend that anticorruption crusade in the country be pursued with greater vigor. The Economic and Financial Crimes Commission (EFCC) and Independent Corrupt Practices Commission (ICPC) be properly positioned and equipped to curtail corruption in public offices.
References


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