Utilization of Internally Generated Revenue on Structural Development in Ebonyi State

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ABSTRACT

The paper evaluated impacts of Internally Generated Revenue (IGR) utilization on structural development in Ebonyi State. It explicitly seeks to discover the degree of contributions of the IGR to infrastructural development like road, water plus educational infrastructure. This study used secondary data extracted from the audited financial reports from the office of the Auditor-General for 1996-2014. The study employed simple regression analysis to test the hypothesized variables and using this research design to analyze the data, it showed p-value of 0.578>0.05 Road Infrastructure (RDI), p-value of 0.38<0.05 Educational Infrastructure, and p-value of 0.033<0.05 Water Infrastructure at 0.05 alpha level of significance. It was discovered that IGR has insignificant impact on Road infrastructure but significantly impacted on Educational and Water infrastructure. It is therefore concluded that IGR has made positive but uneven distribution to the development of infrastructure in the State as some aspect like water and educational infrastructure is seen to have received more boost than road infrastructure. The study recommends that Ebonyi State government should identify the material causes of bad road network, the use of tax consultants is recommended for efficient and effective collection of IGR, as the continued use of unskilled staff in the SBIRS can do little to maximize IGR collection.

Keywords: Educational infrastructure, IGR, Infrastructural development, Road Infrastructure, Taxation, Water infrastructure.

Introduction

Generation of revenue is the focus or recent economic growth strategy. Financial disproportion has been the bane of the Nigerian economy more especially since the oil boom from 1970 when the non-oil revenue sources collapsed into the crude oil booming experience, constituting around 80% of the financial main stream, (Igwe, 2004) Internal sources of revenue are germane to the raising of government revenue to cater for the government expenditure. Oteh (2010) confirms that infrastructure is needful for expansion of the economy as physical assets and services. This is because it raises the standard of living of the populace. Taxation is a foundation and more stable base of income for the government compared to the unsteady crude oil price in the international market beyond the scope and manipulation of the domestic economy, (Oteh, 2010).

Kiabel and Nwokah (2009) claim that at the different levels, government move their focus to other cradles of revenue given the high cost of administration and diminishing crude oil income in order to grow the economy. Ebonyi State is not left out in the drive to raise the much required revenue to bring about infrastructural development, both as it touches planning, execution and maintenance of infrastructure. Basic amenities such as roads, publicly owned schools, public healthcare units, bridges and flyovers sum to the up-to-date development needed by the State.

Anyafot (1996) explains revenue as the money realized by the individuals or government to meritoriously carry out their financial activities for a stated period of time. Infrastructural development of any state is usually perceived as a metric to appraise the economy of that state and the wellbeing of its residents, which is the reason relevance of
infrastructure in a state, cannot be over-stressed. Statement of the Problem

There is poor percentage of Gross Domestic Product (GDP) occasioned by poor internally generated revenue in Ebonyi State. Ill-equipped board of internal revenue leads to unpopular methods of revenue collection, added to discouraging attitude of tax officials: absence of commitment, fraudulence and exploitative behaviours; combine with inadequate machineries touching tax assessment, collection and remittance to slow the pace of infrastructural development. Without escaping, poor road networks has resulted in nonstandard imperfections resources distribution and untold hardship in the State; (Umah, Onwusogbulu and Gorge, 2014).

Indescribable low quality of education in Ebonyi State is not far from the foregoing predicaments. Vocational and technical training notwithstanding its novelty is spreading the yawning gap between education and employability in the State (Usman, 2016; Theobald, Ochekpe and Sanni, 2007).

The abandonment of Ukawu and Oferekpe water schemes support the visible presence of infrastructural deficiencies in the area; which dams are capable of supplying clean water to the nook and cranny of the State. It is against these backdrops that this study is embarked on to investigate the interplay between IGR and structural improvement in the region.

Objectives of the Study
1. To investigate impacts of internally generated income on structural improvement measured by annual expenditure on road infrastructure in Ebonyi State.
2. To determine how internally generated revenue affect annual expenditure on educational infrastructure in Ebonyi State, Nigeria.
3. To determine how internally generated revenue affect annual expenditure on water infrastructure in Ebonyi State, Nigeria.

Research Questions
1. To what extent does internally generated revenue affect annual expenditure on road infrastructure in Ebonyi State, Nigeria?
2. How does internally generated revenue affect annual expenditure on educational infrastructure in Ebonyi State, Nigeria?
3. What are the effects of internally generated revenue annual expenditure on water infrastructure in Ebonyi State, Nigeria?

Statement of Hypotheses
1. $H_{01}$: Internally generated revenue does not significantly affect annual expenditure on road infrastructure in Ebonyi State, Nigeria.
2. $H_{02}$: Internally generated revenue does not significantly affect annual expenditure on educational infrastructure in Ebonyi State, Nigeria.
3. $H_{03}$: Internally generated revenue does not significantly affect annual expenditure on water infrastructure in Ebonyi State, Nigeria.

Review of Literature

Conceptual Framework

Road Infrastructural Development

Usman, (2016) acknowledges that 'infrastructure is hard component that comprises all systems of urban physical structure that are mainly laid under the ground.' Mitigation of poverty through roads infrastructure is viewed as catalyst in the art of growing the economy (Rostow, 1962 and Usman, 2016).

Usman (2016), concedes that 'the World Bank (2007) and leading donor communities have labelled improvement of roads as an instrument of poverty alleviation in developing nations. Improvement of roads will have far reaching effects on agricultural productivity. The African Development Bank (ADB) (2010) estimates that 34% of rural Africa [where 80% of the citizens dwell] can access roads'. Usman, (2016) argues that 'studies on the impacts of road infrastructure in Asia and Latin America have shown positive impacts on a number of outcomes: reduction in poverty levels (Gibson & Rozelle, 2003; Jalan & Ravallion, 1998; Van De Walle & Mu, 2011), alteration of land use (Jacoby, 2000), increased household income and consumption (Escobal and Ponce, 2003; Jalan and Ravallion, 2002; Khandker et al., 2006), investments in health and education(Lokshin and Yemtsov, 2003); crop intensification'.

Estimating the impact of infrastructure improvement in Ebonyi State, especially roads, is
challenging due to data limitations and methodological constraints. Past studies have documented that 'bene? ts due to roads improvement are indirect and often dependent on interactions with other contextual factors such as physical infrastructure and the geographical, community and household characteristics' (Fan & Zhang, 2004; Van De Walle, 2009, Usman, 2016).

Usman, (2016) argues that road infrastructure is weighty for the services it provides. It is central to the fabrication process and raises the output of other areas. It is understood to be a means of linking goods to the markets, workforces to industry, people to facilities and the poor in rural areas to cities. Transport denotes the supply scheme enabling people and goods to move within a distinct area. It involves classic infrastructure, means of transportation and processes; while operations are the way in which infrastructure and vehicles are ran, and also the aiding setting like financing, legal frameworks and policies; (Usman, 2016). According to the work, improving road infrastructure supports communal and economic expansion, increased movement and corporeal accessibility to possessions and markets. Improvement of road infrastructure reduces transportation fares. The more transport charges reduces is the more output supply increases.

**Educational infrastructural Development**

Onuma (2016) claims education in all ramifications world over is viewed as the most important instrument of social change in any society. In this respect, the Federal Government of Nigeria (FRN, 2012) maintains that 'education is a veritable tool for social change national integrations, adding that efforts shall be made to relate education to overall needs of Nigeria'. Onuma (2016) insists that accomplishment of the above intention is a function of the quality of education offered to the citizenry especially in secondary schools in Nigeria.

Students are prepared for usefulness in the society through the wide objective of Nigerian secondary education (FRN, 2012); which is still a mirage in the State probably for lack of fund. The study confirms that 'qualitative education attainment is correlated to teachers and students' management, curriculum and supervision, motivation, finance, infrastructure, technological facilities. The study presents that Ford Foundation streamlined Senior Secondary Education Curriculum reform useful for achievement of functional educational practice necessary for employability and entrepreneurship'. This is consequent upon laborious appreciation of vocational and technical know-how within the secondary school landscape.

**Water Infrastructural Development**

Investing in water infrastructure can positively affect economic evolution, employment and quality of life. Water is essential to everything we do. Every household and business in every community depends on water and wastewater services. Enhanced essential benefits from investing in water infrastructure will extend to more jobs.

CH2M (2017) reports that 'closing the water infrastructure investment gap in America would create jobs and strengthen the economy'. According to the analysis, '$82 billion per year needed to meet the nation's water infrastructure need would create 1.3 million jobs and spur total economic activity to $220 billion annually. The report's findings make it clear that investments in water infrastructure generate high quality jobs, increase the competitiveness of American businesses, and leads to a significant injection of economic activity throughout the nation'. It can be inferred from the statement above that the presence of these facilities explained is essential to the fiscal and societal growth of a state.

**Theoretical Review**

**Fiscal Decentralization Theory (FDT)**

Theoretically, this study is backed up by the Fiscal Decentralization Theory (FDT) originally advocated by Oates in 1972, and further propagated by several authors. FDT posits a socio-economic structure that dissolves a central system by increasing the involvement and influence of sub-level governments in the economic policy making which empowers the masses to have a more direct access to the benefits of the state.

The theory is built on assumptions that the involvement of sub-level government should increase the social welfare and in case of centralization, distribution of public goods to other level should be uniform. The basic components of FDT provide reasons concerning decentralization of social amenities, thus:

1. The distribution of public goods by sub-level government within its area is preferred to the
distribution of goods by the central government which will lead to a less direct focus on the masses which could result in inefficiency of deserved distribution within the area.

2. In decentralization, it is assumed that the merits from the use of public goods and services are restricted only to the residents of that area and have no effect on the welfare of other residents outside the border of where the goods are provided.

3. Decentralization will lead to inter-regional competition which will result in the efficiency of the provision of public goods and services. In decentralization, the possibility of economic gains in a case of provision of goods and services are strengthened by the uniqueness of consumer flexibility.

4. Finally, in a decentralized economy allocation functions can bring about effective levels of public output because standard expenditure decisions can be closely related to the actual cost of that resource.

Empirical Review

Nnanseh and Akpan (2013) investigated the effects of internally generated revenue on infrastructural development in AkwaIbom State for stated infrastructures like road, water and electricity. The study used simple percentage statistics to analyze the data and simple regression statistics to test the hypothesis; the paper discovered uneven contributions to infrastructural development in the areas of road water and electricity.

Another research carried out by Nkanor and Udu (2016) reviewed 'the effects of electronic internally generated revenue (e-IGR) on Infrastructural development of Ebonyi State for a period of four (4) years'. The study suggests a low effect of IGR on infrastructural development in the State.

Ihedinihu, Jones and Amapsibanichuka, (2014) did a work on 'the relationship between the revenue generated from tax and economic growth in Nigeria during the year 1986-2012'. The study employed regression analysis to analyze the data and documents a significant effect of tax revenue on economic growth in Nigeria.

On a study by Adenugba and Ogechi (2013) about the effects of internal revenue generation on infrastructural development, Lagos State; using descriptive and inferential statistics and applying simple percentage and spearman rank respectively; it was found that there is a positive significant association between IGR and Infrastructural development in the State.

Abiola and Ehigiamuose (2014) reviewed the analysis of internally generated revenue and its implication on the fiscal viability of State government in Nigeria using the Descriptive approach and there was a direct relationship between the growth rates of IGR and capital expenditure. Ekankumo and Braye (2011) reviewed stimulating internally generated revenue by sub-national governments in Nigeria. The study discovered the failure of the use of taxation as the major source of internal revenue but revisited the entrepreneurial option as the only viable means to sustainable development.

Madugba and Joseph (2016) carried out a study on the relation involving value added tax and economic development in Nigeria; using the multiple regression model, demonstrated a significant and positive association encompassing total consolidated revenue and gross domestic product.

Mohammed, Ahmed and Saliiu (2015) studied the relationship between expenditure and internally generated revenue in Adamawa's State Local government using pooled regression method and discovered a significant relationship between government expenditure and internally generated revenue of Adamawa state government.

In their study on the impacts of taxation on revenue generation in Nigeria, Afuberoh and Okoye (2014) collected and analysed data using regression analysis computed with the aid of SPSS version 17.0 found that taxation has a significant influence on GDP.

These extant works as arrayed above did not concentrate on effects of IGR on infrastructural development, and even where they did similar study, did not carry out the work on Ebonyi State, Nigeria, hence, the gap in knowledge which necessitated this research on the years under review.

Methodology

Regression analysis is used to describe the effect of the variables on each other and to make predictions regarding the relationships. Secondary data extracted from financial reports from the Office of
the Auditor General for the State for several years (1996-2014) were used in the study. The independent variable of this study is internally generated revenue. Road, Educational and Water Infrastructures are proxies for infrastructural development in the study. The model used is as follows:

Infrastructural development (RDI, WTI, EDI) = f( Internally Generated Revenue, IGR).

Model Specification

$$RDI_{it} = a_0 + a_1IGR + u_{it}$$
$$EDI_{it} = a_0 + a_1IGR + u_{it}$$
$$WTI = a_0 + a_1IGR + u_{it}$$

Where:

- RDI = Road Infrastructure
- EDI = Educational Infrastructure
- WTI = Water Infrastructure
- $a_0$ = intercept of a regression line
- $a_1$ = regression coefficient of IGR
- $u_{it}$ = error term

Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>IGR</td>
<td>5052381644</td>
<td>676040426</td>
<td>462572</td>
<td>1978457084</td>
</tr>
<tr>
<td>RDI</td>
<td>4495778583</td>
<td>747521053</td>
<td>17868814</td>
<td>4628498559</td>
</tr>
<tr>
<td>EDI</td>
<td>676040426</td>
<td>1917192381</td>
<td>5641500</td>
<td>6155759436</td>
</tr>
<tr>
<td>WTI</td>
<td>1340580231</td>
<td>72748875134000484</td>
<td>5300000</td>
<td>724336678469885000</td>
</tr>
</tbody>
</table>

From the table above, the mean values of the variables, Internally-generated revenue, Road Infrastructure, Educational Infrastructure, and Water Infrastructure are 5052381644, 4495778583, 676040426, and 1340580231, respectively. Standard deviations are shown as 6078597731, 4628498559, 747521053, and 1917192381 respectively. A high standard deviation depicts widely spread data (less reliable) while a low standard deviation confirms that the data are clustered closely around the mean (more reliable).

Testing of Hypotheses

1. \( H_0: \) Internally generated revenue does not significantly affect annual expenditure on road infrastructure in Ebonyi State, Nigeria.

Interpretation

From table 1 above, the correlation coefficient (r) of 0.150 shows a positive but very weak relationship between internally generated revenue and annual expenditure on road infrastructure in Ebonyi State Nigeria. The R squared value of 0.023 depicts that internally generated revenue account for only 2% of the changes in road infrastructure in Ebonyi State, Nigeria.

Table 3 showing t-value and p-value (significance) of 2.595 and 0.578> 0.05 indicates that the result is insignificant at the 0.05 alpha level of significance. Put differently, internally generated revenue has no significant impact on annual expenditure on road infrastructure in Ebonyi State, Nigeria. To still underscore the level of insignificance of the relationship, the adjusted R shows a negative value of -0.047. Based on the foregoing, it is ideal to conclude that there is enough evidence to accept the null hypothesis that internally generated revenue does not significantly affect annual expenditure on road infrastructure in Ebonyi State, Nigeria.

Research Hypothesis Two:

\( H_2: \) Internally generated revenue does not significantly affect annual expenditure on educational infrastructure in Ebonyi State, Nigeria.
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Table 4: Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.530(^a)</td>
<td>0.285</td>
<td>0.237</td>
<td>0.210</td>
</tr>
</tbody>
</table>

\(^a\) Predictors: (Constant), Internally Generated Revenue

Table 5: ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>22768166501141</td>
<td>1</td>
<td>2276816650114</td>
<td>5.537</td>
<td>0.038(^b)</td>
</tr>
<tr>
<td>Residual</td>
<td>55462115117264</td>
<td>13</td>
<td>4266316547481</td>
<td>0.090</td>
<td>0.653</td>
</tr>
<tr>
<td>Total</td>
<td>7823081618406</td>
<td>14</td>
<td>8929000000</td>
<td>0.090</td>
<td>0.653</td>
</tr>
</tbody>
</table>

\(^a\) Dependent Variable: Educational Infrastructure
\(^b\) Predictors: (Constant), Internally Generated Revenue

Table 6: Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>13578592.5</td>
<td>0.00</td>
<td>1.00</td>
<td>0.334</td>
</tr>
<tr>
<td>Internally Generated Revenue</td>
<td>15346798</td>
<td>539</td>
<td>2.310</td>
<td>0.038</td>
</tr>
</tbody>
</table>

\(^a\) Dependent Variable: Educational Infrastructure

Interpretation

From table 4 above, the correlation coefficient (r) of 0.539 shows a positive and strong relationship between internally generated revenue and annual expenditure on educational infrastructure in Ebonyi State, Nigeria. The R squared value of 0.285 shows that internally generated revenue accounts for up to 29% of the variations in annual expenditure on educational infrastructure in Ebonyi State, Nigeria. Table 6, shows t-value of 2.310 and 0.038< 0.05 showing a significant result at 0.05% alpha level. In other words, internally generated revenue has a significant impact on annual expenditure on educational infrastructure in Ebonyi State, Nigeria. To buttress the effect of the relationship, the adjusted r square shows a positive value of 0.237. Based on the foregoing, there is enough evidence to reject the null hypothesis and accept the alternative hypothesis that internally generated revenue significantly affects annual expenditure on educational infrastructure in Ebonyi State, Nigeria.

Research Hypothesis Three:

\(H_3\): Internally generated revenue does not significantly affect annual expenditure on educational infrastructure in Ebonyi State, Nigeria.

Table 7: Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.534(^a)</td>
<td>0.285</td>
<td>0.234</td>
<td>0.210</td>
</tr>
</tbody>
</table>

\(^a\) Predictors: (Constant), Internally Generated Revenue

Interpretation

From table 7 above, the correlation coefficient (r) of 0.534 shows a positive and strong significant relationship between IGR and annual expenditure on water infrastructure. The R squared value of 0.285 shows that IGR accounts for 29% of the variations in annual expenditure on water infrastructure in Ebonyi State, Nigeria. Table 8, shows t-value of 2.361 and 0.033< 0.05 depicting that the result is significant at 0.05% alpha level of significance. In other words, IGR has a significant impact on annual expenditure on water infrastructure in Ebonyi State, Nigeria. To buttress the effect of the relationship, the adjusted r square shows a positive value of 0.234. Based on the foregoing, there is enough evidence to reject the null hypothesis and accept the alternative hypothesis that internally generated revenue significantly affects annual expenditure on water infrastructure in Ebonyi State, Nigeria. By this result and decision it implies that research question three has been appropriately answered and the research objective three successfully achieved.
Discussion of findings
The hypothesis one was tested to determine the effect of internally generated revenue on road infrastructure in Ebonyi State, Nigeria. IGR has shown to have an insignificant effect on the road infrastructure in the state accounting for insignificant variations in the dependent variable, leaving 98% to be accounted for by other factors outside the model.

Hypothesis two tested the effect of IGR on educational infrastructure and the result showed a 29% rate of accountability of the changes in educational infrastructure in the State. This means that other variables not captured in the model may have contributed up to 71% of the changes in educational infrastructure in the state. The findings of the hypothesis indicated a strong relationship between IGR (54%) and educational infrastructure, (p-value of 0.038 < 0.05) on educational infrastructure in Ebonyi State.

Hypothesis three tested the effect of IGR on water infrastructure in Ebonyi State, Nigeria; and the result revealed a significant effect on the water infrastructure. It illustrates 29% of the variations in water infrastructure showing that other variables contributed up to 71% of the variations in educational infrastructure in the state.

In summary, the findings of the hypothesis depict that there is a strong relationship between IGR and water infrastructure in Ebonyi State, Nigeria.

Conclusion
This study was conducted to evaluate the impact of internally generated revenue on infrastructural development in Ebonyi State, between 1996 and 2014. Simple regression analysis was adopted for the purpose of this study; and the findings have shown that internally generated revenue significantly affects infrastructural developments. However, internally generated revenue exerts insignificant influence on road infrastructure but significantly impacts educational and water infrastructural development in Ebonyi State.

The study has enough evidence to conclude that IGR does not impact significantly on road infrastructural development but exercises reasonable influence on educational and water infrastructural development. The study accurately proposes that backwardness in road infrastructural development is not attributable to internally generated revenue in Ebonyi State but significantly influences the condition of educational and water infrastructural development in Ebonyi State.

Recommendations
Since more IGR collection will attract massive infrastructural development in the State, the use of tax consultants is recommended for efficient and effective collection of IGR, as the continuous use of unskilled staff of the State Board of Internal Revenue Service can do very little to maximize IGR collection. For effective use of IGR, there should be equality in its allocation towards infrastructural development in the State. The state is also advised to watch out for ways of increasing IGR to ensure advancement in educational and water resource development in the state.

References


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