Internally Generated Revenue and Infrastructural Development in Akwa Ibom State, Nigeria

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Abstract

Public revenue is utilized for the welfare of the citizens of a nation. In Nigeria, public revenue is derivable from the statutory allocation from the federation accounts and internally generated revenue. This study assessed the relationship between internally generated revenue and infrastructural development, in the form of capital expenditure in Akwa Ibom State, for the period 2007- 2020. The objective was to ascertain the contribution of internally generated revenue to infrastructural development on health, education, and sanitation. The ex post facto research design was adopted, where secondary data were obtained from the office of the Accountant General of Akwa Ibom State. The data were analyzed using simple regression analyses to test the hypotheses. It was found that internally generated revenue (IGR) has a positive relationship with infrastructural development in the State, showing a positive and significant relationship with development in education, and an insignificant but positive relationship with health and sanitation. Consequently, it was concluded that a balanced approach to internally generated revenue (IGR) appropriation to the infrastructural development in all the areas was absent. It was therefore recommended that internally generated revenue (IGR) allocations should be redirected to infrastructural development on health and sanitation since health and sanitation are directly linked to the life of every citizen of the state. This will bring about a balanced approach to the appropriation of revenue on capital expenditure which can motivate citizens to pay their taxes regularly and avoid tax evasion.

Keywords: Internally generated revenue, infrastructural development, capital expenditure.

1.0 Introduction

The primary means through which States in Nigeria develop their social contract and infrastructure is through internally generated revenue (IGR). It enables the government to act responsibly and to make the choices necessary to meet the fundamental demands of the populace. Akwa Ibom State's IGR primarily comes from local taxes, licenses and fees. It is crucial for budgeting and a potent fiscal instrument for guiding and energizing the economy. Therefore, when the State government generates more revenue domestically, more projects get funded, more money is in circulation, more jobs are available, more business opportunities arise, and the quality of life improves. It is important to note that IGR serves as a tool for infrastructural development (Olayinka & Irewole, 2019).

Every state of the federation has the potential to be self-sufficient if only it can adequately harness its potential. The reduction in global oil prices and volume of demands has made diversification of the Nigerian economy from over-dependence on oil a mandatory policy issue. Oil revenue dependence has essentially made both the Federal and State governments seek other viable sources for raising funds. Most states of the federation depend solely on federal allocation from Federation Account

Allocation Committee (FAAC) to fund their capital and recurrent expenditures including payment of workers' salaries. Predictably, oil revenue has continued to decline in the international market due to technological innovations that seek to eliminate the consumption of oil products. The total revenue accruable to the nation from sales of oil is determined by the price and quantity sold at the international crude oil market. It also determines what is available to be shared among all tiers of government which has been on a continuous decline.

Unfortunately, the product life cycle of oil has marked its climax and may not recover from its decline. It may go into extinction just like coal, which used to be one of the major sources of income for the country (Inuwa, 2012). The reality at hand for the three tiers of government is to wake up to generate revenue internally within their tax legislative jurisdiction. This will help to meet up with the expectation of the recurrent expenditures in the short run. Many States are yet to show political will and financial support to their revenue collection machinery while some States run into the current financial crunch due to their lack of fiscal prudence (Oseni, 2013).

It can be said that governance is all about stewardship, accountability and transparency. The wealth of the State belongs to the people and they will be more than willing to entrust more to the leaders when value is given to them (Olayinka & Irewole, 2019). Public office managers must eliminate wastages, and avoid unnecessary expenditure and corruption. Issues about state IGR borders on the political will, resilience and commitment to grow revenue. Many State governments look forward to the Federation Account Allocation Committee (FAAC) to deliver services to the people, and when such is not forthcoming in proportion to funding requirements, they fail.

People pay for public services through taxes, levies and fines; they take ownership of public infrastructure and protect it because it is their collective wealth, for which they hold the leaders accountable. The cost of running a state is enormous, especially in the payment of workers' salaries and other recurrent expenditures. This is in addition to meeting the cost of developing infrastructure such as roads, electricity, health, and schools, among others (Onolememen, 2021).

Prudent management of the limited financial resources of the state goes a long way in meeting the needs of the people through proper accountability in budget management. Some of the reasons why most states have financial crises include over-trading, fiscal and budgetary indiscipline, dwindling revenue allocation from FAAC and poor Internally Generated Revenue (IGR). The call for a vibrant revenue collection system cannot be overemphasised, while, the extravagant cost of governance must be avoided by the leaders. Many researchers have however submitted that internally generated revenue remains the only panacea to infrastructural development and funding of public services (Atakpa, Ocheni, & Nwankwo, 2012; Udoudo & Ekpeyong, 2013).

There is a need for revenue generation for infrastructural development such as construction of roads, bridges, buildings of hospitals, schools, provision of telecommunication network, electricity, and water, among others. The main problems of infrastructural development in Nigerian states are inadequate internally generated revenue, overdependence on statutory allocation, corruption and embezzlement of public funds. These may be the basic reasons infrastructural development is poor in most Nigerian states. It is a challenge needing solutions, therefore the objective of this study is to determine the relationship between internally generated revenue and the infrastructural development in Akwa Ibom State.

2.0 Literature Review
2.1 Concept of Revenue
Revenue is money received by the government from taxes and non-tax sources to enable it to undertake public expenditure. Many authors have defined revenue in their different perceptions. Nightingale (2002) defines revenue as funds needed by the government in the public sector to finance government activities, adding that these funds are generated from non-oil sources such as income tax and other forms of taxes, royalties, fines, fees, rates, and aids from the federal government, foreign financial institutions and foreign countries. According to Otunbala (2011), government revenue includes the entire funds

generated from oil and non-oil sources other than funds raised from the issue of debt instruments such as government bonds, stocks, treasury certificates and treasury bills from capital and money market Non-oil sources of revenue include income tax, royalties, fees, utilities, miscellaneous revenues, among others. Udu & Nkeanor (2016) postulated that internally generated revenues are those generated within the state, including revenue from personal income tax, motor vehicle licensing, royalties, fees, fines rate, and funds from sales of government properties, among others. Accordingly, the two sources of revenue accruing to State governments are from the externally generated and internally generated revenue. The externally generated revenue is allocated from the federation account and value-added tax.

2.1.1 Internally Generated Revenue
As Adesoji and Ogechi (2013), emphasized that internally generated revenue is those revenues that are derived within the state from various sources and are not evenly distributed by the states along the lines of infrastructural development. The inequality in distribution may be based on the need of the state for specific development or recurrent expenditures. In the report of the Nigerian Extractive Industries Transparency Initiative (NEITI, 2013), Internally Generated Revenue (IGR) is defined to include the following: personal income tax which applies to the residents of the state; withholding tax which applies to individuals only; capital gains tax for individuals only; stamp duties applicable to instruments executed by individuals only; road taxes, like vehicle licenses; taxes on pool bets, lottery and casino wins; business premises and registration fees; developments levy applicable to taxable individuals only; fees for right occupancy on urban land owned by the state government; market taxes and levies where state finance is involved; and miscellaneous revenue including but not limited to rent on government property, incomes from investment.

2.1.2 Personal Income Tax
Personal Income Tax (PIT) is defined as a direct tax charged on the income of a person. In this context, a person means an individual, a sole proprietorship (non-juristic person), communities, facilities and on executors and trustees (of an undivided estate). Individual income tax is also referred to as personal income tax. This type of income tax is charged on an individual's wages, salaries, and other type of income. This tax is usually a tax the state imposes. Because of exemptions, deductions and credits, most individuals do not pay taxes on all of their income (Kagan, 2021). It is a type of tax that governments impose on income generated by businesses and individuals within their jurisdiction. By law, taxpayers must file an income tax return annually to determine their tax obligation (Kagan, 2021). Income taxes are a source of revenue for governments. They are used to fund public services, pay government obligations and provide goods for citizens. Because of exemptions, deductions, and credits, most individuals do not pay taxes on all of their income (Kagan, 2021). It is a type of tax that governments impose on income generated by businesses and individuals within their jurisdiction. By law, taxpayers must file an income tax return annually to determine their tax obligation (Kagan, 2021). Income taxes are a source of revenue for governments. They are used to fund public services, pay government obligations and provide goods for citizens. Income taxes apply to corporations, partnerships, small businesses, and self-employed people. However certain investments like housing authority bonds, tend to be exempt from income taxes (Kagan, 2021).

To ensure that government obtain the due tax for the optimum operation of the administration of governance, there are certain penalties supported by certain statutory obligations for those in default. Therefore, non-remittance of appropriate personal income tax is an offence under the income tax laws, and failure to pay tax can result in an imposition of fines on the amount of tax not paid, or remitted, in addition to the amount of tax due, and any costs incurred to the recovery of the sums due.

2.1.3 Fines, Fees, Rates and Forfeits
Revenues from this aspect are from school fees generated from State-owned schools, water rates, and fines from the court, among others. According to International Monetary Fund (IMF, 2013), fines and

penalties are compulsory current transfers imposed on units by courts of law or quasi-judicial bodies for violations of laws or administrative rule. Out-of-court agreements are also included. Forfeits are amounts that were deposited with a general government unit pending a legal or administrative proceeding and that have been transferred to a general government unit as part of the resolution of the proceedings. Fines and penalties assessed for infringement of regulations identified as relating to a particular tax are recorded together with that tax.

Other fines and penalties identifiable as relating to tax offences are classified as other taxes. Most fines, penalties, and forfeits are determined at a specific time. Administrative fees however include fees for compulsory licenses and other administrative fees that are sales of services. Examples are driver's licenses, passports, court fees, and radio and television licenses when public authorities provide general broadcasting services. For these fees to be considered as sale of services, the government unit must exercise some regulatory function, for example, checking the competence or qualifications of the persons and the safe functioning of the equipment in question, or carrying out some other forms of control that it would otherwise not be obliged to do. If payment is clearly out of all proportion to the cost of providing the service, then the fee is classified as taxes on the use of goods and on permission to use goods or perform activities (IMF, 2013).

Fines and forfeitures and financial penalties imposed for violations of the law, fines and fees including parking tickets and speeding tickets (including those from traffic cameras), count-imposed fees used to cover administrative costs and funds, special initiatives and other criminal justice-related charges and penalties. According to Afeez, Ndalu, and Micah (2022), a tax penalty is a monetary penalty imposed by the internal revenue service (IRS) for performing a prohibited act or failing to execute a required act, such as failing to timely file a return or filing incorrect or undervalued taxes.

2.1.4 Earning from Licenses
Fees from the issuance of licenses of various types, for example, motor vehicle licenses, constitute earnings from internally generated revenue. Other sources include taxes on the use of motor vehicles or permission to use motor vehicles. It does not include taxes on motor vehicles as property or net wealth or tolls for the use of roads, bridges, and tunnels. Business and professional licenses are included in other categories. They include licenses to carry on a business in general or a particular business or profession. General business taxes or licenses levied in a fixed amount, on a schedule according to the kind of business, or based on various indicators such as floor space, installed horsepower, capital, or shipping tonnage are also included. It would not cover business taxes levied on gross sales, which would be classified under general taxes on goods and services.

Udoudo & Ekpenyong (2013) mentioned that taxes or licenses for particular kinds of businesses would include permission to sell goods or provide services. These taxes may be levied at regular intervals, on a non-time basis, or each time goods are used. Also included in the category are pollution taxes levied on the emission or discharge into the environment of toxic gases, liquids, or other harmful substances. Likewise, in this category, other than business and professional licenses include taxes on permission to hunt, shoot, or fish, and taxes on the ownership of pets, when the right to carry out these activities is not granted as part of a normal commercial transaction. They also include radio and television licenses, unless the public authorities provide general broadcasting services, in which case service payment, rather than a tax, is involved (Sales and Storage of goods act, 2019).

2.1.5 Earning from Sales of Government Properties
The revenue from sales of government vehicles, and houses, among others, constitute internally generated revenue and this serves as the major tool for social contract and infrastructural development within a State. It helps the government to be responsible and carry out necessary decisions to implement developments needed to satisfy the basic needs of the people (Olayinka & Irewole, 2019). Earnings from sales of government properties are a major contributor to IGR. Various sources from some states in the country show that huge financial resources can be generated through IGR with the right political will

and policies in place. An example of such policies in this direction is earning from sales of government properties (Kiabel & Nwokah, 2019; NBS, 2017).

Selling public assets can be an effective way to improve fiscal health but can also be unpopular, slow, and risky. It is also just one of many available options. From real estate and roads to state-owned agencies and monopolies, there are multiple approaches to creating new sources of general revenue that government can use to improve finances or invest in new infrastructure and other key priorities (Palter & Shilson, 2014).

2.1.6 Infrastructural Development

Infrastructural development is the improvement in the quality of various components of infrastructure such as road, electricity, health, education, water, sanitation, security, and ICT Ports among others in a country, (Osei-Hwedie & Kurantin, 2017). Infrastructure is a relatively permanent and foundation capital investment of a country, firm or project that makes possible all its economic activities. They include administrative telecommunication, transportation, utilities and waste removal and process facilities. Infrastructure is classified as hard infrastructure and soft infrastructure.

Hard infrastructure is the tangible, physical assembly of structures such as roads, bridges tunnels, and railways among others. These types of infrastructure are assets defined by the government as being essential to financing the society and economy such as facilities for shelter, heating telecommunication, health education and agriculture among others.

Soft infrastructure is the institutions that help maintain the economy. It requires human capital that helps deliver certain services to people example, the health care system, financial institutions, and government system, among others. The term infrastructure could be defined as the provision of essential services and amenities to the industry and household in society. Thus, investment in the infrastructural development project is a key input in the development of the economy and a panacea to economic activity, development and growth. Development is a sine quo non for modern civilization. In other words, government use money generated from revenue to fund those projects like the construction of roads building of schools, health care centers construction of bridges among others, (Adesoji & Ogechi, 2013).

2.2 Theoretical Framework

Endogenous growth theory and developmental theory are used in this study. However, the study is specifically based on endogenous growth theory, though developmental theory is also relevant.

2.2.1 Endogenous Growth Theory

The endogenous growth theory was propounded by Romer (1994), and the theory holds that economic growth depends on investment in human capital, innovation and knowledge management. The theory also supports government policies that could boost economic growth in a nation. These policies include all measures government take to encourage the exploitation of internally generated revenue (IGR) opportunities within the domain of every state and local government in a nation. There is no homogeneity in IGR sources and opportunities existing in states and local governments, but the government at the centre gives the state the privilege to harness all available resources within the ambit of the law and constitution of the country.

2.2.2 The Developmental Theory

According to Harriss (2013), the developmental theory was propounded by Alexander Gerschenkron in 1951. The theory argues that the only way an underdeveloped country can grow is through the intervention of the government or actions by the state and that underdeveloped countries have to focus on industrialization rather than being dependent on only trading of primary goods with developed countries. The theory was dominant in the 1950s and 60s which emphasized structural features which hinders the economic growth of developing or underdeveloped countries. This theory focuses on the

transformation of a country's economic development from being based on agriculture to a modernized country in which the economic development will be based on service and manufacturing (industrialization). The main purpose of the structural transformation is to create an economy that has self-sustaining growth, which can be reached by ending the reliance of developing and underdeveloped countries on only the export of primary goods such as mining products and agricultural products and also reducing the level of importation by encouraging industrialization to create the number of substitute products for the imported ones. The endogenous growth theory which supports all efforts the state governments take to explore the collection of internally generated revenue (IGR), becomes relevant to the proposed study as the study hopes to assess the stipulated yardsticks in the IGR collection within the state.

On the other hand, the developmental theory which focuses on the industrialization powers and potentials of the state rather than on trading primary goods (oil) with the developed countries, becomes relevant to the study as the study encourages millennium development strategies including industrialization of the states, rather than placing much reliance on the oil trade revenue (Federal Allocation) with the developed countries. However, industrialization of the state will bring more internally generated revenue through taxation.

2.3 Empirical Review

Mbah & Onuora, (2018) investigated the effect of internally generated revenue on infrastructural development of south-east states of Nigeria. The study adopted an ex-post facto research design. The data used were secondary. The study employed descriptive statistics, correlation and multiple linear regression for data analysis. The study revealed a significant relationship between internally generated revenue (IGR) and the cost of infrastructural development in the southeast states of Nigeria. Oyetakin & Yahaya, (2017) analyzed the relationship between internally generated revenue and infrastructural development in the public universities in Ondo state, Nigeria. The study employed primary data. A total of 50 management staff were sampled. The study revealed a negative and significant relationship between internally generated revenue (IGR) and the amount spent on infrastructural development in public universities in Ondo state.

Ajiteru et al., (2018), assessed the relationship between internally generated revenue and infrastructural development in Ogun state. The study used primary data obtained through a survey. A purposive sampling technique was employed to select a total of 102 respondents for questionnaire administration. The questionnaire was analyzed using descriptive statistics. The study found that tax revenue is a very strong tool for infrastructural development in the state. Oseni, (2013) assessed internally generated revenue in Nigeria as a panacea for state development. This study was carried out on the proportions of internally generated revenue to total revenues of states for five years (2007-2011). The data for the study were sourced from the annual reports of the Central Bank of Nigeria (CBN) for the same period. The author adopted descriptive statistics in the analysis of data. The results indicated that states getting additional revenue from the statutory allocations as derivation have lower proportions of IGR to their total revenues than some states. States have had the lowest IGR for the period. Dependence on the statutory allocation by the states does not necessarily translate the good dividends from democracy as internally generated revenue can be used to develop the states. The author recommended among other things that income tax collection should be intensified by identifying the taxpayers and the types of business they are engaged in.

Joseph & Omodero (2020) examined the relationship between government revenue and economic growth in Nigeria. The study employed exploratory and ex post facto research design. Secondary data from 1981- 2018 were used. The study used the ordinary least square (OLS) regression technique. The result revealed that federally received revenue and value-added tax (VAT) have a moderate and positive impact on economic growth. Onwuka & Christian (2019) examined the impact of revenue generation on infrastructural development in Nigeria. Secondary data were adopted in the study. The ordinary least square (OLS) regression analysis technique was employed in the study from

1981- 2018. The study revealed that revenue generated has a significant impact on infrastructural development in Nigeria. Mohammed et al., (2015) investigated the relationship between expenditures and internally generated revenue in Adamawa State Local Government using pool regression method and discovered a significant relationship between government expenditure and internally generated revenue of Adamawa state government.

Olowolaju et al (2014) studied the federal government fund allocation to states in Nigeria. They stated that each level of government should have sufficient funds to effectively and efficiently discharge its assigned responsibilities. The study revealed that statutory allocation is not enough for the state in Nigeria to depend on, for expenditure. It emphasized that states need to boost their internally generated revenue. For a state to develop its infrastructure, it has to make sure its internally generated revenue (IGR) is sufficient for capital expenditures. Adesoji & Chike, (2013) examined a statistical analysis in their study which shows that effective internally generated revenue results in infrastructural development in Lagos state. They also observed that Lagos state is progressing faster than any other state in Nigeria in terms of infrastructural development. They concluded that for the government to boost its revenue, they have to educate its citizens on the need and importance of regular tax payment. Furthermore, they recommended that the state government should not focus on revenue generation alone but should ensure that social services like environmental sanitation, provision of public goods and social welfare should be significantly focused on.

Adenugba & Ogechi (2013) investigated the effect of internally generated revenue on infrastructural development in Lagos State, using descriptive and inferential statistics and applying simple percentage and Spearman rank respectively. It was found that there is a positive significant relationship between internally generated revenue and infrastructural development in Lagos State. Nwosu & Okafor (2014) examined the relationship between government expenditure and revenue in Nigeria using time services data, within the period of 1970 to 2011. They concluded that the increase in government spending on infrastructural development should be with a corresponding increase in the revenue generated by the country. If not, it will result in a budget deficit and therefore lead to the country's borrowing. This will slow down future infrastructural development leaving the country in a static state. The actions further stated that government should reduce its recurrent expenditure to reduce running costs for the country but rather form more on capital expenditure which has more to do with the infrastructural developments.

Okwori & Sule (2016) examined the effect of revenue-generating sources on economic growth in Nigeria. The study emphasized that deliberate actions should be taken by the government to improve revenue generation and that a proper mechanism should be developed for the proper utilization of resources. The study concluded that the government should focus on the tax system to improve revenue generation by formulating policies that will ensure remittance to the government and that borrowing should be the last resort of the government. Akpan & Namseh (2013) examined the relationship between Internally Generated Revenue and Infrastructural Development in Akwa Ibom State using statistical analysis from their various findings. They concluded that though internally generated revenue has contributed to infrastructural development in Akwa Ibom State, those contributions are not significantly sufficient. They recommended that the government should monitor the way IGR is being used for expenditure through independent bodies.

Ekpung (2014) analyzed the trend of government expenditure on infrastructural development in Nigeria between 1970 -2010. The study revealed that infrastructural development has not yielded positive results over the years, indicating that there is deterioration in infrastructural development in the country. The study recommended that government monitors the expenditure on infrastructural development and adheres strictly to due process and procedures to manage funds.

3.0 Methodology
The researcher adopted an ex post facto research design, with elements of the descriptive study. The population of the study is a finite population which is considered generally in the course of this study.

Secondary data were sourced from the office of the Accountant General of Akwa Ibom State from year 2007 to 2020.

3.1 Test of Hypotheses and Method of Data Analysis

The hypotheses were tested with the use of simple multiple regression analysis for the estimation of multiple linear relationships between internally generated revenue which was the independent variable, and the infrastructural development on health, education and sanitation in Akwa Ibom State was the dependent variable.

3.1.1 Research Hypotheses

Based on the objectives of the study, the following null hypotheses were formulated

Hypothesis 1: There is no significant relationship between internally generated revenue and the infrastructural development on health, in Akwa Ibom State.

Hypothesis 2: There is no significant relationship between internally generated revenue and infrastructural development on education, in Akwa Ibom State.

Hypothesis 3: There is no significant relationship between internally generated revenue and infrastructural development on sanitation, in Akwa Ibom State.

Hypothesis 4: There is no relationship between internally generated revenue and total expenditure on infrastructural development on health, education, and sanitation, in Akwa Ibom State.

3.2 Model Specification

The researcher adopted the model used by Akpan and Namseh (2013) on revenue and infrastructural development in Akwa Ibom State. The model was modified to fit the variables used in this work. For this work, internally generated revenue was represented by variable X, while infrastructural development was represented by variable Y.

The Independent variable was internally generated revenue (IGR), while the dependent variables were the Akwa Ibom State infrastructural development on health, education, and sanitation. The study used the following model:

$Y = a_o + \beta$, AKIGR + e

Thus: AKID = f (AKIGR)

The function above was further collapsed thus:

Infrastructural development (IDH, IDE, IDS) = f (AKIGR)

$$IDH = f (AKIGR)$$
$$= a_o + \beta + x + e$$
$$= a_o + \beta + AKIGR + e……………i$$
$$IDE = f (AKIGR)$$
$$= a_o + \beta + x + e$$
$$= a_o + \beta + AKIGR + e……………ii$$
$$IDS = f (AKIGR)$$
$$= a_o + \beta + x + e$$
$$= a_o + \beta + AKIGR + e……………iii$$
$$\sum (IDH, IDE, IDS) = f (AKIGR)$$
$$= a_o + \beta + x + e$$
$$= a_o + \beta + AKIGR + e…………………iv$$

Where,

AKID   =   Akwa Ibom State Infrastructural Development

AKIGR=   Akwa Ibom State Internally Generated Revenue

IDH   =   Infrastructural Development on Health

IDE   =   Infrastructural Development on Education

IDS   =   Infrastructural Development on Sanitation

a_o =   The estimate of true intercept of the dependent variable regression constant (intercept of a regression)

β =   The estimate perimeters of independent variable of regression coefficient

e   =   the error term

The analysis will be based on simple linear regression models to test the hypothesis stated for the effect of internally generated revenue on infrastructural development on health, education, and sanitation in Akwa Ibom State.

4.1 Data Presentation

Table 4.1 Presentation of internally generated revenue and the expenditure on infrastructural developments on health, education, and sanitation, in Akwa Ibom State between 2007 and 2020

Year	Internally Generated Revenue	Capital Expenditure On Health	Capital Expenditure On Education	Capital Expenditure On Sanitation	Total Expenditure On Health, Education And Sanitation
2007	12,623,821,599	1,737,257,338	17,255,394,789	4,236,368,020	23,229,020,147
2008	12,091,432,039	8,854,417,200	5,317,457,059	2,708,452,064	16,880,326,323
2009	12,113,438,230	6,103,001,679	4,851,948,272	876,695,402	11,831,645,353
2010	12,086,460,227	3,653,207,169	9,456,121,491	1,193,303,948	14,302,632,608
2011	16,554,319,166	4,647,435,365	5,886,543,804	735,898,115	11,269,877,284
2012	17,059,385,909	5,592,436,725	3,214,380,471	19,301,467,774	28,108,284,970
2013	18,005,802,296	8,767,475,612	6,224,809,136	2,317,141,763	17,309,426,511
2014	18,715,737,159	9,260,373,704	2,024,713,619	-	11,285,087,323
2015	18,730,338,859	11,094,194,518	1,166,933,264	-	12,261,127,782
2016	16,290,953,095	475,128,573	809,321,790	-	1,284,450,363
2017	19,513,860,604	2,274,099,805	2,215,807,736	-	4,489,907,541
2018	28,213,636,273	3,516,889,200	1,779,392,000	-	5,296,281,200
2019	35,504,936,358	4,314,717,500	2,279,245,500	25,000,000	6,618,963,000
2020	30,610,557,476	2,273,295,000	1,113,865,000	50,000,000	3,437,160,000

Source: Office of Accountant General of Akwa Ibom State (2023).

Table 4.1 presents internally generated revenue against the expenditure on infrastructural development, on health, education, and sanitation, in Akwa Ibom State between 2007 and 2020.

Table 4.2: Summary of descriptive statistics of variables

	N	Minimum	Maximum	Mean	Std. Deviation
IGR	14	12086460227.00	35504936358.00	19151048520.7143	7305886183.12416
IDH	14	475128573.00	11094194518.00	5183137813.4286	3234801415.32366
IDE	14	809321790.00	17255394789.00	4542566709.3571	4424187419.08667
IDS	9	25000000.00	19301467774.00	3493814120.6667	6083532454.01466
Valid N (listwise)	9				

Source: Researcher computation (2023)

Table 4.2 shows that the maximum and minimum values of internally generated revenue (IGR) are 35504936358 and 12086460227 respectively, with a mean value of 19151048520. The standard deviation is 7305886183. The result shows that over the years, the state IGR has grown steadily. The same pattern is reflected in the other variables, with investment in infrastructural development in health, education and sanitation increasing accordingly as IGR increases.

Table 4.3 Correlation coefficient matrix

		IGR	IDH	IDE	IDS	TE
IGR	Pearson Correlation	1	-.186	-.516	-.203	-.619
	Sig. (2-tailed)		.524	.059	.601	.075
	N	14	14	14	9	9
IDH	Pearson Correlation	-.186	1	-.176	.101	.212
	Sig. (2-tailed)	.524		.547	.796	.583
	N	14	14	14	9	9
IDE	Pearson Correlation	-.516	-.176	1	-.044	.488
	Sig. (2-tailed)	.059	.547		.911	.183
	N	14	14	14	9	9
IDS	Pearson Correlation	-.203	.101	-.044	1	.794*
	Sig. (2-tailed)	.601	.796	.911		.011
	N	9	9	9	9	9
TE	Pearson Correlation	-.619	.212	.488	.794*	1
	Sig. (2-tailed)	.075	.583	.183	.011	
	N	9	9	9	9	9

*. Correlation is significant at the 0.05 level (2-tailed).
Source: Researcher computation (2023)

The correlation matrix in Table 4.3 shows that IGR has negative relationships with infrastructural development in health (-.186), infrastructural development in education (-.516) and infrastructural development in sanitation (-.203). This implies that as IGR increases, expenditure on infrastructural development on health, education and sanitation decreases, or as internally generated revenue (IGR) decreases expenditure on infrastructural development on health, education, and sanitation, increases. The result, however, shows no significance at the .05 alpha level.

4.2: Data Analysis

Ho$_1$: There is no significant relationship between internally generated revenue (IGR) and infrastructural development on health in Akwa Ibom State.

Table 4.4: Summary of regression analysis for relationship between internally generated revenue (IGR) and infrastructural development on health

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.13E+10	1.83E+09	11.67783	0.0000
HEALTH	-0.420204	0.301980	-1.391494	0.1698

R-squared	0.034615	Mean dependent var		1.92E+10
Adjusted R-squared	0.016738	S.D. dependent var		7.10E+09
S.E. of regression	7.04E+09	Akaike info criterion		48.22386
Sum squared resid	2.68E+21	Schwarz criterion		48.29620
Log likelihood	-1348.268	Hannan-Quinn criter.		48.25191
F-statistic	1.936254	Durbin-Watson stat		0.440938
Prob(F-statistic)	0.169782			

Source: Researcher computation (2023).

Table 4.4 summarizes the regression analysis result. The correlation index is -0.186, indicating a low negative relationship between internally generated revenue (IGR) and infrastructural development on health. The R^2 value is 0.035, indicating that 3.5% of changes in infrastructural development on health

is as a result of IGR. The result shows that the calculated F value is 1.93. The probability value of F is 0.169. Since the probability value (0.169) is greater than the alpha value of 0.05 (p<0.050.169), the result is statistically not significant. Thus, there is no significant relationship between internally generated revenue (IGR) and infrastructural development on health in Akwa Ibom State.

Ho2: There is no significant relationship between internally generated revenue (IGR) and infrastructural development in education in Akwa Ibom State.

Table 4.5: Summary of regression analysis for relationship between internally generated revenue (IGR) and infrastructural development on education

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.30E+10	1.20E+09	19.20506	0.0000
EDU	-0.852707	0.192443	-4.430961	0.0000
R-squared	0.266637	Mean dependent var		1.92E+10
Adjusted R-squared	0.253057	S.D. dependent var		7.10E+09
S.E. of regression	6.14E+09	Akaike info criterion		47.94898
Sum squared resid	2.04E+21	Schwarz criterion		48.02131
Log likelihood	-1340.571	Hannan-Quinn criter.		47.97702
F-statistic	19.63342	Durbin-Watson stat		0.720568
Prob(F-statistic)	0.000046			

Source: Researcher computation (2023).

Table 4.5 summarises the regression analysis result. The correlation index is -0.516, indicating a high negative relationship between internally generated revenue (IGR) and infrastructural development in education. The R2 value is 0.267, indicating that 27% of changes in infrastructural development on education are the results of IGR. The result shows that the calculated F value is 19.63. The probability value of F is 0.000. Since the probability value (0.000) is less than the alpha value of 0.05 (p<0.050.000), the result is statistically significant. Thus, there is a significant relationship between internally generated revenue (IGR) and infrastructural development in education in Akwa Ibom State.

Ho3: There is no significant relationship between internally generated revenue (IGR) and infrastructural development in sanitation in Akwa Ibom State.

Table 4.6: Summary of regression analysis for relationship between internally generated revenue (IGR) and infrastructural development on sanitation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.95E+10	1.60E+09	12.16563	0.0000
SANI	-0.288374	0.238964	-1.206768	0.2359
R-squared	0.041073	Mean dependent var		1.85E+10
Adjusted R-squared	0.012869	S.D. dependent var		8.28E+09
S.E. of regression	8.22E+09	Akaike info criterion		48.55238
Sum squared resid	2.30E+21	Schwarz criterion		48.64035
Log likelihood	-871.9428	Hannan-Quinn criter.		48.58308
F-statistic	1.456290	Durbin-Watson stat		0.202634
Prob(F-statistic)	0.235851			

Source: Researcher computation (2023).

Table 4.6 summarises the regression analysis result. The correlation index is -0.203, indicating a low negative relationship between internally generated revenue (IGR) and infrastructural development on sanitation. The R2 value is 0.041, indicating that 4% of change in infrastructural development on

sanitation is a result of IGR. The result shows that the calculated F value is 1.456. The probability value of F is 0.235. Since the probability value (0.235) is greater than the alpha value of 0.05 (p<0.050.235), the result is statistically not significant. Thus, there is no significant relationship between internally generated revenue (IGR) and infrastructural development on sanitation in Akwa Ibom State.

Ho4: There is no significant relationship between IGR and the total expenditure on infrastructural development on health, education and sanitation

Table 4.7: Summary of regression analysis for relationship between internally generated revenue (IGR) and the total expenditure on infrastructural development on health, education and sanitation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.13E+10	2.63E+09	8.103111	0.0000
TE	-0.420204	0.435200	-0.965542	0.3432
R-squared	0.034615	Mean dependent var		1.92E+10
Adjusted R-squared	-0.002515	S.D. dependent var		7.17E+09
S.E. of regression	7.18E+09	Akaike info criterion		48.29529
Sum squared resid	1.34E+21	Schwarz criterion		48.39045
Log likelihood	-674.1341	Hannan-Quinn criter.		48.32438
F-statistic	0.932271	Durbin-Watson stat		0.432773
Prob(F-statistic)	0.343169			

Source: Researcher computation (2023).

Table 4.7 summarises the multiple regression analysis result. The result shows that the coefficient is negative, indicating a negative relationship between IGR and total expenditure. The R2 value is 0.0346, indicating that a 3% change in total expenditure on health, education and sanitation is a result of IGR. The result shows that the calculated F value is 0.932. The probability value of F is 0.343. Since the probability value (0.343) is greater than the alpha value of 0.05 (p<0.050.343), the result is statistically not significant. Thus, there is no significant relationship between IGR and the total expenditure on infrastructural development on health, education and sanitation.

4.3 Discussion of Findings

The result of the analysis of hypothesis one indicates that there is no significant relationship between internally generated revenue (IGR) and infrastructural development on health in Akwa Ibom State. The findings in hypothesis one aligns with the work of Ekpung (2014) who analyzed the trend of government expenditure on infrastructural development in Nigeria between 1970 -2010 and found that infrastructural development has not yielded positive result over the years, indicating that there might not have been adequate funding of infrastructures from internally generated revenue. If IGR is attached to specific infrastructure, there will be a way to support this development from other sources, even when the funding was inadequate because if there is a will, there must always be a way. This is in line with the precepts of developmental theory used in this study.

The analysis of the relationship between internally generated revenue and infrastructural development in education in Akwa Ibom State indicates that a significant relationship exists between them, leading to a rejection of null hypothesis two. The result of the findings is in line with the study conducted by Namseh and Akpan (2013) who examined the relationship between internally generated revenue and infrastructural development in Akwa Ibom State. Their findings saw a coordinated approach in attaching the IGR to infrastructure. The findings here can be interpreted to support the increase in enrolment in all levels of education in Akwa Ibom State within the period of this study, as out-of-school children statistics had dropped drastically.

The relationship between the internally generated revenue and infrastructural development on sanitation shows an insignificant positive relationship leading to the acceptance of null hypothesis three. The explanation given in the discussion of hypothesis one suffices here. Adesoji and Chike (2013) examined internally generated revenue and infrastructural development in Lagos state and observed that Lagos state was progressing faster in utilizing their IGR, but that not much was done on social services like environmental sanitation. This aspect of social infrastructural development is absent in most states in Nigeria, thus, the issue of flooding and other environmental challenges keep on increasing across them, Akwa Ibom inclusive.

Analysis of the relationship between the internally generated revenue and total expenditure on infrastructural development on health, education and sanitation resulted in an insignificant positive relationship leading to the acceptance of null hypothesis four. That means there is no significant relationship between IGR and the total expenditure on infrastructural development on health, education and sanitation. This analysis shows that in aggregate, internally generated revenue accounts for less than a proportionate contribution to infrastructural expenditure in the three areas of health, education and sanitation studied. This finding corroborates what Okwori and Sule (2016) found out when they examined the effect of revenue-generating sources on economic growth in Nigeria. The study found out that IGR is not systematically pursued in Nigeria, and therefore emphasized that deliberate actions should be taken by the government to improve revenue generation and that proper mechanisms should be developed for proper appropriation of funds for the provision of developmental projects.

5.0 Conclusion

The result of the analysis carried out by the researcher resulted in the following conclusions: There is an insignificant positive relationship between internally generated revenue (IGR) and infrastructural development on health and infrastructural development on sanitation in Akwa Ibom State. The relationship between internally generated revenue (IGR) and expenditure on infrastructural development on education is positive and significant in Akwa Ibom State. The relationship between internally generated revenue (IGR) and total expenditure on infrastructural development on health, education, and sanitation is positive and insignificant in Akwa Ibom State.

5.1 Recommendations

Based on the findings, the following recommendations are made:

1. State government should redirect the allocation of internally generated revenue (IGR) to infrastructural development on health. The proportion of internally generated revenue (IGR) allocated to the infrastructural development of health should be increased regularly in the annual budget for the relationship to be significant. Moreover, the implementation of the infrastructural development on health should be closely monitored in this area because health is life.
2. State government should maintain or increase the proportion of internally generated revenue (IGR) in the infrastructural development of education to maintain a significant and continuous positive relationship between internally generated revenue and, infrastructural development in education.
3. Akwa Ibom State government should ensure the strict and effective implementation of the budget provision on infrastructural development on sanitation. Monitoring of the project should be taken as most important since sanitation is closely linked to life.
4. The state government should also ensure that all internally generated revenue sources in the state are fully tapped to increase the revenue for expenditure on infrastructural development in the state for the benefit of the citizens. This will encourage the payment of tax by the citizens considerably.

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