

Internally Generated Revenue and Infrastructural Development : Of what relevance to Lagos?

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Abstract: Revenue generation is one of the core drivers of modern development and is key to developing modern economies. Hence, this study assesses the impact of internally generated revenue on infrastructural development in Lagos state. Data was sourced from State and Local Government Programme (SLGP) Consultants' Report 320 and Lagos state ministry of Planning and Budgeting website. The result showed that there is a significant positive relationship between internally generated revenue and infrastructural development. Taxes, earnings and sales which are major components of internally generated revenue, do not have any significant impact on the infrastructural development of Lagos state. However, licenses, fines and fees have a significant impact on the infrastructural development of the state. The study recommends that government should enhance revenue collection agency in the following ways: computerization of their processes, regular training and motivation of staff members.

Keywords: Infrastructure, Revenue, Development, Taxation, Lagos state

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I. Introduction

Revenue is defined as the total amount of earnings that accrues to an organization to assist in financing its activities (Hamid, 2008; Adam, 2006). Pearce (1986) defined government revenue as all the money received other than from debt and liquidation of investments. Government revenue comprises of licenses, charges, sale of government properties, tax collections, and fines; among others. Therefore from definitions stated above, it can be concluded that revenue is the entire amount of income a state is able to raise from various source under its territory within a definite period. State government is similar to the other tiers of government (local government and federal government) having various sources. Osisami, (1994) states that there are two types of revenue that state governments can raise: internally generated revenue (IGR) and revenue allocation from the federation account (statutory allocation). Internally generated revenue are the revenues gotten within the state's territory and from various sources which include: taxes such as PAYE, road taxes, direct assessment, fines, licensing, interest on investments, rent from government properties, and fees. Whereas statutory allocation is from the Federation Account, according to revenue allocation formula. Many of the states in Nigeria get their maximum revenue from statutory allocation to finance their expenditures. According to (Adekunle, 2017) Lagos internally generated revenue is more than the statutory allocation it receives by 169% and no other state in Nigeria has up to 100% of internally generated revenue to the federal aid. This indicates that Lagos state is different. The internally generated revenue of Lagos state has increased from N201.76bn in 2011 to N301.19bn in 2016 (National Bureau of Statistics, 2017).

Internally generated revenue (IGR) serves as the major tool for social contract and infrastructural development within a state. It helps the government to be responsible and required decisions needed to satisfy the basic needs of the people. IGR is majorly derived from taxation in Lagos state. It is important for budgeting and it is a powerful fiscal tool to direct and boost the economy. It goes a long way by providing the state with continuous growth and development to keep the society moving. As the state government raises more revenue internally, it results in more commissioned projects, more money in circulation, more job opportunities, more business opportunities and the standard of living improves. Most importantly it serves as tool for infrastructural development within the state. There are two main expenditures that every state usually incur namely, recurrent expenditures and capital expenditure. (Jimoh, 2007) states that recurrent expenditure is the kind of expenditure that occurs frequently on a periodic basis, includes: wages and salaries of government workers, administrative overhead, and maintenance of state properties. Capital expenditure is amount of money spent on capital projects such as, railways, roads, ports, refineries, health infrastructures, energy infrastructures, land and buildings. Capital expenditure mainly has to do with government paying for acquisition of fixed capital assets that are

expected to increase productivity in a state for a long period of time and therefore improve the standard of living.

There are also two main sources of state government revenue namely, re-current revenue and capital receipts. The recurrent revenue sources include; licenses, fines and fees: such as; vehicle license, drivers' license, registration of land, and survey fees. Taxes: include personal income tax (PAYE) as well as, statutory allocation which is distributed from the federation account to the three tiers of government namely federal government, state government and local government. On the other hand the capital receipts includes; Loans: this can be in two forms internal or external loans. The internal loans symbolize state government borrowing from various sources within the country while external loans are sourced from the World Bank, foreign organizations or countries. Nevertheless, the loan must be approved by the federal government within certain established units. The financial aid could be from charitable universal establishments such as UNICEF to perform in the states some altruistic programs like children immunization. Federal Government Grant could also be released to finance Federal Government programs within a state, or to assist in particular projects.

The development of infrastructure falls under capital expenditure of a state. According to (Oteh, 2010), infrastructure is the physical assets and services that are fundamental to the growth and development of an economy. Based on this statement, infrastructure is considered an enabler of economic growth and aid to development of industrial transformation in a country. There are various types of infrastructures needed in order to maintain economic growth in a state such as, transport infrastructures which involves, the development of roads, airport, railways, and ports. Health infrastructure which includes, hospitals with a substantial amount of medical equipment. Also energy infrastructure which involves, natural gas pipelines, electric transmission lines, transformers, etc. Infrastructures are large physical networks essential for the establishment and running of modern industrial countries. In many states infrastructural development are highly expected and demanded for by people in the state. Continuous infrastructural development can be used as a tool by a political party in power to remain the ruling party in a state for a long period of time. Therefore, for a state that wants to grow and develop, infrastructural development must be its priority and policy concern. But for development of infrastructure revenue is a necessity.

National Population Commission of Nigeria in 2016, declared that Lagos state is the most populated city in Nigeria with over 21 million residents. The population of residents in Lagos state are made up of diverse people of various culture due to migration of people from other states across Nigeria and neighboring countries, this has resulted in more expenditure for Lagos state government to incur on infrastructure. In line with the population growth Lagos state needs more fund or revenue to meet up its infrastructural development. As stated by the Lagos state governor Akinwunmi Ambode on the 6th of March 2018, he explained that the reason why the state government decided to increase the Land Use Charge is to increase the internally generated revenue in order for the state to meet up with infrastructural gap of 14.47 trillion naira (Muritala Ayinla, 2018). With the significant increase of 48.55% on internally generated revenue between 2011 and 2016 in Lagos state as shown in (National Bureau of Statistics, 2017) and continuous increase in 2017, the state government is yet unable to sufficiently finance its infrastructural expenditures. Due to the problem stated above, it is my interest to conduct a research to examine the impact of internally generated revenue on the infrastructural development of Lagos State

The main objective of this study therefore is to examine the impact of internally generated revenue on the infrastructural development of Lagos State.

The following are the specific objectives for the study;

1. To obtain the relationship between revenue from taxes infrastructural development in Lagos state.
2. To ascertain relationship between revenue from fines & fees and infrastructural development in Lagos state.
3. To obtain the relationship between revenue from licenses and infrastructural development in Lagos state.
4. To obtain the relationship between revenue from earnings & sales and infrastructural development in Lagos state.

The result of this study will be useful for policy makers, to enable them make economic decisions as regards revenue and expenditure on infrastructure in Lagos state. It also provides researchers with relevant information as regards the various revenue sources of government and its impact on infrastructural development. Other states will also benefit from this study as it will enable them realize the importance of internally generated revenue and how statutory allocation cannot be exclusively depended on by any state. Furthermore this study will assist the government in proper utilization of resources or revenue towards continuous infrastructural development which will benefit the state and lead to increase in the standard of living for the citizens. This work has not been done exactly by any researcher before.

II. Literature Review

As stated by (Merriam-Webster, 1828) revenue is “the yield of sources of income (such as taxes) that a political unit (such as a nation or state) collects and receives into the treasury for public use”. Revenue is defined as all amounts of money generated by a government from various sources for example taxes, fines, licenses, and those originating from “outside the state government”(federal government) net of refunds, earnings from issuance of loan, the sale of investments, agency or private trust transactions, and intra-governmental transfers (Ahmed, 2010).. “Financial resources of government constitute the bulk of its revenue and this relate to monies mobilized or generated in the economy” (Obiechina, 2010). In Nigeria the source of government revenue is either from statutory allocation or from the internally generated revenue. This allocation is shared from the federation account to the three tiers of government which are: the federal government, 36 state government and 774 local government. According to (Nigerian Constitution, 1999) the federation account was established, the constitution stated that all revenue collected by the government of the federation shall be paid into the account except PAYE of residents of the Federal Capital Territory, Foreign Service officers, the personnel of the armed forces of the federation and Nigerian police force. The sharing formula is as follows, 52.68 percent to federal government, 26.70 percent to state government and 20.60 percent to the local government. The data below shows the proportion of revenue in Lagos state gotten from statutory allocation compared to the amount gotten from internally generated revenue between 2011 and 2016.

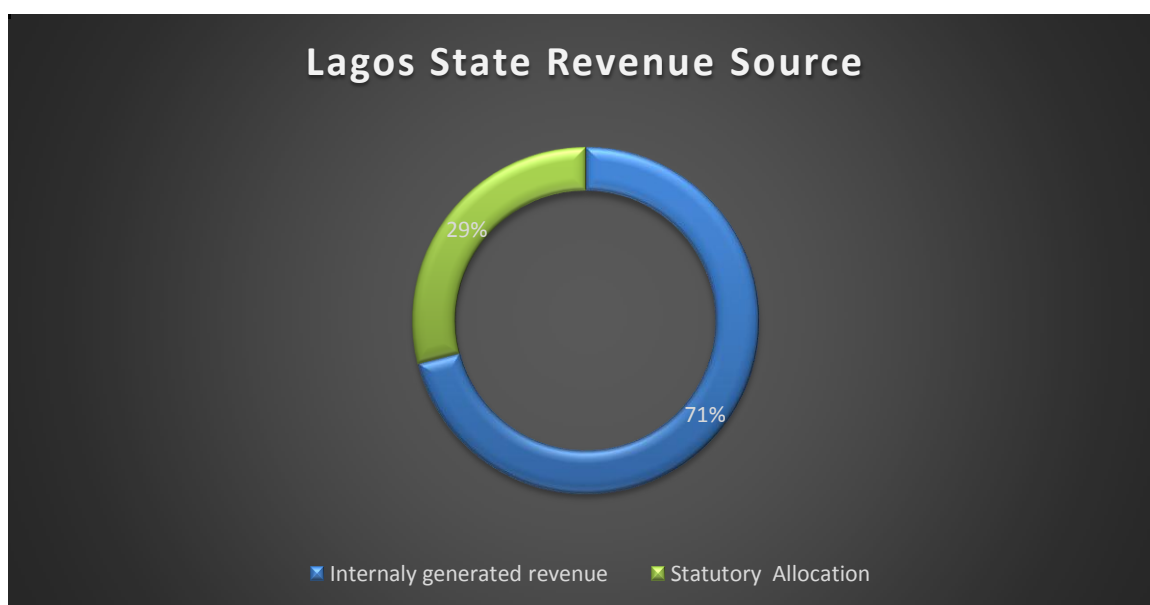


Figure 1: Lagos state revenue source.

Source: compiled by the author

Revenue can be generated within a state which from tax source, non-tax revenues source, and other miscellaneous sources according to the Nigerian Government Forum held in 2015. Internally generated revenue is that revenue resulting from activities and various sources within the state. Revenue generation has been a major issue in recent times for most states in Nigeria, because of the dependence on statutory allocation from the federation account. It has been the highest source of revenue for various states in Nigeria, and the revenue from federation account is largely derived from the sale of crude oil which is no longer reliable due to recent fall in fuel price around the world. Due to the great reliance on revenue generated from crude oil in the past, it contributed to economic recession experience by the country in the year 2016. But in Lagos state the case is different, in the past years, Lagos state internally generated revenue has been increasing significantly as shown in the report of national bureau of statistics on IGR, with an increase of 48.55% between 2011 and 2016.



Figure 2: Lagos State IGR, Source: compiled by the author from National Bureau of Statistics 2017

Although, despite the continuous increase in revenue the basic infrastructure needed by the residents of Lagos state are not sufficient. There are still communities without good energy supply, good roads, and proper health care, which show that there is need for more infrastructure to be built. For the purpose of this research, government revenue generated from taxation will be the main focus. According to (Afuberoh & Okoye , 2014) There are various types of taxes collected by state government in Nigeria namely; Development Levy, Right of occupancy on land owned by state, Market taxes on state financed taxes, road tax, personal income tax (PAYE). They also stated that taxation has a significant impact on revenue generation in Nigeria. PAYE is the revenue generated by imposing tax on employed residents of a state which is remitted every month by the company to the relevant tax authorities. In Lagos state the highest source of revenue is PAYE as shown in (National Bureau of Statistics, 2017) report. This fact make taxation a very significant contribution to internally generated revenue by the state government. There are other sources of internally generated revenue that is worth mentioning as shown in the record of the Lagos state ministry of planning and budgeting, the government generates revenue from such as, fines & fees, licenses, earning & sales, and rent of government properties.

In spite of all the benefits derived from internally generated revenue, there are several challenges attached to it. Such as; lack of database for customers of the state inland revenue service, unwillingness of individuals to pay tax, poor collection processes, lack of financial integrity of taxpayers; lack of transparent accounting of the tax authorities, undocumented financial transactions; poor training of staff in revenue administration; low determination in the area of revenue administration; poor internal organizational arrangement for revenue generation; poor business process among others (Eze, C., Omole, J., Onyia, S., and Okonji, P., 2004).

Oyedele (2016) referred to Joint Tax Board stated that about 4.6 million people are registered with Lagos Inland Revenue Service for tax purpose which is too low compared to the population in Lagos State. One of the major problem to revenue generation is that, most people in the informal sector that have businesses or trade don't want to pay taxes and their income cannot be traced by the government due to lack of financial records. Without financial records the government is unable to ascertain their tax liability and this reduces the amount of revenue the state is able to generate. According to Transparency International (2017),Nigeria was ranked the 148 least corrupt country in the world out of 195 countries. Furthermore high level of corruption will greatly affect the amount of revenue generated in a state, if the government workers are corrupt the records in the books will not match the actual receipt of revenue generated by the state. High level of corruption also means that tax administrators will be inefficient when doing their work due to bribery. The level of corruption in a system corresponds with the level of internal control system, due to corruption the internal control system of government offices will be weakened therefore affecting the amount of revenue generated.

Tax is a source of revenue for a government, it is a compulsory levy imposed by the government on individuals or corporate entities who reside or operate within a geographical location. There are various underlining principles that guide the concepts of taxation. The Benefit principle of taxation by (Cooper, 1994) is of the view that taxes are to be levied on individuals or entities in proportion to the benefit conferred on them. That is, the more benefits a person gets from the activities of a State, the more he should pay as taxes to the government. Although, it is impossible to measure precisely the amount of government benefits gotten by every individual or entity, which makes it difficult to determine how much a person will pay under this school of thought. Another principle is by (Pigou, 1920) the 'Ability to pay' principle which states that taxes should be

levied on tax payers according to their ability to pay (income), in order to meet up with the cost of government expenditures. This seems to have gained so much population as income tax is built on this principle.

According to (Afubero & Okoye, 2014) “the primary objective of a modern tax system is generation of revenue to help the government to finance ever-increasing public sector expenditure”. The main purpose of taxation is for government to finance its expenditures and to provide funds for the running of the government machineries (Anon., 2013). According to the fiscal federalism theory the government is expected to ensure a well-organized use of resources to maintain an equitable distribution of revenue and to ensure the standard of living is improved on, by providing basic infrastructure at different levels of government. Having stated some functions of the government to the citizens using taxation as a tool, according to (Nightingale, 2002) and (Lymer, A. and Oat, L, 2010) the objectives of taxation can be summed up to the following:

- Generating revenue for government expenditure.
- Allocation of income to promote the welfare and equality of the citizens.
- Regulation of the economy to create an enabling environment for companies to succeed.

However taxation is one among other means of generating revenue by the government, in order to meet up with their expenditures and needs of the citizens. (Miller and Oats, 2009) Stated, “Taxation is required to finance public expenditure”. Except from taxation there are other sources of revenue for the government such as; borrowing, grants etc. The government face various problems when raising revenue, but one of the major problems is tax evasion and unwillingness of citizens to pay tax in the informal sector. Taxation being for the purpose of public expenditure, it is essential that infrastructure is provided and developed for citizens taking into consideration that public goods ought to be consumed equally. Tax payers are only encouraged to pay tax when they can see that the revenue raised by the government is being used for things to improve the environment around them. According to (Abiola & Asiweh, 2012) the rate of tax evasion might continue to rise if tax payers do not see the evidence of taxation in the public goods, because the citizens might feel exploited. Looking at the benefit principle of taxation, tax payers would only pay tax based on the benefits they get from the government, if infrastructures are not developed, there is no economic stability and no security provided for citizens then tax payers do not have a reason to pay taxes. That is, the more benefits tax payers get from the government, the more they are willing to pay taxes and the easier it becomes for government to raise revenue internally in order to cater for its expenditures.

(Group African Development Bank, 2018), Described infrastructural development as a key driver for progress across a country and a driving force for productivity and continuous economic growth. (Torrise, 2009) Defined infrastructure as “capital good (provided in large units) in the sense that it is originated by investment expenditure and characterized by long duration, technical indivisibility and a high capital-output ratio”. He also stated that in terms of economics, infrastructure is a public good. (Miller, 2013) described infrastructure as “the life blood of property and economic confidence in the 21st century”. He further stated that infrastructure is the structural foundation on which the continuous development of a community depends on, that is, infrastructures are the basic structures that are vital for the running of a society or state. Infrastructural development significantly aids human and environmental development, increase in the standard of living, and the accomplishment of the Millennium Development Goals (MDGs). Infrastructural development involves structures such as roads, water supply, electrical grids, telecommunications, renewable energy, and so on (Anon., 2011). Infrastructural development in state is dependent on how much revenue the government can raise for capital expenditures.

III. Theoretical Review

According to (Harriss, 2013) the developmental theory was propounded by Alexander Gerschenkron in 1951, who 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 60's which emphasizes on structural features which hinders the economic growth of developing or underdeveloped countries. This theory focuses on the transformation of a country's economic development being based on agriculture to a modernized country in which the economic development will be based on service and manufacturing (industrialization). The main purpose for 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 export of primary goods such as, mining products and agricultural products and also reducing the level of importation by encouraging industrialization in order to increase the number of substitute product for the imported ones. The structuralism theory majorly involves government intervention in the country to fuel economic and industrial growth. For the government to intervene in the development of a state or country they need to generate sufficient revenue.

Hypothetically, this research adopts the fiscal federalism theory (which is the financial relationship amongst the different governmental unit in a federal system) as a framework for the basis of discussion about internally generated revenue, “the theory assumes that federal system of government can be efficient at solving problems government face today such as just distribution of income, efficient allocation of resources and economic stability” (Kapucu, 2006). The theory has grounds on the theory of public goods which established the framework and explained the role of the government in the state (Arrow, 1970). The framework recognized the duties of the government in rectifying different forms of market failure, make sure an equitable circulation of revenue and seeking to sustain consistency in the macro-economy at full employment. This study will focus on the role of government in improving the standards of living for its citizens by providing infrastructure. It is essential that the government steps in incase of any market failure due to various public goods characteristics such as electricity. Economics teaches that public goods will be scarce if left in the hands of the private market because individual would rather under-invest for benefits they can get and not for the common good, or for the benefit of the entire society. For this reason it is best that the government put infrastructures in place that will assist the general public. From this the government is regarded as warden of public interest who seeks to improve the standard of living, maximize social welfare, put in place rectifying measures for the society to remain in good condition, and maintain economic stability for infrastructural development or growth. Looking at the fiscal adequacy principle which states that sources of government revenue raised should be enough to handle the demand of the public expenditure. Generally it is believed that, states with robust internally generated revenue are capable of providing more for their expenditure requirements, which makes this relevant in this study. “The theory of transformational leadership states that, the focus of leadership ought to be the commitment to organizational goals and objectives as well as greater capacity for accomplishing those goals and therefore greater productivity” (Leithwood, 1994). This describes what the focus of the state government (as the leader) should be on. It should be focused on what the people need and how to increase the standard of living for people. For the government to fulfill its obligations towards the residents of its state, they have to raise funds internally and enforce polices within the state to ensure market stability and promote infrastructural development.

IV. Empirical Review

According (Michael & Akpan, 2013) to who cited the following authors: Argentina by (Schwartz, G. Liuksila, C., 1999), Colombia by (Ahmad, E. and Baer, K., 1999), Ethiopia by (Brosio, G. and Gupta, S., 1999), South Korea by (Chu, Ke-Young & John Norregaard, 1999) and Mexico by (Amieva-Huerta, J., 1997). From their findings a common result was derived that most times developing countries do not obtain the full benefits of internally generated revenue in terms of development. Almost in all cases, there were concerns about the state governments or other tiers of government not having sufficient internally generated revenue that equates to their expenditure assignments. Which makes it difficult to develop infrastructure, usually, the case is that the previous revenue is larger than the next, making them mainly dependent on financial transfers from the central government. Therefore it becomes difficult for state government to provide and develop basic infrastructures.

(Oechslin, 2009) Studied government revenues and how it relates to economic development in faintly institutionalized nation. The result of his findings revealed that even properly financed governments usually fail to provide vital public goods such as suitable infrastructures or a reliable law enforcement system. This can be said to be as a result of political instability; embezzlement or mismanagement of funds, more resources in the hands of a self-centered government for power struggle among competing leaders (corruption). His findings also stated that the instability effect may be stronger in places with low levels of human or physical capital or in remote areas where technology adoption is more expensive. This shows that infrastructural development can be greatly affected by other factors aside internally generated revenue and those factor can slow down the development of a state even if the resources needed are available.

A research group, (The Initiatives, 2008) who studied Internally Generated Revenue (IGR) And The Challenges of National Development, stated different areas of state development that internally generated revenue can positively influence which includes but it is not limited to, social infrastructure such as; improved educational system, developing the health sector, and providing physical infrastructure to aid private sector investment in water supply, security of life and property, Societal Development, electricity, transportation, and provision of social amenities. The research group concluded that “a steady flow of revenue such as (IGR) would enable Nigeria lay a foundation for stability and relative independence which would aid the country’s pursuit for national development”.

(Olowolaju, et al., 2014) Studied Federal Government Statutory Fund Allocation to State in Nigeria, in the study they state “that each level of government should have sufficient funds to effectively and efficiently discharge its assigned responsibilities”. The study reveals that statutory allocation is not enough for a state in Nigeria to fully depend on it for expenditures, it emphasized the states need to boost their internally generated revenue. For a state to develop its infrastructure it has to make sure IGR is sufficient for capital expenditures.

As stated by (José & Helder , 2013)in their studies on the impact of infrastructure and taxation on economic growth which covered the period of 1976-2011, they mentioned that in order for a good state government to increase spending on public infrastructure they need to increase tax burden on their residents. The study spotted out the important impact of an increase in infrastructural development and taxation on the contribution to economic growth in a state. This shows how the contribution of internally generated revenue on infrastructural development can lead to the further benefit of a state as a whole not just the citizens.

(Nwosu & Okafor, 2014) Examined the relationship between government expenditure and revenue in Nigeria using time series data within the period of 1970 to 2011, they concluded from their studies 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 widened budget deficit and therefore lead to the country borrowing. This will slow down future infrastructural development leaving the country in a static state. (Nwosu & Okafor, 2014) Further stated that government should reduce its recurrent expenditure in order to reduce running cost for the country, but rather focus more on capital expenditure which has more to do with infrastructural development.

(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 improve revenue generation and proper mechanism should be developed for proper utilization of resources. The study concluded that the government should focus on the tax system in order to improve revenue generation by formulating policies that will ensure remittance to the government and that borrowing should be that last resort by the government.

(Ekpong, 2014) Analyzed the trend of government expenditure on infrastructural development in Nigeria between the years 1970-2010. The study revealed that infrastructural development has not yielded positive result over the years indicating that there is a deterioration in infrastructural development in the country. The study further recommended that government monitors the expenditure on infrastructural development and adhere strictly to due processes and procedures in order to manage funds.

(Michael & Akpan, 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 internally generated revenue has contributed to infrastructural development in Akwa Ibom State, but stating that the contribution was significantly sufficient. They recommended that in the allocation of internally generated revenue should be distributed evenly across the state for the purpose of infrastructural development but the amount spent on the different infrastructure don't have to be equally distributed. Giving an example of expenditure on water should be more than the expenditure on road and they gave reasons why. They also concluded just like (Ekpong, 2014) that the government should monitor the way internally generated revenue is being used for expenditure through independent bodies.

(Adesoji & Chike , 2013)did a statistical analysis in their study which showed that effective internally generated revenue results in infrastructural development in Lagos state. They also observed that Lagos state is progressing faster than other Nigerian states in terms of basic infrastructural development. In their studies they concluded that in order for the government boost its revenue they have to educate the citizens on the need and importance of regular tax payment. Furthermore they recommended that state government should not be focused on revenue generation alone but they should ensure that social services like environmental sanitation, provision for public goods and social welfare concerns a significantly focused on.

Methodology and Model Specification

The researcher adopts non-experimental research design in carrying out the study and secondary data was used. The set of data used for this study were sourced from State and Local Government Program (SLGP) report 320 by Chinedu Eze and Lagos State Ministry of planning and budgeting website with detailed report of Internallt Generated Report of Lagos State and Infrastructural Development Budget from (1996-2015) spanning a period of 20years.Data collected were presented in table and the hypotheses were tested using Simple Linear regression technique for analysis and estimating the linear relationship between infrastructural development which is the dependent variable while Revenue from Taxes is independent variable, Revenue from Fine and Fees is independent (Xii), Revenue from Licenses is independent and Revenue from Earnings and Sales is independent variable .This study adapts the model used by (Michael & Akpan, 2013) in their research work on Internally Generated Revenue (IGR) and Infrastructural development in Akwa Ibom State. The model was modified to capture all the four independent variables.Where internally generated revenue is the independent variable X and infrastructural development represents the dependent variable Y.

The statistical model is as follows; $Y = a_0 + b_1 \text{LIGR} + e$;

Thus $\text{LID} = f(\text{LIGR})$, where LID is Lagos Infrastructural Development and

LIGR stands for Lagos state internally generated revenue representing the independent variables.LIGR is further broken into four as follows:

Thus, $LID = f(RT, RFF, RL, RES)$

$$ID = a_0 + b_1RT + b_2RFF + b_3RL + b_4RES + e_t$$

Where: ID is Infrastructural development

RT: Revenue from Taxes

RFF: Revenue from Fines and Fees

RL: Revenue from Licenses

RES: Revenue from Earnings and Sales

a_0 is the estimate of true intercept of the dependent variables or regression constant

b_1 to b_4 is the estimate of parameters of independent variables or regression coefficient.

e is the error term.

Empirical Analysis

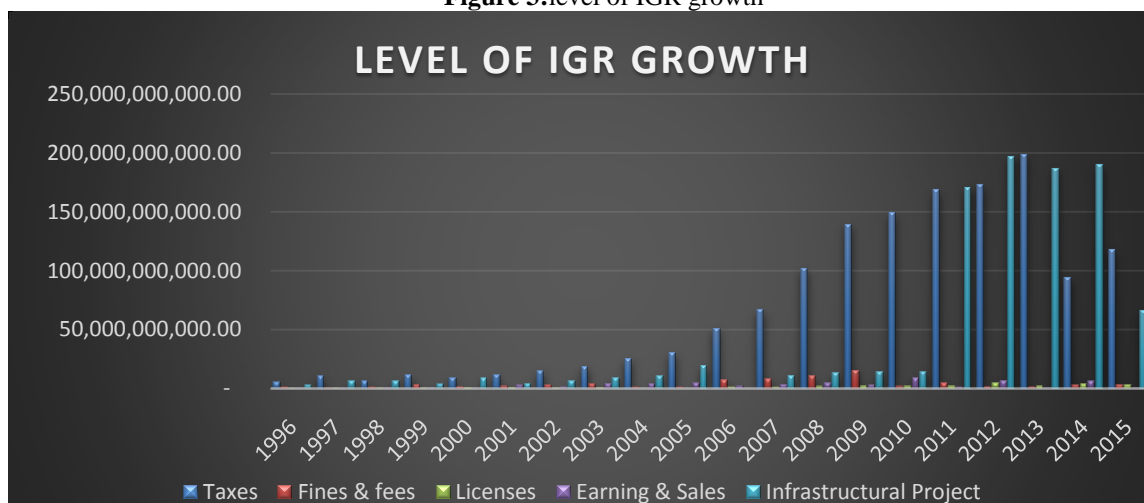
The data analysis is based on multiple linear regression model to test the hypothesis stated for the impact of internally generated revenue on infrastructural development in Lagos state and examine the relationship among variables. The tables presented below reflect the result from the secondary data gotten from Lagos State Ministry of Planning and Budgeting website after data analysis using the model stated in the previous section. From the linear model, the relationship between Internally Generated Revenue and Infrastructural Development in Lagos State was studied for a 20-year period spanning 1996 - 2015. The correlation analysis is reported first, after which the multiple linear regression result was presented and discussed.

Table 1

Data amount in million Naira					
Year	Taxes	Fines & fees	Licenses	Earning & Sales	Infrastructural Project
1996	4,844	951	57	368	2,626
1997	9,815	214	1	19	5,924
1998	5,796	835	296	553	5,694
1999	10,715	2,968	378	558	3,257
2000	8,427	1,284	667	453	8,093
2001	10,905	1,936	655	2,514	3,918
2002	13,991	2,547	299	1,195	6,072
2003	18,181	3,610	510	3,893	8,518
2004	24,445	734	-	3,536	9,689
2005	29,377	682	-	4,334	19,201
2006	50,170	6,576	838	1,782	
2007	66,186	7,652	725	3,108	10,416
2008	101,436	9,921	1,596	4,329	12,422
2009	139,141	14,922	2,186	2,559	13,157
2010	148,445	1,565	1,838	8,077	13,307
2011	168,132	4,206	1,993	828	170,101
2012	172,435	1,358	4,361	6,169	196,279
2013	197,734	1,203	2,056	216	186,024
2014	93,291	2,589	3,728	5,672	189,290
2015	117,530	2,962	2,888	387	65,420

Source: compiled by the author from Lagos state Ministry of planning and budgeting website

Figure 3:level of IGR growth



The chart presented above shows the growth in expenditure on infrastructural development over the period of 20 years and also the revenue generated from the taxes, fines & fees, licenses, and earnings & sales in Lagos state over the same period of 20 years. The growth in taxes over the years agrees with the findings of Michael & Akpan (2013) that internally generated revenue from taxes has a significant contribution to the infrastructural development of a state.

The main emphasis of the correlation analysis of the research is the association or relationship between infrastructural development and the different variables of internally generated revenue in Lagos state. Thus, the correlations between the independent variables are not reported here.

Table 2: Correlation Matrix

		LID	LTX	LFF	LLC	LES
LID	Pearson Correlation	1	.723**	-.199	.795**	.209
	Sig. (1-tailed)		.000	.215	.000	.203
	N	20	20	20	20	20

Source: Compiled by the Author

The results indicate that significant positive and strong correlations exist between capital expenditure as a measure of infrastructural development (LID) and both taxes (LTX - $r = 0.723$; $p = 0.000$) and licenses (LLC - $r = 0.795$; $p = 0.000$). In contrast, LID was found to have an insignificant very weak negative association with fines and fees (LFF- $r = -0.199$; $p = 0.215$) while it has an insignificant weak but positive association with earnings and sales (LES - $r = 0.209$; $p = 0.203$).

Table 3: Regression Analysis

Variables	Dependent Variable: Infrastructural Development				
	B	BETA	t-value	p-value	Remark
(CONSTANT)	7.304		.461	.653	Insignificant
TAXES	.406	.367	1.818	.092	Insignificant
FINES & FEES	-6.677	-.334	-2.674	.019	Significant
LICENSES	39.804	.672	3.123	.008	Significant
EARNINGS & SALES	-7.602	-.239	-1.686	.116	Insignificant
Goodness of Fit of the Model					
R ² = .815		Adjusted R ² = .759			
F-Statistic = 14.354***		DW Statistic = 2.149			
Average Tolerance = 0.568		Average Variance Inflation Factor = 2.161			
*p-value of t-value of coefficient and F-statistic < 0.05					
**p-value of t-value of coefficient and F-statistic < 0.01					

Source: Compiled by the Author.

As analyzed above, taxes (LTX) and licenses (LCC) variables were signed positive as expected while fines & fees (LFF) and earnings & sales (LES) were negative as against expectation. However, only the impact of fines & fees (LFF) and licenses (LCC) to the infrastructural development (LID) were statistically significant. Thus, a unit increase in both fines & fees and licenses will increase infrastructural.

The overall performance of the model in table above is satisfactory, given the R² and adjusted R² values of 0.815 and 0.759 respectively. Thus, the average variations in the impact of internally generated revenue on

infrastructural development is substantially explained by taxes, fines & fees, licenses and earnings & sales variables, who jointly account for 81.5% of the variations in Lagos state infrastructural development projects. Moreover, the equally high adjusted R² attests to the good predictive value of the adopted model, as the error terms have little variance. This is further corroborated by the very high F-value of 14.354 significant at both the 0.05 and 0.01 levels of significance. Durbin Watson statistic of 2.149 is close to 2, pointing to the absence of autocorrelation. The average tolerance value is not less than 0.10 and the average variance inflation factor is less than 2.5 indicating the absence of collinearity. Thus, the empirical results obtained are meaningful and not spurious regression results.

This study adapts the use of the OLS assumption (check summary table from Chukwumerije , et al., 2018) to examine and summarize all assumptions of the linear regression model adopted for this study which includes: linearity, normality, autocorrelation, and multicollinearity gotten from the analyzed data with reference to tables presented below.

Table 4: Statistical Checks

CHECKS	FINDINGS
Normality	The findings from the analyzed data shows that normality is achieved with the result of skewness test, which shows in table 5, the values is below 3.
Linearity	The linearity in the equation was examined with the use of the F statistic significant at 1% level.
Multicollinearity	Collinearity diagnostic is used in linear regression statistics to determine whether or not the tolerance value for all the independent variables is greater than 0.1 and less than 1, whereas the inter-correlation coefficients between the independent variables are less than 1. This suggests that the independent variables are not correlated with one another, hence the absence of multicollinearity as shown in table 6.
Autocorrelation	From the result on Durbin-Watson statistic in table 8 which stated value of 2.149 in the regression equation. This shows that the detected error terms from different cross-sectional observations are not correlated.

The tables in this section descriptive statistics and correlation coefficient from Pearson’s correlation matrix are derived from the data presented in table 1. To test the relationship between variables, the mean, standard deviation, skewness and kurtosis were examined for the study in the tables below.

Table 5: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Taxes	20	5	198	69.55	66.451	.656	.512	-1.119	.992
Fines and Fees	20		15	3.44	3.714	1.992	.512	4.040	.992
Licenses	18	0	4	1.40	1.281	1.024	.536	.281	1.038
Earnings & sales	20		8	2.53	2.315	.877	.512	.033	.992
Infrastructure	20	0	196	46.47	72.669	1.525	.512	.523	.992
Valid N (list wise)	18								

Source: Compiled by the Author.

Table 6: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	7.304	15.860		.461	.653		
TAXES	.406	.224	.367	1.818	.092	.349	2.867
FINES & FEES	-6.677	2.497	-.334	-2.674	.019	.909	1.100
LICENCES	39.804	12.747	.672	3.123	.008	.307	3.257
EARNINGS & SALES	-7.602	4.508	-.239	-1.686	.116	.705	1.418

a. Dependent Variable: INFRASTRUCTURE Source: Compiled by the Author.

Table 7: Collinearity Diagnostics a

Model	Eigenvalue	Condition Index	Variance Proportions				
			(Constant)	TAXES	FINES & FEES	LICENCES	EARNINGS & SALES
1	3.861	1.000	.02	.01	.02	.01	.02
2	.506	2.763	.03	.02	.58	.04	.05
3	.315	3.499	.02	.14	.01	.03	.66
4	.238	4.026	.93	.01	.32	.00	.14
5	.080	6.961	.00	.82	.08	.91	.13

a. Dependent Variable: INFRASTRUCTURE Source: Compiled by the Author.

Table 8: Model Summary b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.903 ^a	.815	.759	37.307	.815	14.354	4	13	.000	2.149

a. Predictors: (Constant), EARNINGS & SALES, FINES & FEES, TAXES, LICENCES

b. Dependent Variable: INFRASTRUCTURE Source: Compiled by the Author.

The hypotheses formulated for this research are examined using the associate t-values and p-values of the estimated coefficient. Herein, the accompanying p-value (*p*) of the obtained t-value (*t*) value is compared to the 0.05 significance level for each variable which is the acceptable level for social sciences in statistics. Where *p-value* is lower than the 0.05 significance level, the null hypothesis is rejected while where *p-value* is greater than 0.05 significance level, the null hypothesis is accepted.

Hypothesis One: revenue from Taxes not have significant effect on infrastructural development in Lagos State.

From table 3 above, the t-value and the associate p-value for taxes (LTX) are 1.818 and 0.092 respectively. Given that 0.092 is above the 0.05 significance level, the null hypothesis is accepted. Thus, the output of the result shows that taxes contribution to internally generated revenue has an insignificant positive impact on infrastructural development in Lagos state.

Hypothesis Two: revenue from fines & fees does not have significant effect on infrastructural development in Lagos State.

As shown in the table 3 above t-value for fines & fees is -2.674 and the associate p-value is 0.019. Since 0.19 is less than the 0.05 significance level, the null hypothesis is rejected. Thus, the output of the result from fines & fees contribution to internally generated revenue has a significant negative impact on infrastructural development in Lagos state.

Hypothesis Three: revenue from Licenses does not have significant effect on infrastructural development in Lagos State.

From the data analysis in table 3 above, a t-value of 3.123 and associate p-value of 0.008 for licenses were obtained. Where 0.008 falls below the 0.05 significance level, the null hypothesis is rejected. Thus, the output of the result from licenses contribution to internally generated revenue has a significant positive impact on infrastructural development in Lagos state.

Hypothesis Four: revenue from earnings & sales does not have significant effect on infrastructural development in Lagos State.

From table 3 above, t-value and associate p-value for earnings & sales are -1.686 and 0.116 respectively. Since 0.116 exceeds the 0.05 significance level, the null hypothesis is accepted. Thus, the output of the result from

earnings & sales contribution to internally generated revenue has an insignificant negative impact on infrastructural development in Lagos state.

So far the empirical evidence presented, implies that the overall contribution of internally generated revenue to infrastructural development in Lagos state is significant, having positive impacts on infrastructural development. From the result R-squared valued at 0.815 implies that all variables accounted for as parameters of internally generated revenue in the model, resulted for 81.5% of the variations in infrastructural development and F-statistics of 14.354. Indicating that internally generated revenue has a significant effect on infrastructural development, which agrees with the findings of (Adesoji & Chike , 2013) However, some variables of internally generated revenue do not really contribute positively to having a meaningful impact on infrastructural development. These findings will be discussed one after the other, in details as the factors that affect the outcome of the data analysis presented above.

The contribution of taxes to internally generated revenue resulted in a positive but not significant to infrastructural development of Lagos state leading to the acceptance of null hypothesis one. This result was unexpected given that Lagos state government generate most of their revenue from taxes just by looking at the trend in of revenue generated from taxes which reflected as 91% of the total revenue of the data presented in appendix 2, making it the highest revenue source. On the other hand the result from the correlation analysis shows that taxes has a significant positive and strong relationship with infrastructural development which is as expected because as described in appendix 2 taxes grew as infrastructures grew over the 20 years.

From the second variable presented the result is different, the contribution of fines and fees to internally generated revenue resulted in a negative impact on infrastructural development in Lagos state but significantly, which results in rejection of hypothesis two. This result was expected given that only 4% of the revenue generated in Lagos state government was raised from fines and fees which is presented in the table 1 above and shown in appendix 2 below. So the negative influence that exist between them is as expected because fines and fees did not grow at a similar rate with infrastructure over the 20 years period. On the other hand the result from the correlation analysis shows that fines and fees has an insignificant negative and very weak association with infrastructural development which is as expected due to its percentage of total revenue contributed to internally generated revenue from fines and fees in Lagos state over the 20 years period.

In a similar fashion, Licenses contribution to internally generated revenue over the 20 years period has had a significant positive impact on infrastructural development in Lagos state, hereby, the null hypothesis three is rejected. The outcome of this result is as expected, also the correlation analysis reflect that licenses has a significant positive and strong association with infrastructural development in Lagos state. In contrast, revenue raised from earnings and sales had a negative and insignificant impact on infrastructural development from the regression analysis done resulting in the acceptance of hypothesis four, while it has an insignificant weak and positive relationship with infrastructural development in the correlation analysis done over the 20 years period. These results from the individual variables impacting or influence on infrastructural development speaks largely to the need that more revenue has to be generated by state government for infrastructural development to keep growing.

V. Conclusion and Policy Recommendations

Theoretical, hypothetical and empirical evidence has been provided by this study on how internally generated revenue impacts infrastructural development in Lagos state. The statistical analysis in this study shows that the internally generated revenue has led to infrastructural development given that the F-statistics in table 4.2.2 resulted in 14.354 significance level, which is in agreement with the work of (Adesoji & Chike , 2013) that the infrastructural development in Lagos state is as a result of appropriate revenue generated and that generating revenue aids infrastructural development. The relevant aspect of literature reflects mixed results, where some of the prior research find that internally generated revenue significantly influence infrastructural development in Lagos state, while others research find results to the contrary. Empirical evidence based on the data analysis of this study hypothesis confirms both significant, as well as insignificant (positive/negative) impact of internally generated revenue on Lagos state infrastructural development. Precisely, the findings of the study are summarized as follows:

1. Taxes contribution to internally generated revenue has a positive impact on infrastructural development in Lagos state but not significant.
2. Fines & fees contribution to internally generated revenue has a significant negative impact on infrastructural development in Lagos state.
3. Licenses contribution to internally generated revenue has a significant positive impact on infrastructural development in Lagos state.
4. Earnings & sales contribution to internally generated revenue has an insignificant negative impact on infrastructural development in Lagos state.

The findings reflect that internally generated revenue has significant implications for the infrastructural development of Lagos state. Thus, it is vital that some key government policies are put in place and strictly followed to improve the growth rate of infrastructural development in Lagos state. In fact, internally generated revenue sources such as taxes, fines & fees, licenses, earnings & sales are imperative given that they account for huge chunk of the total amount of internally generated revenue which influence infrastructural development in Lagos state. Weaknesses to the growth of internally generated revenue in the government system, especially in the area of corruption, mismanagement of funds and tax evasion should be properly dealt with, so the government can make more meaningful contributions to the development of infrastructure in Lagos state.

Based on the empirical findings it was discovered that taxes, earnings and sales do not have significant impact on the infrastructural development of Lagos state over the period of twenty years. This explains the fluctuating growth rate of Lagos state infrastructural development in appendix 1. In order to improve infrastructural development the major variables of internally generated revenue must increase significantly, I therefore recommend that the government implement the following;

- Regular auditing of revenue collection agency
- Government should enhance the revenue collection service agency
- Computerized Procedure
- New Development and Maintenance of Infrastructure

1. Regular Auditing of revenue collection agency: Auditing the books of revenue collection agency will reduce the level of corruption in the system to the barest minimum because the tendencies of embezzling the State governments' funds will reduce and it will enable revenue collecting agencies operate with a stronger internal control system. The auditors would also find out if revenue collected are remitted correctly and adequately into government account in order to prevent any fraud in the system. Which results in more funds for the development of infrastructure.

2. Government should enhance the revenue collection service agency: this can be done in the following way, regular training of staff so they are more efficient and work in line with the current trends, motivation of workforce by paying them properly so they can do their jobs efficiently and don't feel the need to engage in embezzlement of government revenue.

3. Computerized Procedure: all the processes of the revenue collection agency should become computerized where by tax payers can pay online and send prove of payment online. The government can employ experts that will build a software that is connected to the bank account of the government where by any amount of money received automatically is updated in the software and any payment can be tracked, that is, revenue collectors don't work with cash but with a computerized system. Revenue collection process can become like that of the bank's operations with customers, where documents can be filled to the tax authority online and both parties have evidence of the procedure. This will save cost and enable more people to be willing to pay their taxes because the procedure is easier.

In this study it was discovered that licenses had a significant impact on infrastructural development, never the less revenue generated must be utilized properly in other to motivate citizens to pay their taxes. Therefore the recommendation below is given,

4. New Development and Maintenance of Infrastructure: Setting up basic infrastructure in the state is an undisputable way of telling the citizens that the government is active and that money generated is utilized for the development of the communities. Also infrastructure must be properly maintained from time to time so that citizens don't get frustrated, for example, bad roads causes' traffic for people and if not developed on time citizens get frustrated. Also structures such as hospitals, institutions, recreation centers, and electricity should be properly managed, monitored and audited regularly so that the citizens can enjoy continuously basic infrastructures. Many tax payers may not be willing to pay direct tax and will do everything to avoid or evade tax if they find reasons to believe that their taxes are not utilized efficiently by the government or mismanaged. So continuous development or maintenance of existing infrastructure is important for the state to generate more revenue from taxes. According to the findings of (Naoyuki & Umid, 2016) total average tax revenues increases during times of major infrastructural development and decreased after such infrastructural projects are over. Further policy research aimed at government revenue in order to promote infrastructural development in Lagos state need to focus on the following areas, namely administration of IGR, revenue collection process and utilization of internally generated revenue.

- **Administration of internally generating revenue:** this is required because it determines the amount of revenue generated in a state. The focus of this study should include the analysis of the population of tax payers in Lagos state to determine the population in the informal sector who don't pay taxes and how much the government is losing due to that. Deficiencies in the tax administration process and ways they can be improved upon in order for the government to raise sufficient revenue.

- Revenue Collection Process: further studies should be done in this area to improve the amount of internally generated revenue and therefore promote infrastructural development in Lagos state. This study should include, examination of the revenue collection procedure, how the government can improve revenue collection especially from the informal sector of Lagos state.
- Utilization of internally generated revenue: it is important that further studies be done to find out how the government manages internally generated revenue. This is important because once infrastructure is properly managed from time to time, it reduces the amount of revenue sent on renovation or to rebuild infrastructure in the long run. This study should include, findings on how the government utilizes revenue, amount of revenue spent on maintaining infrastructure compared to the amount spent on rebuilding infrastructures.

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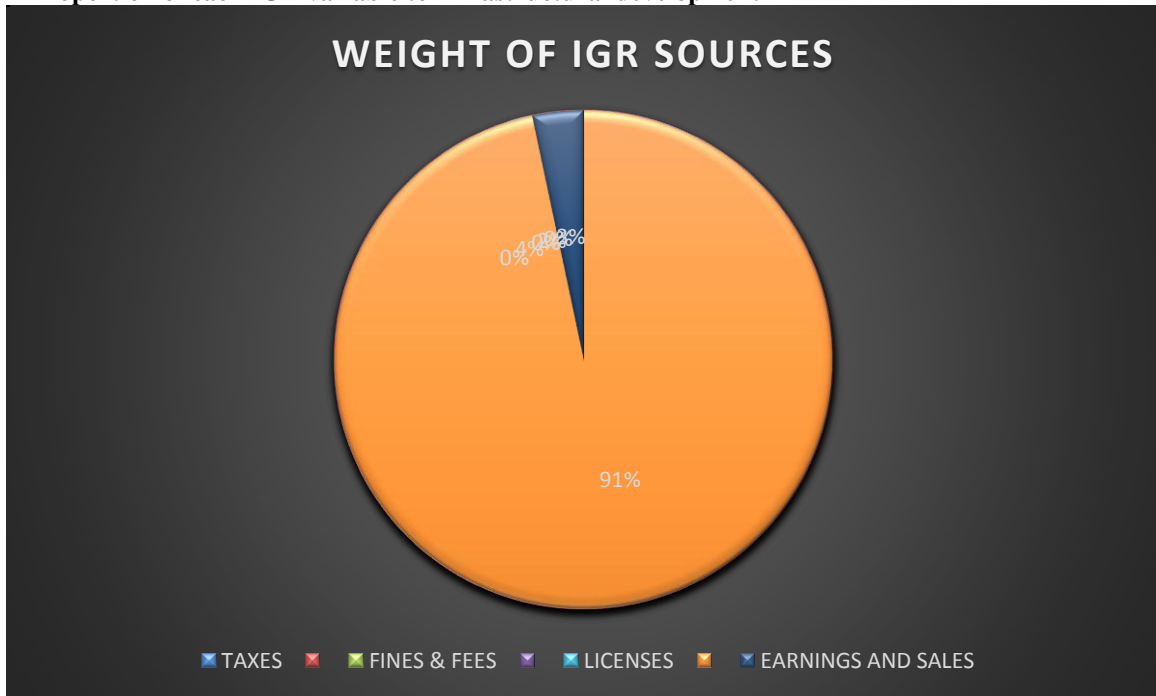
APPENDIX

1. Growth rate of each variables on a yearly basis

Amount in billion Naira

Year	Taxes	Growth % 1	Fines & fees	Growth % 2	Licenses	Growth % 3	Earning & Sales	Growth % 4	Infrastructural Project	Growth %
1996	4.84	#VALUE!	0.95	#VALUE!	0.06	#VALUE!	0.37	#VALUE!	2.63	#VALUE!
1997	9.82	102.62	0.21	-77.5	0.00	-98.25	0.02	-94.84	5.92	125.59
1998	5.80	-40.95	0.84	290.19	0.30	29,500.00	0.55	2,810.53	5.69	-3.88
1999	10.72	84.87	2.97	255.45	0.38	27.7	0.56	0.9	3.26	-42.8
2000	8.43	-21.35	1.28	-56.74	0.67	76.46	0.45	-18.82	8.09	148.48
2001	10.91	29.41	1.94	50.78	0.66	-1.8	2.51	454.97	3.92	-51.59
2002	13.99	28.3	2.55	31.56	0.30	-54.35	1.20	-52.47	6.07	54.98
2003	18.18	29.95	3.61	41.74	0.51	70.57	3.89	225.77	8.52	40.28
2004	24.45	34.45	0.73	-79.67	#VALUE!	-100	3.54	-9.17	9.69	13.75
2005	29.38	20.18	0.68	-7.08	#VALUE!	#DIV/0!	4.33	22.57	19.20	98.17
2006	50.17	70.78	6.58	864.32	0.84	#DIV/0!	1.78	-58.86	0	-100
2007	66.19	31.93	7.65	16.35	0.73	-13.44	3.11	74.34	10.42	#DIV/0!
2008	101.44	53.26	9.92	29.66	1.60	120.01	4.33	39.29	12.42	19.26
2009	139.14	37.17	14.92	50.4	2.19	36.97	2.56	-40.88	13.16	5.92
2010	148.45	6.69	1.57	-89.51	1.84	-15.92	8.08	215.6	13.31	1.14
2011	168.13	13.26	4.21	168.71	1.99	8.43	0.83	-89.74	170.10	1,178.22
2012	172.44	2.56	1.36	-67.71	4.36	118.77	6.17	644.57	196.28	15.39
2013	197.73	14.67	1.20	-11.42	2.06	-52.85	0.22	-96.49	186.02	-5.22
2014	93.29	-52.82	2.59	115.15	3.73	81.32	5.67	2,520.32	189.29	1.76
2015	117.53	25.98	2.96	14.43	2.89	-22.52	0.39	-93.17	65.42	-65.44

2. Proportion of each IGR variable to Infrastructural development



3. Data Analysis Result

Correlations

		INFRASTRUCTURE	TAXES	FINES & FEES	LICENCES	EARNINGS & SALES
Pearson Correlation	INFRASTRUCTURE	1.000	.723	-.199	.795	.209
	TAXES	.723	1.000	.248	.790	.384
	FINES & FEES	-.199	.248	1.000	.119	.147
	LICENCES	.795	.790	.119	1.000	.530
	EARNINGS & SALES	.209	.384	.147	.530	1.000
Sig. (1-tailed)	INFRASTRUCTURE		.000	.215	.000	.203
	TAXES	.000		.161	.000	.058
	FINES & FEES	.215	.161		.319	.280
	LICENCES	.000	.000	.319		.012
	EARNINGS & SALES	.203	.058	.280	.012	
N	INFRASTRUCTURE	18	18	18	18	
	TAXES	18	18	18	18	18
	FINES & FEES	18	18	18	18	18
	LICENCES	18	18	18	18	18
	EARNINGS & SALES	18	18	18	18	18

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.903 ^a	.815	.759	37.307	.815	14.354	4	13	.000	2.149

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
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Internally Generated Revenue and Infrastructural Development : Of what relevance to Lagos?

1	Regression	79916.254	4	19979.063	14.354	.000 ^b
	Residual	18093.892	13	1391.838		
	Total	98010.146	17			

a. Dependent Variable: INFRASTRUCTURE

b. Predictors: (Constant), EARNINGS & SALES, FINES & FEES, TAXES, LICENCES

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	7.304	15.860		.461	.653		
TAXES	.406	.224	.367	1.818	.092	.349	2.867
FINES & FEES	-6.677	2.497	-.334	-2.674	.019	.909	1.100
LICENCES	39.804	12.747	.672	3.123	.008	.307	3.257
EARNINGS & SALES	-7.602	4.508	-.239	-1.686	.116	.705	1.418

a. Dependent Variable: INFRASTRUCTURE

Collinearity Diagnostics^a

Model	Eigenvalue	Condition Index	Variance Proportions				
			(Constant)	TAXES	FINES & FEES	LICENCES	EARNINGS & SALES
1	3.861	1.000	.02	.01	.02	.01	.02
2	.506	2.763	.03	.02	.58	.04	.05
3	.315	3.499	.02	.14	.01	.03	.66
4	.238	4.026	.93	.01	.32	.00	.14
5	.080	6.961	.00	.82	.08	.91	.13

a. Dependent Variable: INFRASTRUCTURE

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