JOURNAL OF CRITICAL REVIEWS

ISSN- 2394-5125 VOL 8, ISSUE 01, 2020

Internally Generated Revenue and Transport Infrastructural Development in Lagos State Nigeria between 1998 to 2018.

Ajike, Emmanuel Ogbonna[1], Ariguzo, Adaobi Vivian[2], Akinyosoye Olanrewaju[3], Nwankwere Idowu A. [4], Oyedeji, Fisayo [5]

[1,3,4]Department of Business Administration and Marketing Babcock University Nigeria

[2,5] Entrepreneurship & Business Planning Faculty, Rome Business School, Nigeria

ajikee@babcock.edu.ng
corresponding author

Abstract

Globally, initiating and sustaining growth and development remains a concern for all leaders: either at the Local, State, or Federal government levels. Despite the rising population, and the correspondingly highest internally generated revenue contributor in Nigeria, the decay in transport infrastructural development seems insurmountable. This study investigated the impact of internally generated revenue on infrastructural development in Lagos State, Nigeria (1998-2018). Ex-poste facto research design was employed for the study been a secondary data. The study covered an evaluation of annual time series data for a twenty-one-year period, commencing from years 1998 to 2018. Findings revealed that internally generated revenue components had significant effect on transport infrastructure (R^2 = 0.891, *Adj*. R^2 = 0.804, $F(1,187) = 10.254$, $p < 0.05$) in Lagos State, Nigeria. The study concluded that internally generated revenue enhances the transport infrastructural development in Nigeria. It recommended that the State government should channel these funds deliberately towards the development of transport infrastructure, so as to bring about the ripple effect of improved standard of living, increased gross domestic product, reduced employment shortages and enhance economic development.

Keywords: *Transport Infrastructural, development, Internally generated revenue, Lagos State*

1.0 Research Background

Infrastructural development is a strategic driver for advancement in most nations and a relevant activator for resourcefulness and sustainable economic growth. Some varieties of infrastructure such as economic (transport, power generation, information, and communication) and social (health, education, housing) infrastructure are key due to their contributions to economic growth outcomes. Delving into transport infrastructure, it can be said to be the lifeblood of all business enterprises capable of reengineering the production activities within a nation's economic activities. As a result, government agencies, investment allies, and non-governmental businesses have dedicated extensive resources and resolve in ensuring establishment and survival of existing road infrastructure. However, dealing with infrastructure backlogs and its future demands is quite challenging, often impeding the smooth evolution of underdeveloped nations to contemporary developed nations.

United Nations (UN) policy on 2030 agenda for sustainable development has posited that infrastructure development is germane to developing countries in terms of poverty eradication and intensification of employment opportunities (United Nations newsletter, 2017). The need for structures, principles and instruments to guarantee that infrastructure development is not only cautiously operational and sustainable, but also obvious, fair and all-encompassing, is a yardstick for economic growth (OECD, 2018). Additionally, several UN entities such as UN Industrial Development Organization (UNIDO), UN Institute for Training and Research (UNITAR) have outlined means in which infrastructure offers ample opportunities for employment conception, income generation and economic growth, as well as access to social and institutional infrastructure such as healthcare, education, water and sanitation.

Furthermore, it was highlighted that merely only seven nations—Cameroon, Côte d'Ivoire, Gabon, Ghana, Namibia, Senegal and South Africa—have power infrastructure such as electricity access rates greater than 50 percent while nations like Nigeria has an average grid access rate of just 20 percent (Castellano, et. al., 2015). At the moment, roughly 95 million Nigerians, about 55% of the population, are without access to grid electricity, whereas those

ISSN- 2394-5125 VOL 8, ISSUE 01, 2020

having access experience epileptic supply over 60% of the time (Aliyu, Ramli, & Saleh, 2013; Nigeria Power Baseline Report (NPBR), 2015). Scholars (Gusau & Orah, 2018; Obokoh & Goldman, 2016) argued that despite the successful privatisation of power infrastructure and establishment of independent power projects in some states in Nigeria, there is still no substantial enhancement in power supply especially in Lagos State.

There is seemingly a threat to Lagos State government drive to effectively actualise its dream of becoming a mega city with modern roads, drainage, quality educational and health services by the year 2030 due to inadequate revenue to meet infrastructure requirement of its exploding population. To buttress this, a report by NBS indicated that whereas Lagos State government projected monthly internally generated revenue for 2018 was N720bn, it got about N382bn instead of N720bn at the end of the year, which is just about 53 percent of the targeted revenue. Against this back, the challenge of ensuring infrastructure development in Nigeria could be cumbersome due to dwindling revenue, necessitating formulation of approaches to increase internally generated revenue (Salau, 2019).

To buttress this, Salau (2019) reported that the inability of several governments especially in less developed countries like Nigeria to provide transport infrastructure is attributable to the incessant decline in internally generated revenue. According to Etim (2019), in Lagos State particularly, transport infrastructure has suffered years of neglect combined with ever-increasing population and leakages in the process of generating revenue.

Critical investigation on modalities of enhancing internally generated revenue in order to mitigate infrastructural deficit is needed, as reported by BudgiT (2018). Lagos State's extraordinarily high overhead costs and debts continue to weigh down its revenue. Consequently, transport infrastructure shortfalls, such as rail and road problems, have lowered productivity rates of businesses by as much as 40 percent (BudgiT, 2018). Moreover, infrastructural deficits is creating entry barrier as foreign direct investment in 2018 to Nigeria fell 21% to $3.5 billion (UNCTAD, 2018). This nagging problem has seen Lagos State government make efforts towards increasing transport infrastructural options, for example providing the BRT buses, with bus terminals in various locations. However, the lack of revenue which could be raised internally, to harness other opportunities in the waterways and even the rail system has left the state perpetually incapacitated. Hence, this present study seeks to examine the effect of internally generated revenue components on transport infrastructure development in Lagos State, Nigeria.

2.0 Literature Review

2.1. Internally generated revenue

Internally generated revenue according to Omodero, Ekwe and Ihendinihu (2018) and Adam (2006) defined revenue as the fund required by the government to finance its activities. Internally generated revenues (IGR) are revenues or funds generated by states within the Nigerian federation, independent of their share of revenue from the federation account (Deloitte, 2016). IGR for State governments has also been described as revenues that are derived within the state from various sources such as taxes (pay as you earn, direct assessment, capital gain taxes, amongst others) and motor vehicle license, among others (Adenugba & Chike, 2013). Nnanseh and Akpan (2013) IGR serves as the nerve centre of the social contract, it makes government more responsible and more responsive to the needs of the people, it serves as a tool for economic development, it is an important consideration in the planning of savings and investment and a powerful fiscal weapon to plan and direct the economy. IGR also serves as a tool for social engineering, it goes a long way to keep the society moving, because as government gets more revenue and commission more projects, more money is put in circulation, more employment opportunities arise and more business opportunities are created which impact positively on generality of the society. Above all it serves as tool for infrastructural development.

Transport Infrastructure is the major structure of component parts of the transportation system offering the bedrock for operations, and they include rail tracks, roads, air and seaports (Olamigoke & Adebayo, 2013). It consists of the fixed installations necessary for transportation, in the form of roads, railways, airways, waterways, canals and pipelines, and terminals such as airports, railway stations, bus stations, warehouses, trucking terminals, refuelling depots (including fuelling docks and fuel stations) and seaports. Terminals maybe used both for interchange of passengers and cargo and for maintenance (Akinsoyoye, 2020; Mayaki, 2014). Transport infrastructure helps to meet demand function of moving people, produce and services from one location to another. Transportation is significantly vital which can be likened to the human blood circulatory system whose healthy functioning is a necessary condition for sustenance of life (Adeniji, 2000).

Studies on the Nigerian economy (Njoku & Ikeji, 2012; Amba & Danladi, 2013; Olamigoke & Adebayo, 2013; Oyesiku, Onakoya & Folawewo, 2013) posits that transportation costs form a significant proportion of the final price of most goods – agricultural, manufactured and mining products. On the average, transport accounts for more than 30 percent of the value of the delivered product. This high cost is partly attributable to the inadequacy and inefficiency in Nigeria's transportation infrastructure (Njoku & Ikeji, 2012; Oguanobi, Nzeribe, & Ibekilo, 2016).

ISSN- 2394-5125 VOL 8, ISSUE 01, 2020

2.2. Internally generated revenue and infrastructural development

Nnanseh and Akpan (2013) research reported that internally generated revenue contributed significantly and positively to provision of water, electricity and roads. Conversely, these contributions were tilted more to roads than electricity and water. Obara and Nangih (2017) findings showed that deficiency in reliable tax database and the occurrence of cash transactions impede government's internal revenue generation and transport infrastructure after a study in the Port Harcourt metropolis. Fave and Dabari (2017) findings revealed that stamp duty, capital gains tax, education tax and petroleum profit tax are positively significant at 1%, 5% and 10% respectively whereas company income tax and value added tax were not significant.

Olalekan and Irewole (2019) study indicated a significant positive relationship between internally generated revenue and infrastructural development, noting that personal income taxes, earnings and sales which are key constituents of internally generated revenue do not have any significant influence on the infrastructure development of Lagos state. Oyetakin and Yahya (2017) research conveyed a negative and significant relationship between internally generated revenue and aggregate spent on infrastructure development. Ogbu, Okezie, and Okezie (2017) study discovered that internally generated revenue has insignificant impact on transport infrastructure but significantly influenced social infrastructure and water infrastructure. The variations in findings amongst the diverse scholars, has necessitated the need for a study from the Nigerian context.

2.3. Theoretical Review

This study is underpinned on the Peacock and Wiseman effect theory. The theory was postulated in 1961 as a follow up to Wagner's Law (Bird, 1971; Goffman, 1968). This theory underscores the various stages of growth of financial expenditure within a State which requires the right combination of infrastructure development (personal income tax, withholding tax, stamp duty tax, capital gain tax and value added tax to attain this level of expenditure (Goffman, 1968). The three basic propositions underlying the P-W analysis are that; (i) State governments can always find profitable ways to expend available funds, (ii) citizens, in general, are unwilling to accept higher taxes, and (iii) governments must be responsive to the wishes of their citizens. From these basic tenets, P-W derived the key concept of a 'tolerable burden of taxation'. Wiseman-Peacock hypothesis appears to be quite relevant to this study on infrastructural development as it emphasizes the jerks and jumps in public expenditure, and the corresponding need of an appropriate revenue generation structure to meet government increasing financial commitments. Most importantly, the Peacock and Wiseman (1961) helps reveal that the higher the government revenues available to support permanently higher levels of public sector allocation, they most likely corresponding increase in availability of infrastructure beneficial for public use hence resulting in a causal-effect relationship on the development of infrastructure. These advantages of an effective and efficient collection of internally generated revenue (taxes) would rub off on development of infrastructure which cut across transport, power, social and even institutional too.

3.0. Methodology

In order to evaluate the effect of Internally Generated Revenue (such as personal income tax, withholding tax, stamp duty, capital gain tax, consumption tax) on transport infrastructural development in Lagos State, Nigeria, the study adopted ex-post facto research design. This design as posited by Akhor (2016) and Ofoegbu et al. (2016) aids the investigation into trends over specified time frames. Lagos State is the preferred location for the study because the State provides the highest internally generated revenue amongst all the 36 states in the Federal Republic of Nigeria (Nigerian Bureau of Statistics, 2019). Furthermore, the study covered an evaluation of annual time series data for a twenty-one-year period, commencing from years 1998 to 2018. Secondary data was collected from outlining the inherent gains of the research to the Tax Controller, LIRS, Agidingbi. The completeness, accuracy and correctness of all figures relative to the variables under study were verified and validated as confirmed. Similarly, the data were confirmed to be highly reliable as they had been audited and certified by the office of the auditor-general of Lagos State. To test the hypothesis of this study (Internally generated revenue has no significant effect on transport infrastructure in Lagos State, Nigeria), the following functional and econometric model were stated:

$TI = f(PIT, WHT, SDT, CGT, CST)$ ---------- Functional equation

$TI_t = \beta_0 + \beta_1 PIT_t + \beta_2 WHT_t + \beta_3 SDT_t + \beta_4 CGT_t + \beta_5 CST_t + \varepsilon_t$ ---------- Model of the Study

Where PIT = Personal Income Tax
WHT = Withholding Tax
STD = Stamp Duty (land use charge)
CGT = Capital Gain Tax
CST = Consumption Tax
TI = Transport Infrastructure

The apriori expectation of the study: If $p \leq 0.05$, $\beta_i \neq 0$; where $\beta_i = \beta_1, \beta_2, \beta_3, \beta_4$; H_0 will be rejected.

ISSN- 2394-5125 VOL 8, ISSUE 01, 2020

The collected data for this study was analyzed. To test for the econometric equation the unit-root test, co-integration tests and the Autoregressive distributed lag model (ARDL) was adopted. After the model estimation, it was essential to conduct post estimation tests in order to ascertain the fit of the model and to examine the structure of the residuals so as to ascertain the validity of inferences that will be made from the estimated results. As such, the following series of diagnostic tests which include tests for serial correlation, heteroscedasticity, normality and stability tests comprising functional form and recursive estimates were conducted.

4.0. Results, Interpretation and Discussion of Findings

The results as presented in Table 1 reveals the descriptive results and data treatment outcomes for Internally Generated Revenue (IGR).

Table 1: **Descriptive results and Data treatment of Internally Generated Revenue (IGR)**

	PIT (M'N)	*WHT (M'N)*	*SDT (M'N)*	*CGT (M'N)*	*CST (M'N)*	*TI (M'N)*
Mean	90,184.88	15,704.07	1,305.10	504.33	987.74	2,639.21
Median	72,016.56	16,351.27	853.56	611.41	61.93	2,644.65
Maximum	255,565.90	43,161.91	3,621.68	931.51	4,177.71	8,528.81
Minimum	3,749.52	1,474.28	7.84	47.81	0.11	151.34
Std. Dev.	82,455.37	12,183.93	1,269.06	320.39	1,385.10	2,360.07
Skewness	0.51	0.57	0.49	-0.32	1.14	0.98
Kurtosis	1.92	2.52	1.70	1.48	2.90	3.66
Jarque-Bera	1.94	1.32	2.32	2.39	4.56	3.73
Probability	0.38	0.52	0.31	0.30	0.10	0.15
Observations	21	21	21	21	21	21

Source: Author's Computation (2020) using Eviews 10

From Table 1, with observation that stands at 21; Personal Income Tax (PIT) has an average value of N90, 184.88m and median value of N72, 016.56m, with minimum and maximum values being N3, 749.52m and N255, 565.90m respectively. The rate at which the variable values spread out is 82455.37, which connotes wide range of variation in the variable values. The skewness value is 0.51, kurtosis is 1.92 and Jarque-Bera is 1.94 (Prob. > 0.05), which means that distribution of the variable is a normally distributed type. As observed from Table 1 also, that Withholding Tax (WHT) average value is N15,704.07m, when the Tax's values during the years under study are arranged orderly, the middle value is amount to N16,351.27m and the standard deviation is 12183.93; the values range from N1, 474.28m to N43,161.91m. Furthermore, the skewness value is 0.57, kurtosis is 2.52, while Jarque-Bera is 1.32 (Prob. > 0.05), which shows that PIT is normally distributed.

Stamp Duty {land use charge} (STD): In Table 1, Stamp Duty {land use charge} (STD) has an average value of N1, 305.10m, median value of N853.56m and standard deviation of 1269.06 from range of values which has lowest value as N7.84m and the highest value of N3,621.68m. In addition, the values of skewness, kurtosis and Jarque-Bera are 0.49, 1.70 and 2.32 (Prob. > 0.05) respectively, which depict that STD is normally distributed.

Capital Gain Tax (CGT): has average taxation of N504.33m, median of N611.41m when values are arranged orderly and the middle value is selected, as evident in Table 1. The maximum and minimum values of CGT are N47.81m and N931.51m respectively, with a wide rate of dispersion among the variable's values, standard deviation being 320.39. Moreover, the skewness is -0.32, kurtosis is 1.48 and Jarque-Bera is 2.39 (Prob. > 0.05); hence, CGT is normally distributed.

Consumption Tax (CST): In Table 1, with number of observation remaining as 21, Consumption Tax (CST) has N987.74m an average amount, N61.93m median value and standard deviation of 1385.10, from list of values ranging from N0.11m to N4177.71m. The skewness value is seen to be 1.14, kurtosis is 2.90 and Jarque-Bera is 4.56 (Prob. > 0.05), which means CST is distributed normally.

Transport Infrastructure: From Table 1, the average value of Transport Infrastructure proxy as Expenses on transport in the state (TI) is seen to be N2639.21m, with N2644.65m median, in which the range of its value is from N151.34m to N8, 528.81m, standard deviation is 2360.07 which depict wide range of variation in TI values. In addition to this, TI has skewness value of 0.98, kurtosis value of 3.66 and Jarque-Bera value is 3.73; having all

ISSN- 2394-5125 VOL 8, ISSUE 01, 2020

these, under the null hypothesis, it means this variable TI is normally distributed, since JB pro. > 0.05. The number of observation is 21.

Bounds Cointegration Test for Internally Generated Revenue Components and Transport Infrastructure

Resulting from the unit root tests results with mixed order of integration in **Table 1**, the study adopted the ARDL bound co-integration test approach to check the existence of long-run relationships among the Internally Generated Revenue Components and Transport Infrastructure variables.

Table 2: Bounds Cointegration Test for Internally Generated Revenue Components and Transport Infrastructure

Sig. Level	***Lower Bound [I(0)]***	***Upper Bound [I(1)]***
10%	2.26	3.35
5%	2.62	3.79
2.5%	2.96	4.18
1%	3.41	4.68
Computed F-statistic = 4.079		

Source: Author's Computation (2020) using Eviews 10

However, the result in Table 2 suggests that the null hypothesis of no cointegration can be rejected at 5% significance level as clearly shown by the computed F-statistic value = 4.079 which is greater than the Upper Bound [I(1)] =3.79. Therefore, the study concludes that there is long-run relationship (cointegration) among the variables

Short-run and Long-run Models for Internally Generated Revenue Components and Transport Infrastructure

The results from the estimation of the short – run and the long-run models for Internally Generated Revenue Components and Transport Infrastructure based on the estimated ARDL (1, 0, 2, 2, 1, 2) guided by Akaike Information Criterion (AIC) and Schwarz Information Criterion (SIC) are presented in Table 3.

Table 3: Short-run and Long-run Models for Internally Generated Revenue Components and Transport Infrastructure

Variables	**Coef. (SdError)**	**[t-stat] //Prob//**
Error Correction Model Regression		
C	0.730*** (0.103)	[7.107] //0.001//
ΔlnPIT	-1.606** (0.434)	[-3.702] //0.014//
ΔlnWHT	-1.906*** (0.352)	[-5.409] //0.003//
ΔlnWHT(-1)	-3.657*** (0.442)	[-8.28] //0.000//
ΔlnSDT	-0.031 (0.13)	[-0.241] //0.819//
ΔlnSDT(-1)	1.097*** (0.145)	[7.552] //0.001//
ΔlnCGT	3.524*** (0.446)	[7.894] //0.001//
ΔlnCST	0.061 (0.059)	[1.024] //0.353//
ΔlnCST(-1)	-0.248** (0.077)	[-3.205] //0.024//
CointEq(-1)	-0.749*** (0.107)	[-6.996] //0.001//
Long Run Coefficients		
lnPIT	-2.142** (0.738)	[-2.904] //0.034//
lnWHT	2.809** (0.853)	[3.292] //0.022//
lnSDT	-2.474** (0.61)	[-4.054] //0.010//
lnCGT	2.683*** (0.653)	[4.110] //0.009//
lnCST	0.955** (0.291)	[3.280] //0.022//
Post Estimation Tests		
F-Stat. (P-value) =10.254 (0.001)***; R^2*** = 0.891***; Adj. R^2*** = *0.804*; ***D-Watson*** = *2.253*		
BG Serial Correlation (Prob.) = 2.362 (0.199)***; Jarque-Bera (Prob.)*** = *1.410 (0.494)*; ***BPG Heteroskedasticity (Prob.)*** = 1.352 (0.393)***; Ramsey RESET (Prob.)*** = 1.228 *(0.287)*		

ISSN- 2394-5125 VOL 8, ISSUE 01, 2020

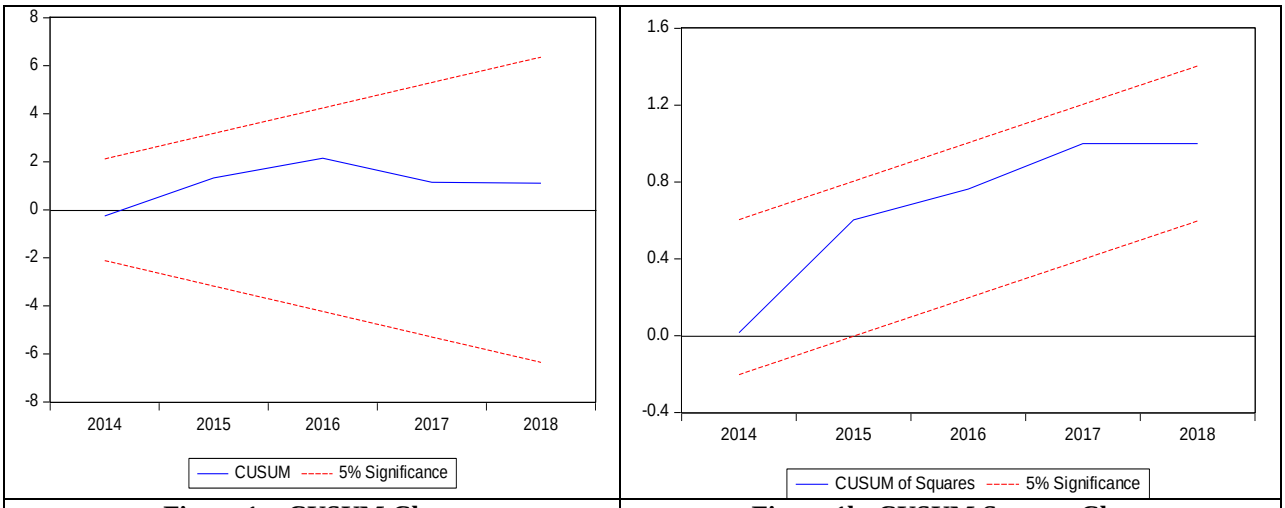

Figure 1a: CUSUM Chart | **Figure 1b: CUSUM Squares Chart**

Figure 1: Post Diagnostic Test of IGR on TI

Source: Author's Computation (2020) using Eviews 10. Note: *, ** and * denote 1%, 5% and 10% levels of significance respectively.**

Interpretation

$LOG(TI_t) = \beta_0 + \beta_1 \text{LOG}(\text{PIT}_t) + \beta_2 \text{LOG}(\text{WHT}_t) + \beta_3 \text{LOG}(\text{SDT}_t) + \beta_4 \text{LOG}(\text{CGT}_t) + \beta_5 \text{LOG}(\text{CST}_t) + \varepsilon_t$ …… Model Equation 1

The equation now becomes:

$\text{LOG}(\text{TI}_t) = 0.730 - 2.142 * \text{LOG}(\text{PIT}_t) + 2.809 * \text{LOG}(\text{WHT}_t) - 2.474 * \text{LOG}(\text{SDT}_t) + 2.683 * \text{LOG}(\text{CGT}_t) + 0.955 * \text{LOG}(\text{CST}_t) + \varepsilon_t$ …….. Equation 1

Where TI = Transport Infrastructure
PIT = Personal Income Tax
WHT = With Holding Tax
SDT = Stamp Duty Tax
CGT = Capital Gains Tax
CST = Consumption Tax

As in the estimated short-run and long-run dynamic models with F-stat. (Prob.) = 10.254 (0.001) and Adjusted R-squared = 0.804 in the table above, the coefficient of CointEq(-1) is -0.749 (P = 0.001). The coefficient with the anticipated negative sign is found to be statistically significant at 1% level. Also, the negatively signed and statistically significant coefficient is less than unity as expected. This result further confirms the presence of a stable long run relationship between Internally Generated Revenue Components and Transport Infrastructure.

Additionally, the results on the coefficients of explanatory variables show that a negative and significant relationship exists between current Personal Income Tax (PIT) and Lagos state expenditure on Transportation Infrastructure (TI) [β = - 1.606; P – value = 0.014] in the short run at 5% level and the negative and significant relationship remains the same [β = - 2.142; P – value = 0.034] in the long-run at 5% level. These therefore suggest that Personal Income Tax (PIT) has significant influence on Transportation Infrastructure (TI); though negative. These then imply that one percent increase in PIT lead to about 1.606 and 2.142 percent decrease in Transportation Infrastructure (TI) both in the short run and long run respectively.

Also, the findings reveal that current and past Withholding Tax (WHT) exhibit negative and significant relationships with Transportation Infrastructure (TI) [β = - 1.906; P – value = 0.003 and β = - 3.657; P – value = 0.000] at 1% levels in the short run. However, the statically significant relationship becomes positive [β = 2.809; P – value = 0.022] at 5% level in the long run. These are suggesting that; in the short run, Withholding Tax (WHT) has negative influence on Transportation Infrastructure (TI) of Lagos state. On the contrary, the effect of Withholding Tax (WHT) on Transportation Infrastructure (TI) is positive in the long run. These further suggest that one percent increase in current and past values WHT in the short run cause about 1.906 and 3.657 percent decrease in Transportation Infrastructure (TI) while one percent increase in the WHT in the long run produces 2.809 percent increases in Transportation Infrastructure (TI).

In Table 3, findings show that the coefficients of current and past Stamp Duty (SDT) display negative and positive signs respectively but only the positive coefficient of the past value of Stamp Duty (SDT) is statistically significant

[β = 1.097; P – value = 0.001] at 1% level. On the other hand, the long run coefficient is seen to be negative and statistically significant [β = - 2.474; P – value = 0.009] at 5% level. In effect, these mean that there are positive and negative impacts of Stamp Duty (SDT) on Transportation Infrastructure (TI) of Lagos State in the short run and long run respectively during the period under review in this study. The result also suggests that 1.097 percent increases and 2.474 percent decreases in Transportation Infrastructure (TI) during the years are caused by one percent increase in Stamp Duty (SDT) in the short run and long run respectively.

Capital Gain Tax (CGT) is an explanatory variable that exhibits positive and significant relationships with Transportation Infrastructure (TI) both in the short run [β = 3.524; P – value = 0.001] and long run [β = 2.683; P – value = 0.009] at 1% level. These imply that there are positive impacts of Capital Gain Tax (CGT) on Transportation Infrastructure (TI) of Lagos State both in the short run and long run during the period of this study. The result also submits that 3.524 and 2.683 percent increases in Transportation Infrastructure (TI) during the years are caused by one percent increases in Capital Gain Tax (CGT) in the short run and long run respectively.

The relationships that exist between Consumption Tax (CST) and Transportation Infrastructure (TI) in this study are relatively similar to that of Withholding Tax (WHT) and Transportation Infrastructure (TI) explained earlier as revealed in Table 4.2.2. The past Consumption Tax (CST) exhibits negative and significant relationships with Transportation Infrastructure (TI) [β = - 0.248; P – value = 0.024] at 5% level in the short run. However, the statically significant relationship becomes positive [β = 0.955; P – value = 0.022] at 5% level in the long run suggesting that; in the short run, Consumption Tax (CST) has negative effect on Transportation Infrastructure (TI) of Lagos state. On the contrary, the effect of Consumption Tax (CST) on Transportation Infrastructure (TI) is positive in the long run. Furthermore, the results suggest that one percent increase in current and past Consumption Tax (CST) in the short run cause about 0.248 percent decrease in Transportation Infrastructure (TI) while one percent increase in the Consumption Tax (CST) in the long run produces 0.955 increases in Transportation Infrastructure (TI).

Post Diagnostic Tests

In Table 3 and Figures 1, all the diagnostic test results provide support for the validity of the model. From the Table 3 and Figure 1a & b, all the test statistics and their corresponding probability values are statistically insignificant (Prob. > 0.05). These mean that the residual is normally distributed, free from serial correlation problem and has constant variance. Also, the insignificant value of Ramsey RESET and the blue lines of CUSUM and CUSUM Square tests that fall within the upper and lower bounds (red lines) confirm that the model is well specified and stable.

Decision

From to the results from the ARDL regression estimation, the rejection of the null hypothesis which states that '*Internally Generated Revenue Components have no significant effect on Transport Infrastructure in Lagos state, Nigeria'* is highly supported. The decision is based on the computed F- Statistic ***(P-value)*** =10.254 (***0.001***) that is highly statistically significant and Adjusted R^2 = *0.804* that is reasonably high. Consequently, this study concludes that Internally Generated Revenue Components have significant effect on Transport Infrastructure in Lagos state, Nigeria.

4.1. Discussions of findings

Based on the results as revealed from the investigation which sought to test; internally generated revenue components have no significant effect on transport infrastructure, the hypothesis was rejected. This finding is in tandem with the outcomes by several scholars (Edame, 2014; Edame, Udude, & Ugwu, 2014; Fave & Dabari, 2017; Nnanseh & Akpan, 2013). The results confirm the assertion by Edame (2014) who investigated the effect of public expenditure on infrastructural development and economic growth in Nigeria between 1970 and 2010 and found strong significance levels in influencing in the development of roads, water, electricity, transport, housing and environment and invariably economic growth. Fave and Dabari (2017) agreed with the outcome of this study as it observed that internally generated revenue measures such as stamp duty, capital gains tax, education tax and petroleum profit tax to be positively significant at 1%, 5% and 10% in influencing growth trends in transport infrastructure.

It also corroborated the results of similar study carried out by Nnanseh and Akpan (2013) who observed that internally generated revenue contributed significantly and positively to provision of water, electricity and roads with higher significance in terms of transport infrastructure that electricity and water. Also, the findings also give credence to the views of Edame, Udude, and Ugwu (2014) who found significant effects of public expenditure growth trends on infrastructure development in Nigeria, in their investigation between years 1970 to 2006. Olalekan and Irewole (2019) further confirmed the position of this study as they found components of internally generated revenue (licenses, fines and fees) had a significant impact on the infrastructural development of Lagos State.

Divergences from the study's finding were observed as provided by the results of a number of other scholars (Fave & Dabari, 2017; Obara & Nangih (2017); Olalekan & Irewole, 2019; Ogbu et al., 2017; Oyetakin & Yahya, 2017). Contrary to the findings of this study, Obara and Nangih (2017) that internal revenue generation was deficient in influencing transport infrastructural development in Port Harcourt, Metropolis. Olalekan and Irewole (2019) further supported this contrary position, as they observed that personal income taxes, earnings and sales, which are key constituents of internally generated revenue, had no significant influence on the infrastructure development of Lagos state.

An earlier study by Fave and Dabari (2017) revealed that company income tax and value added tax were not significant in providing growth trends on transport infrastructure, which is not consonance with the result of this study. Another study by Ogbu et al. (2017) was not in agreement with this result, as it showed that internally generated revenue has insignificant impact on transport infrastructure. Also, Oyetakin and Yahya (2017) conveyed negative and significant relationship between internally generated revenue and the aggregate spent on infrastructural development of which transport was inclusive; and hence remained in disagreement with this study's findings.

5.0. Conclusion and Recommendation

The Internally Generated Revenue components had a positive and significant effect on transport infrastructure in Lagos State, Nigeria between the period of 1998-2018. Thus, the revenue generated internally is beneficial to transport infrastructural development in Lagos State, Nigeria. Thus, the development of transport infrastructure for use by the citizenry needs to be prioritized, largely as a result of the wholesome benefits to the Nigerian economy. This study contributes empirically to the existing body of knowledge by establishing the existing interaction between internally generated revenue on infrastructural development, by employing time series of internally generated revenue with secondary source to generate a more robust result. The study thus recommends that the State government should channel these funds deliberately towards the development of Transport infrastructure, so as to bring about the ripple effect of improved standard of living, increased gross domestic product, reduced employment shortages and enhance economic development. Also, government should enforce policy reformation and implementation that are capable of blocking diversions of these revenue heads, while promoting a tax paying culture in all the citizenry.

References

Adams, R. A. (2006). *Public sector accounting and finance*. Lagos, Nigeria: Corporate Publishers Ventures.

Adenugba, A. A., & Chike, F. O. (2013). The effect of internal revenue generation on infrastructural development: A study of Lagos State Internal Revenue Services. *Journal of Educational and Social Research, 3*(2), 419-436.

Akhor, S. O., & Ekundayo, O. U. (2016). The impact of indirect tax revenue on economic growth: The Nigeria experience. *Igbinedion University Journal of Accounting, 2*, 62-87.

Aliyu, A., Ramli, A., & Saleh, M. (2013). Nigeria electricity crisis: power generation capacity expansion and environmental ramifications. *Energy, 61*, 354-367.

BudgiT (2018). State of States: The 2018 edition. Retrieved on October 18, 2019 from https://yourbudgit.com/wp-content/uploads/2018/09/State-of-State-2018-Final-Print-Copy.pdf

Deloitte (2016). *Internally generated revenue: What are the short-term options at State level?* Retrieved from http://Blog.deloitte.com.ng.

Edame, E. G. (2014). Trends analysis of public expenditure on infrastructure and economic growth in Nigeria. *International Journal of Asian Social Science, 4*(4), 480-491.

Edame, G. E., Udude, C. C., & Ugwu, U. D. (2014). An analysis of public expenditure growth on infrastructure in Nigeria. *International Journal of Humanities Social Sciences and Education (IJHSSE), 1*(12), 18-36.

Etim, E. J. (2019). Poor public transport infrastructure in Lagos Nigeria, How sustainable improvement could enhance well-being of the people and provide environmental benefits. B.Sc Thesis. Published University of Applied Sciences, Nova, Finland.

Fave, K. S., & Dabari, I. J. (2017). Empirical analysis of tax revenue collection by the federal government in Nigeria. *European Journal of Accounting, Auditing and Finance Research*, 5(2), 1-11.

Gusau, A. M., & Orah, A. M. (2018). Independent power plants (IPPs): A Panacea to the growth and sustainability of manufacturing industries in Nigeria. 2018 IOP Conf. Ser.: *Mater. Sci. Eng., 37*(7), 12-16.

Nigeria Power Baseline Report (NPBR) (2015). Nigeria Power Baseline Report developed by the Advisory Power Team, Office of the Vice President, Federal Government of Nigeria in conjunction with Power Africa. Retrieved from https://mypower.ng/wpcontent/uploads/2019/10/Baseline-Report.pdf

ISSN- 2394-5125 VOL 8, ISSUE 01, 2020

Nigerian Bureau of Statistics (2019)

Nnanseh, M., & Akpan, S. S. (2013). Internally generated revenue (IGR) and infrastructural development in Akwa Ibom State. *European Journal of Business and Management, 5*(31), 164-172.

Obara, L, C., & Nangih, E. (2017). Tax compliance barriers and internally generated revenue in Nigeria: Empirical from small and medium enterprises in Port-harcourt metropolis. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, *7*(4), 169-176.

Obokoh, L. O., & Goldman, G. (2016). Infrastructure deficiency and the performance of small- and medium-sized enterprises in Nigeria's liberalised economy. *Acta Commercii, 16*(1), 339-348.

OECD (2018). In the public interest: Delivery of sustainable, transparent and inclusive infrastructure. Retrieved on February 23, 2020 from http://www.oecd.org/gov/oecd-forum-on-governance-of-infrastructure-2018.htm

Ofoegbu, G. N., Akwu, D. O., & Oliver, O. (2016). Empirical analysis of effect of tax revenue on economic development of Nigeria. *International Journal of Asian Social Science*, *6*(10), 604-613.

Ogbu, U. G., Okezie, B. N., & Okezie, R. A. (2017). Utilization of internally generated revenue on structural development in Ebonyi State. *Journal of Accounting, Business and finance*, *1*(1), 39-46.

Olalekan, O. M., & Irewole, P. (2019). Internally generated revenue and infrastructural development: Of what relevance to Lagos? *Journal of Economics and Finance*, *10*(4), 58-74.

Omodero, C. O., Ekwe, C. M., & Ihendinihu, J. U. (2018). The impact of internally generated revenue on economic development in Nigeria. *Accounting and Finance Research, 7*(2), 166-173.

Oyetakin, A. I., & Yahya, L. O. (2017). Analysis of internally generated revenue and infrastructural development of public universities in Ondo state, Nigeria. *Global Journal of Commerce and Management Perspective*, *6*(1), 24-33.

Peacock, A. T., & Wiseman, J. (1961). *The growth of public expenditure in the United Kingdom*. Princeton: Princeton University Press.

Salau, G. (2019). How to grow states' IGR without increasing taxes. Retrieved on October 16, 2019 from https://guardian.ng/business-services/how-to-grow-states-igr-without-increasing-taxes/

UNCTAD. (2018). WIR-Foreign direct investment to Africa fell by 21% in 2017, says United Nations report. Retrieved on October 18, 2019 from https://unctad.org/en/pages/PressRelease.aspx?OriginalVersionID=461

United Nations newsletter (2017). Key trends for infrastructure development and industrialization in spotlight at special UN meeting. Retrieved February 23, 2020 from https://www.un.org/development/desa/en/news/intergovernmental-coordination/infrastructure-development-industrialization.html