Effect of Budgetary Allocation on the Capital Expenditure Management of Local Government Councils in Nigeria (1993-2020)

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Abstract

The primary function of budgetary estimates is to plan and raise enough revenue to finance development at local level that will raise aggregate standard of living, and promote ease of doing business. This study investigated the effect of budgetary allocation on capital expenditure management of local government councils in Nigeria. The researcher adopted five (5) objectives, with an ex-post-facto research design with interval scale and preceding year basis. The population of study was 774 local government areas of Nigeria with a budget history of 28years from 1993 to 2020, while the sample size was a period of 10 years from 2010 to 2019. This study used secondary data from the Central Bank of Nigeria and the State & Local Government Affairs Office. The study adopted OLS model, F-test, T-test, pre-estimation techniques and post-estimation techniques. Findings show that there is a significant relationship between GFA, SGA, VAT, Grant and capital expenditure at p-values 0.008, 0.006, 0.006 and 0.006; while there is no significant relationship between IGR and capital expenditure at p-value of 0.269. We concluded that gross federation allocation, state government allocation, value added taxes, and external grants & aids were adequate to finance capital expenditure; however internally generated revenue were not adequate to finance capital expenditure for implementing critical infrastructure projects at local level. We recommended that revenue authorities should promote retained earnings from government allocations as well as automate the revenue generation with technology.

Keywords: Budgetary Allocation, Capital Expenditure, Local Government Councils, Nigeria

Introduction

Monetary, fiscal or trading authorities use municipal policy instruments in the reporting government for the purpose of government intervention, at the local level. These instruments including budget planning, tax revenue and public spending are intended to achieve outcomes, which conform to the objectives of public policy. Oxford dictionary of finance and banking defines a budget as a financial or quantitative statement, prepared prior to a specified accounting period, containing the plans and polices to be pursued that period (Jonathan, 2008). Oxford dictionary of economics defines a budget as a statement of a government's planned receipt and expenditure for some future period usually a year, usually accompanied by a statement of actual receipts and expenditures for the previous period (John, et al, 2013). A budget is a financial statement prepared and approved prior to a defined period of the policy to be pursued for purposes of attaining a given objective (Wodo, 2013). Hansen and Mowen define budgets as financial plans for the future through which objectives as well as the means by which to achieve them are identified (Eunice, 2015). A budget is an integral part of an organization's plan expressed in monetary terms. A plan is a conscious and deliberate attempt to think of what one wants to do or realize in future. In government, expenditure must be traceable to the approved revenue estimate, and every office or institution carries out close watch over its expenditure through vote control in order not to overspend. Okey, et al (2012) defined a budget as the statement of intentions of government, or the actual plan of action of government. The word budget originally meant the contents of a package; and it is so called because it brings all the government tax and spending plans together (John, et al 2013). Wodo (2013) classifies a budget into three

broad headings including, Revenue Estimate, Capital Expenditure, and Recurrent Expenditure. In Nigeria, revenue estimates for local governments include: gross federation allocation, state government allocation, value added taxes, internally generated revenue, grants. On the other hand, capital expenditure, may be on creating new capital goods, or more often, buying them from outside suppliers; and the purchase of existing business, patents or trademarks (John, et al 2013). Therefore, capital expenditure has to be paid for either out of post-tax income, national or state budget allocations, share of tax revenue such as value added taxes and personal income taxes, grants and associated funds or by raising external finance. A budget also has many outcomes such as budget deficit, budget surplus, balanced budgets, and budget constraints (John, et al 2013). The classification of budgetary planning by Wodo (2013) formed the philosophy behind the motivation for this study on the effect of budgetary allocation on capital expenditure management of local government councils in Nigeria.

Thesis Statement

The increasing cost of running government coupled with dwindling revenue has motivated various Local and State governments in Nigeria with the need of budget planning and public fundraising to improve their revenue base. The recurring oil production cuts, environmental disasters, violent extremism as well as epidemic outbreaks in Nigeria and the world, affected external sources of government revenue. Most of the prior related studies reviewed, measured budgeting in the aggregate, for example, consolidated revenue fund, or total government revenue; rather than individually, whose effects will better inform decision makers about which areas of public finance need reforms for improved efficiency, effectiveness and economy of public spending on capital projects. To the best of our knowledge, none of these prior related studies investigated the significant relationship between gross federation allocation, state government allocation, value added taxes, internally generated revenue, grants; and capital expenditure. This research seeks to investigate the effect of budgetary allocation on capital expenditure management of local government councils in Nigeria. The scope of this study includes four dimensions: The geographical scope is the Federal Republic of Nigeria, with seven hundred and seventy-four (774) local government councils. The content scope includes gross federation allocation, state government allocation, value added taxes, internally generated revenue, external grants & aids, and capital expenditure. The measurement scope is an interval scale and preceding year basis. The unit of analysis is organizational. This study is practically significant, as it focuses on developing the practice of relevant local financing for capital projects in the Nigerian local governments by systematizing their conceptual frameworks. Results of the study can be used by regional and municipal authorities to improve the relevant legislation, and by representatives of local communities to increase their participation in the budgeting process.

Aims and Objectives

The aim of the study is to investigate how budgetary allocation significantly affects capital expenditure management of local government councils in Nigeria. The objectives are:

a) To determine the effect of gross federation allocation on capital expenditure management.
b) To determine the effect of state government allocation on capital expenditure management.
c) To determine the effect of internally generated revenue on capital expenditure management.
d) To determine the impact of share of value added taxes on capital expenditure management.
e) To determine the impact of external grants and aids on capital expenditure management.

Conceptual Review

One of the major areas of municipal budgetary planning, is the forecast of revenue estimates for the next fiscal year in a local government council. Revenue is defined as cost and income items that are either charged or credited to the profit and loss account for an accounting period (Jonathan, 2008). Revenue is also the total monies received by the government from the imposition of taxation (John, Nigar, & Garrett, 2013). For purposes of this study, government revenue includes: taxes, levies, grants and other forms of internally generated revenue as approved by law. According to Section 2 of the Taxes and Levies (Approved List for Collection) Act, 1998; public funds or revenue is divided into three parts: taxes to be collected by the federal

government, taxes and levies to be collected by the state governments, and levies and charges to be collected by the local governments of Nigeria. Wodo (2013), defined internally generated revenue (IGR) as all revenue accruing to the Local Government because of its jurisdiction, and whose collection and custody is a product of its machinery. IGR are the alternative sources of financing local government contracts, stores, payroll, and other relevant objectives. This revenues from local government:, fall under these seven headings: Taxes or Capitation Rate - Head 1001, Rates or Tenement - Head 1002, Local licenses, fees and fines - Head 1003, Earnings from commercial undertakings - Head 1004, Rent in local government properties - Head 1005, Interest payment and dividend - Head 1006, and Miscellaneous receipts - Head 1007 (Wodo, 2013). Similarly, budget estimates for local governments include gross federation allocation, state government allocation, share of value added taxes, and external grants & aids. These external sources of budget funding, help to largely support the capital structure of a municipality or council. Capital expenditure, may be on creating new capital goods, or more often, buying them from outside suppliers; and the purchase of existing business, patents or trademarks (John, et al 2013). The cost has to be paid for either out of post-tax income, national or state budget allocations, share of tax revenue such as value added taxes and personal income taxes, grants and associated funds or by raising external finance. Whenever a revenue authority incurs capital expenditure on a project, the outcomes is to build, operate and maintain an infrastructure. What is Infrastructure? Although infrastructure spending has garnered increased attention recently, there are no generally agreed definitions of infrastructure. In general, the term refers to a longer-lived, capital-intensive systems and facilities (Jeffrey, 2018). Infrastructure is the capital equipment used to produce publicly available services, including transport, telecommunications, gas, electricity, and water supplies (John, et al, 2013). The definition of infrastructure also include expenditures on research and development, as they add to the stock of technology and information available for use by private individuals (Jeffrey, 2018). These infrastructures provide an essential background for other economic activities in modern economies; the fact that they are not available or reliable is characteristics of less developed countries, and handicaps their development (John, et al 2013). Infrastructure is beneficial for both households and businesses and for the economy broadly, as they allow production of more goods and services with the same level of inputs, fostering long-term economic growth (Jeffrey, 2018). Almost every capital expenditure project at local, state or national level, are executed by contracts, which could either be through jobbing orders, local purchase orders and open tender bids. The Public Procurement Act 2007, the Public Procurement (Goods and Works Regulation) 2007, and the Model Financial Memoranda for Local Government 2009 regulate the execution of government contracts in each of the local government council in Nigeria.

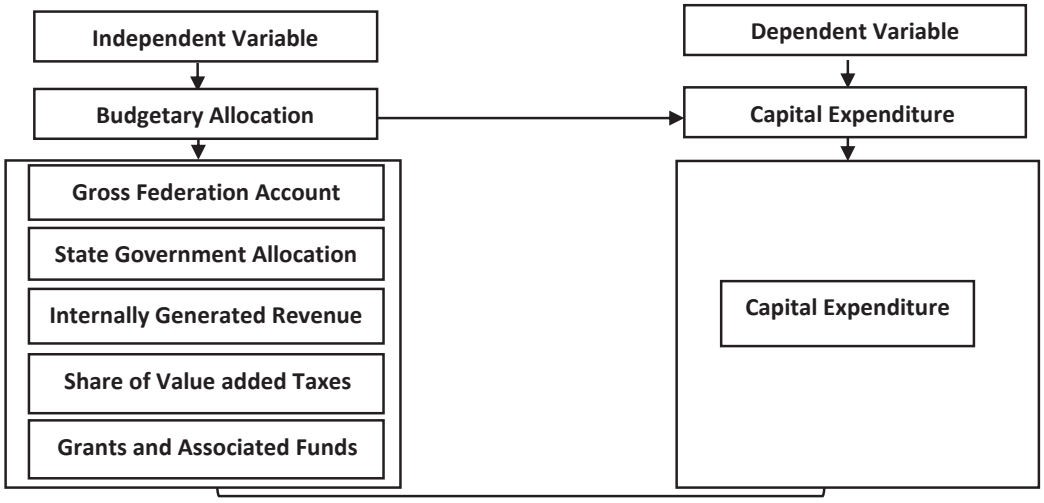

Figure 1: Conceptual Framework (Source: CBN Statistical Bulletin, V30, Section B)

Theoretical Framework

There are five (5) baseline theories, including budget theory, the subsidiarity principle, the benefit received principle, cost of service theory and theory of resource utilization which are relevant to the philosophy behind this study. The budget theory was propounded by Henry C. Adams in 1985 to explain the social motivation behind budgeting (Hindereth, 2002). Bartle (2008) stated that without effective controls, an enterprise was at the mercy of certain forces disrupt its efficiency, and they may be unaware and thus not able to combat such forces. The subsidiarity principle was propounded by R. R. Barnett in an article on "Subsidiarity, enabling government, and local governance". It holds that the major role of local governments is to provide goods and services within a particular geographic area to residents who are willing to pay for them. Inimino, Otubu and Akpan (2020) stated that benefit received theory was developed by Knut Wicksell in 1896 and refined by Erik Lindahl in 1919. It is based on the principle that the cost of public expenditures should be met by those (for example, local councils) who benefit from them. The cost of service theory states that there is a semi commercial relationship between the state and citizens; and the state should give up basic amenities and welfare functions (Ofishe, 2015). Citizens are not entitled to any benefits if they however receive any benefits, then they must pay the cost of service thereof. The theory of resource utilization was propounded by neo-classical economists, including Gossen and Jevoins, in the 19th century; and stated that the consumer or individual tries to satisfy wants by allocating limited resources on various commodities that give satisfaction (Owhondah, 2018). For the purpose of this study, a theory will be adopted based on two (2) factors such as the jurisdiction of public services, and burden of local financing. In the light of the foregoing, and based on findings of this study, the most relevant theoretical framework on budgeting for infrastructural development, was the subsidiarity principle and benefits received principle. Based on this adopted theory, capital expenditure is a function of revenues accrued from national or state allocations, internally generated revenue and external grants & aids. This ability of government to implement these capital expenditure projects into judicious and sustainable uses that would translate to development of the local government councils is important to us.

Review of Prior Studies

Odunayo and Oluwaseun (2015) revealed that the ratios of expenditure to all the sector exert positive influence on the level of development driven capital projects save for the ratio of expenditure on environmental sector to total expenditure that negatively influence the measure of economic development. *Sefishi (2015)* observed that 87.5% of the respondents do believe that there is a relationship between capital budgeting process and cost overruns; and that post audits are done for all SOEs, but findings are only presented internally to the investment committees. *Edame (2015)* indicated that the response of rate of urbanization, openness, government revenue, external reserves, population density and type of government to public expenditure is high, particularly in the short-run and with a higher adjustment toward long-run static equilibrium. *Fatai, et al (2016)* show that infrastructure components exert positive contribution on economic growth, and that domestic investment on infrastructure and total labour force correlated with economic growth negatively. The results of *Tsurkan, et al (2016)* observed updated conceptual basis of participatory budgeting; indicators reflecting the influence of the participatory budgeting on infrastructural development and criteria for its implementation in the municipalities; organizational chart clarifying the methodological aspects of different types of the participatory budgeting; and classification of territorial development mechanisms based on the participatory budgeting models of financing municipal projects. Findings of *Edeme and Nkalu (2017)* suggest that the level of capital budget implementation is insufficient to foster the desired development; this poor performance is attributable to inadequacy in the budget implementation plans, non-release or late release of budgeted funds and lack of budget performance monitoring. *Olaoye, et al (2017)* examined the impact of capital budget expenditure implementation on economic growth in Nigeria; and the long run normalized estimation reported coefficient values of -387, 2292, 69.05, 184.17 for capital expenditure on administration, economic services and socio-community services respectively, while the short run parsimonious ECM estimation reported coefficient estimates and probability value of 27.20 (p=0.11), -27.82 (p=0.001), -17.23(p=0.49) respectively. *Ajiteru, et al (2018)* found that tax revenue is a very strong tool for infrastructural development in the State; that where taxes are not adequately

paid by the citizens, the government will depend on only a single source which is the statutory allocation, there will be low level of infrastructures which will lead to low economic situation in the State. *Nursini, et al (2018)* found that the number of programs implemented by their local government authority in 2015 amounted to 45 programs with budget realization of IDR 126.2 billion, this figure is relatively small only 6.86% of IDR 1841.8 billion total local government spending in Bone District. *Delewa (2018)* revealed that while political functionality and civic participation leadership explain the leadership-fiscal imbalances, managerial and technical capacity leadership does not; besides, budget incrementalism mediates the leadership-fiscal imbalances relationship. *Boedijono, et al (2019)* found amongst others issues that: (i) the level of public consumption does not change in the short term but increases in the long term; (ii) there is an increase in investment in the short and long term; (iii) a decrease in government spending in the short and long term; (iv) there is a decrease in government revenues from taxes in the short and long term. *Davies, et al (2019)* found that some of the identified barriers causing the poor implementations of SDGs in Nigeria include poverty, poor accountability, inadequate domestic water supply, poor energy supply, poor human capital development initiatives, poor transportation and telecommunication networks, illiteracy level, and environmental degradation. *Ramadhan (2019)* found that the economic driving infrastructure and education infrastructure had a significant impact on GDP per capita; and concluded that, it is necessary to strengthen budget planning for the development of public infrastructure to improve economic welfare. *Rashid (2019)* found a positive relationship between budgetary planning and effective service delivery was established, through the use of various performance measurements. *Dorota, et al (2020)* observed that, despite the small scale of FS spending, the number of municipalities using this form of citizen participation is increasing, that there is significant variation between regions, which indicates the flexibility of the FSs in adapting to the needs reported by residents; and that the FSs are in line with the SDG objectives related to the improvement of residents' quality of life. *Irene, et al (2020)* found that there were low levels of municipal planning compliance, high levels of citizen dissatisfaction and also a disagreement with the PB implementation process; and that the implementation of the participatory budget in rural communities presents deficiencies that limit the obtaining of representative benefits and that imply an improvement in the governance and quality of life of the citizenry. *Sampson (2020)* revealed that capital expenditure as a percentage of the total revenue expenditure is low in the local government areas of Rivers state. It was found that the spatial distribution of capital expenditure significantly differs across the LGAs, hence forecasting capital expenditure from one local government to another is thus difficult (Sampson, 2020). It was found that the local government expenditures are more on recurrent expenditure in comparison to capital expenditure, which depicts a poor infrastructural development in the LGAs (Sampson, 2020).

Methodology

The study adopted ex-post-facto research design with interval scale of measurement and preceding year basis of sampling. The area of the study was seven hundred and seventy-four (774) municipal councils of Nigeria. The target population was a budget history of twenty-eight (28) years from 1993 to 2020. The sample size was a period of ten (10) years from 2010 to 2019. The source of data was secondary, including data on local government, obtained from Model Financial Memoranda for Local Government (2009) of the State & Local Government Affairs Office of the Presidency; and data on budgetary allocations and capital expenditure for local governments, obtained from Public Finance Statistics Bulletin Volume 30 Section B (2019) of the Central Bank of Nigeria. The study adopted univariate analysis, bivariate analysis, ordinary least square (OLS) model, pre-estimation techniques and post-estimation techniques for data analysis with the aid of MS Excel 2019 and SPSS Statistics 20. Univariate analysis methods were range, minimum, maximum, mean, standard deviation, variance, skewness and kurtosis. Bivariate analysis methods used were linear regression, ANOVA, F-test statistics and T-test statistic. The pre-estimation techniques were test of normality, and test of linearity, while the post-estimation techniques were test of autocorrelation, test of significance, test of multicollinearity and test of cointegration.

Presentation of Data

Table 1: LG Finance ***(Source:*** *CBN Public Finance Statistics, Vol. 30, Sec. B, Table B.3.1)*

YEAR	Gross Fed. Account (₦' Billion)	State Govt. Allocation (₦' Billion)	Share of VAT (₦' Billion)	Internally Gen Revenue (₦' Billion)	Federal & State Grant in Aids (₦' Billion)
2010	715.9651	12.6739	189.1198	26.1500	48.9100
2011	940.0316	35.2148	218.2254	31.6000	228.9806
2012	977.4018	8.7443	238.5464	22.6155	131.5465
2013	1106.9712	12.7856	267.3213	29.2911	94.0084
2014	1125.0752	4.1254	266.8594	36.4887	91.0240
2015	822.8661	6.8766	261.6460	24.0305	83.2119
2016	595.9645	9.7590	272.4950	36.3921	34.9000
2017	828.9483	12.8721	325.1332	38.2199	28.8816
2018	1243.1446	16.0515	366.2919	32.5000	11.9837
2019	1222.7392	18.3515	395.1143	32.5975	0.0000

Table 2: LG Finance ***(Source:*** *CBN Public Finance Statistics, Vol. 30, Sec. B, Table B.3.1)*

YEAR	Recurrent Expenditure (₦' Billion)	Capital Expenditure (₦' Billion)		Local Govt. Loan (₦' Billion)	Opening Cash Balance (₦' Billion)	Other Funds (₦' Billion)
2010	823.6933	532.9589		3.2421	30.4200	-36.1713
2011	1279.7725	352.1474		6.7347	-36.1713	25.1118
2012	1345.4156	299.3883		4.2553	25.1118	-32.7506
2013	1413.9652	392.9478		9.1745	-32.7506	20.4391
2014	1432.5987	181.2313		3.3499	0.8955	-5.1945
2015	1150.4267	95.8952		5.5808	-0.4587	-4.4329
2016	994.0459	90.7991		2.9039	1.8591	-3.4676
2017	1194.5251	144.0699		2.0327	1.8591	-3.3161
2018	1405.2020	319.7651		4.8568	-1.1528	-3.4584
2019	1405.8375	316.6903		5.6811	-1.8528	-3.5584

Statistical Analysis

The output presented below in table 1-7 are results for test of normality, test of autocorrelation, test of significance, test of multicollinearity and test of cointegration. The data used, was presented above for dimensions of independent variable (budgetary allocation) and for proxies of dependent variable (capital expenditure). The dimensions were gross federation allocation (GFA), state government allocation (SGA), value added taxes (VAT), internally generated revenue (IGR) and grants in aids (GRANT) while the proxy was capital expenditure (CAP).

Table 1: Descriptive Statistics (*Source*: *IBM SPSS Statistics 23 Output for Test of Normality.)*

	N	Mean	Standard Deviation	Variance	Skewness		Kurtosis	
	Stat	Statistics	Statistics	Statistics	Statistics	Std. Error	Statistics	Std. Error
GFA	10	957.910760	217.7578037	47418.461	-.221	.687	-1.038	1.334
SGA	10	13.745470	8.6340963	74.548	1.856	.687	4.482	1.334
VAT	10	280.075270	64.3384067	4139.431	.617	.687	-.254	1.334
IGR	10	30.988530	5.3934613	29.089	-.294	.687	-1.159	1.334
Grant	10	75.344670	67.9898081	4622.614	1.303	.687	2.029	1.334
CAP	10	272.589330	142.4502374	20292.070	.274	.687	-.489	1.334

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.965[a]	.932	.846	55.8775869	1.949

a. Predictors: (Constant), Budgetary Estimates

b. Dependent Variable: Capital Expenditure

***Source**: IBM SPSS Statistics 23 Output for Test of Autocorrelation.*

Table 3: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	170139.412	5	34027.882	10.898	.019[b]
	Residual	12489.219	4	3122.305		
	Total	182628.631	9			

a. Dependent Variable: Capital Expenditure

b. Predictors: (Constant), Budgetary Estimates

***Source**: IBM SPSS Statistics 23 Output for the Test of Significance.*

Table 4: Coefficients

	Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Collinearity Statistics	
Model	B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Tol.	VIF
1 (Constant)	845.394	160.986		5.251	.006	398.424	1292.363		
GFA	.654	.132	.999	4.965	.008	.288	1.019	.422	2.370
SGA	15.307	2.861	.928	5.350	.006	7.364	23.251	.569	1.759
VAT	-3.667	.679	-1.656	-5.403	.006	-5.551	-1.783	.182	5.495
IGR	-5.298	4.127	-.201	-1.284	.269	-16.757	6.161	.700	1.428
Grant	-2.898	.554	-1.383	-5.226	.006	-4.437	-1.358	.244	4.096

a. Dependent Variable: Capital Expenditure

***Source**: IBM SPSS Statistics 23 Output for Test of Multicollinearity.*

Table 5: Collinearity Diagnostics[a]

Model	Dimension	Eigen value	Condition Index	Variance Proportions (Constant)	GFA	SGA	VAT	IGR	Grant
1	1	5.336	1.000	.00	.00	.00	.00	.00	.00
	2	.466	3.384	.00	.00	.03	.00	.00	.14
	3	.148	6.010	.00	.00	.75	.00	.00	.12
	4	.036	12.227	.02	.28	.00	.00	.20	.00
	5	.009	24.283	.80	.12	.05	.00	.68	.07
	6	.006	31.001	.17	.60	.17	.99	.11	.66

a. Dependent Variable: Capital Expenditure

***Source**: IBM SPSS Statistics 23 Output for Test of Cointegration.*

Table 6: Correlations Matrix

		Grant	GFA	SGA	VAT	IGR	CAP
Grant	Pearson Correlation	1	-.062	.479	-.659*	-.309	**.152**
	Sig. (2-tailed)		.864	.161	.038	.385	**.674**
	N	10	10	10	10	10	**10**
GFA	Pearson Correlation	-.062	1	.141	.576	.054	**.251**
	Sig. (2-tailed)	.864		.697	.081	.882	**.484**
	N	10	10	10	10	10	**10**
SGA	Pearson Correlation	.479	.141	1	-.007	.095	**.399**
	Sig. (2-tailed)	.161	.697		.984	.794	**.253**
	N	10	10	10	10	10	**10**
VAT	Pearson Correlation	-.659*	.576	-.007	1	.457	**-.267**
	Sig. (2-tailed)	.038	.081	.984		.184	**.455**
	N	10	10	10	10	10	**10**
IGR	Pearson Correlation	-.309	.054	.095	.457	1	**-.388**
	Sig. (2-tailed)	.385	.882	.794	.184		**.268**
	N	10	10	10	10	10	**10**
CAP	Pearson Correlation	**.152**	**.251**	**.399**	**-.267**	**-.388**	1
	Sig. (2-tailed)	**.674**	**.484**	**.253**	**.455**	**.268**	
	N	**10**	**10**	**10**	**10**	**10**	10

*. Correlation is significant at the 0.05 level (2-tailed).

***Source**: IBM SPSS Statistics 23 Output for Test of Correlation*

Table 7: Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	91.297798	533.755249	272.589330	137.4931967	10
Residual	-64.9007797	56.8337936	.0000000	37.2517246	10
Std. Predicted Value	-1.319	1.899	.000	1.000	10
Std. Residual	-1.161	1.017	.000	.667	10

a. Dependent Variable: Capital Expenditure

***Source**: IBM SPSS Statistics 23 Output for Residual Analysis*

Tests of Hypotheses

Ho1 – There is no significant relationship between gross federation allocation and capital expenditure for implementing critical infrastructure projects.

The kurtosis of -1.038 where $K < 3$ and skewness of -0.221 where $\gamma < 0$ in Table 1 show that the probability distribution of GFA is normal. The R-square value of .932 in table 2 shows a 93.2% impact of the budgetary estimates on capital expenditure. The Durbin-Watson value of 1.949 in table 2, falling between $0 < D \geq 1$, implies that there is autocorrelation in the regression model. The F-statistics at 10.898 and P-value at 0.019 in table 3, which shows that budgetary estimates a significant impact on capital expenditure. The T-statistics at 4.965 and P-value at 0.008 in table 4, show that there is a significant relationship between GFA and capital expenditure. The VIF of GFA at 2.370 is less than five (VIF<5), which implies that there is low collinearity or no exact multicollinearity in its coefficients. The variance of GFA at 46.6% in table 5, implies that Max-Eigen is greater than 0.05 C.V., Eigenvalue is more than 10% variance and there is cointegration between GFA and capital expenditure. The results of CORR (0.251) and SIG (0.484) in table 6 show that the correlation between GFA and capital expenditure is positive and not significant.

Ho2 – There is no significant relationship between state government allocation and capital expenditure for implementing critical infrastructure projects.

The kurtosis of 4.482 where $K > 3$ and skewness of 1.856 where $\gamma > 0$ in Table 1 show that the probability distribution of SGA is normal. The R-square value of .932 in table 2 shows a 93.2% impact of the budgetary estimates on capital expenditure. The Durbin-Watson value of 1.949 in table 2, falling between $0 < D \geq 1$, implies that there is autocorrelation in the regression model. The F-statistics at 10.898, and P-value at 0.019 in table 3, which shows that budgetary estimates a significant impact on capital expenditure. The T-statistics at 5.350 and P-value at 0.006 in table 4, show that there is a significant relationship between SGA and capital expenditure. The VIF of SGA at 1.759, is less than five (VIF<5), which implies that there is low collinearity or no exact multicollinearity in its coefficients. The variance of SGA at 14.8% in table 5, implies that Max-Eigen is greater than 0.05 C.V., Eigenvalue is more than 10% variance and there is cointegration between SGA and capital expenditure. The results of CORR (0.399) and SIG (0.253) in table 6 show that the correlation between SGA and capital expenditure is positive and not significant.

Ho3 – There is no significant relationship between internally generated revenue and capital expenditure for implementing critical infrastructure projects.

The kurtosis of -1.159 where $K < 3$ and skewness of -0.294 where $\gamma < 0$ in Table 1 show that the probability distribution of IGR is normal. The R-square value of .932 in table 2 shows a 93.2% impact of the budgetary estimates on capital expenditure. The Durbin-Watson value of 1.949 in table 2, falling between $0 < D \geq 1$, implies that there is autocorrelation in the regression model. The F-statistics at 10.898, and P-value at 0.019 in table 3, which shows that budgetary estimates a significant impact on capital expenditure. The T-statistics at -1.284 and P-value at 0.269 in table 4, show that there is no significant relationship between IGR and capital expenditure. The VIF of IGR at 1.428 is less than five (VIF<5), which implies that there is low collinearity or no exact multicollinearity in its coefficients. The variance of IGR is 0.9% in table 5, implies that Max-Eigen is less than 0.05 C.V., Eigenvalue is less than 10% variance and there is no cointegration between IGR and capital expenditure. The results of CORR (-0.388) and SIG (0.268) in table 6 show that the correlation between IGR and capital expenditure is negative and not significant.

Ho4 – There is no significant relationship between share of value added taxes and capital expenditure for implementing critical infrastructure projects.

The kurtosis of -0.254 where $K < 3$ and skewness of 0.617 where $\gamma > 0$ in Table 1 show that the probability distribution of VAT is normal. The R-square value of .932 in table 2 shows a 93.2% impact of the budgetary

estimates on capital expenditure. The Durbin-Watson value of 1.949 in table 2, falling between $0 < D \geq 1$, implies that there is autocorrelation in the regression model. The F-statistics at 10.898, and P-value at 0.019 in table 3, which shows that budgetary estimates a significant impact on capital expenditure. The T-statistics at -5.403 and P-value at 0.006 in table 4, show that there is a significant relationship between VAT and capital expenditure. The VIF of VAT at 5.495 is greater than five (VIF>5), which implies that there is a high collinearity or perfect multicollinearity in its coefficients. The variance of VAT at 3.6% in table 5, implies that Max-Eigen is less than 0.05 C.V., Eigenvalue is less than 10% variance and there is no cointegration between VAT and capital expenditure. The results of CORR (-0.267) and SIG (0.455) in table 6 show that the correlation between VAT and capital expenditure is negative and not significant.

Ho5 – There is no significant relationship between grants & associated funds and capital expenditure for implementing critical infrastructure projects.

The kurtosis of 2.029 where $K < 3$ and skewness of 1.303 where $\gamma > 0$ in Table 1 show that the probability distribution of grant is normal. The R-square value of .932 in table 2 shows a 93.2% impact of the budgetary estimates on capital expenditure. The Durbin-Watson value of 1.949 in table 2, falling between $0 < D \geq 1$, implies that there is autocorrelation in the regression model. The F-statistics at 10.898, and P-value at 0.019 in table 3, which shows that budgetary estimates a significant impact on capital expenditure. The T-statistics at -5.226 and P-value at 0.006 in table 4, show that there is a significant relationship between grant and capital expenditure. The VIF of Grant at 4.096 is less than five (VIF<5), which implies that there is low collinearity or no exact multicollinearity in the coefficients. The variance of grant at 0.6% in table 5, that Max-Eigen is less than 0.05 C.V., Eigenvalue is less than 10% variance and there is no cointegration between grant and capital expenditure. The results of CORR (0.152) and SIG (0.674) in table 6 show that the correlation between grant and capital expenditure is positive and not significant.

Conclusions

We concluded in line with findings that four budgetary estimates such as: gross federation allocation, state government allocation, share value added taxes, and external grants & aids were adequate to finance capital expenditure for implementing critical infrastructure projects in Nigeria. However only one budgetary estimates such as internally generated revenue were inadequate to finance capital expenditure for implementing critical infrastructure projects in Nigeria.

Recommendations

We recommended that revenue authorities should promote retained earnings from government allocations to finance capital expenditure for implementing critical infrastructure projects in the event of economic recession or pandemic outbreak. We also recommended that revenue authorities should automate the demand, payments and reporting of IGR for implementing critical infrastructure projects in the fight against political influence and executive collusion.

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