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EFFECT OF FEDERAL ALLOCATION ON DEBT MANAGEMENT OF STATES IN NIGERIA

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Abstract: This study examined the effect of federal allocation on debt management of states in Nigeria. Specifically the study analyzed both static and dynamic effect of federal allocation on debt management of 18 states sampled across the six geopolitical zone of Nigeria.. Data used in the study were sourced from Debt Management Office of Nigeria; FAAC allocation reports and National Bureau of statistics, over the period of 10 years spanning from 2010-2019. Data were analyzed using the two–step system generalized method of moment (GMM). Result revealed that federal allocation exert insignificant negative static effect on the ratio of debt to IGR (-0.6027023, $p > 0.05$); insignificant positive dynamic effect on ratio of debt to IGR (1.238224, $p > 0.05$), while the lagged measure of debt management exert significant effect on it current value (0.5479158, $p < 0.05$). The study concluded that federal allocation has no significant effect on the level of debt management of states in Nigeria viewed both from static and dynamic perspective. And that the level of debt management in the current period could be a significant frontier of debt management looking forward given the established significant autoregressive effect of debt management on itself. Thus this study recommended that federal government should set benchmark for debt accumulation at state level based on their capacity to generate revenue internally and also evaluate debt management frontiers of states across the nation so as to foster be management of resources across the and reduce over reliance of borrowing. In addition state government should be proactive in designing debt structure, this is necessary so as not to dampen future revenue generation and state performance stability by excessive debt accumulation and/or overhang

Keywords:*Federal Allocation, Debt Management, States, Nigeria.*

1.0 Introduction

Federal allocation is an important expression of fiscal structure for nations where federal system of government is practiced. This is because federal allocation is about the amount distributed to each tiers of government (federal, provincial/state and district/local government) from the stream of revenue accrued to the government from the pool of resources collectively owned by the federation and kept in the federation account (Richard &Eme, 2015). In Nigeria for instance, there are three tiers of government to which federation account balance are divided as federal allocation. These tiers are the federal government, state government (including FCT) and the local government. For their fiscal federalism, responsibility (in form of government spending) and resources (revenue of the federation) are shared among the tiers of government of such countries in which it operate. To this regard, federal allocation indicates the amount that is received by the tiers of government of the nation to support the achievement of the sub divided

fiscal responsibilities to the citizens and the nation at large (Stephen, Barkan and Adegboyega, 2012).

Ideally, federal system should be about sharing power among the tiers of government in the area of generating revenue and providing public services to the people. According to Anyafo (1996 cited in Dang, 2013) federal system is a system of government in which each level of government have power to generate revenue and authority over expenditure. That is, the tiers of government are independent of one another in terms of revenue generation and spending activities. However in Nigeria, the federal government allocates funds in terms of federal allocation to federal government, state government including the federal capital territory and local government. This federal allocation has overtime becomes the major source of revenue for most state of the federation such that the internally generated revenue has been relatively low (Olowolaju, Ajibola&Falayi, 2014). This was confirmed by Saifullahi and Abubakar (2013) in their study that federal allocation has consequently made most states of the federation to depend mainly on the monthly revenue that is received from the federal government every month to cater for spending in the respective states.

Public debt has been an important source of meeting the gap between the revenue generated and expenditure of government. The insufficient revenue to achieve government goals in terms of spending in a fiscal year does not imply that government would not spend as planned rather it would incur debt in financing deficit (Fagge& Ibrahim, 2018). In achieving this, government have different options such as printing of new notes through its apex bank, a means with the lowest interest cost, but this source does not totally means elimination of debt and could also lead to hyperinflation (Idenyi, Igberi&Anofe, 2016). Public debt therefore is best choosing as the source for closing the gap between government savings (revenue) and government investment (spending) in order to achieve the stated government goals (Umaru, Hamidu& Musa, 2013; Abu, Selvanathan&Selvanathan, 2015). For instance, Soludo (2003 cited in Fatukasi, Kolawole, Falade&Ayeomoni, 2020) as well as Aminu, Ahmadu and Salihu (2013) among others confirmed that Nigeria as a nation borrowed funds in order to cover its finance deficit and achieve macroeconomic objectives.

The argument for public debt is that when effectively and efficiently utilized, growth and development can be enhanced in the economy. This is because a reasonable level of public debt can create an enabling environment for economic growth and development through capital investment or accumulation as well as productivity growth (Chukwu, Ugbonnaya-Udo&Ubah, 2021). However, overreliance on public debt and inability to properly manage debt has macroeconomic implications that can be detrimental to the growth and development of the state in the long run. For instance, high public debt profile can increase domestic interest rate which then makes borrowing more expensive for private sector leading to the crowding out of private sector investment (Fagge& Ibrahim, 2018). Ngassam (2000 cited in Abdulkadir&Abdulazeez, 2019) noted that spending resources realized through debt in unproductive activities rather than on the improvement of economic activities, could be detrimental since the capacity to refund the debt is not built within the economy. Fosu (2010) also indicated that high level of debt profile increases government debt services which can causes diversion of spending from social services such in the economic sector

such as agriculture, industry, education and health among others into repayment of debt obligation.

Most of the state in Nigeria largely depends on the federal allocation as a major means of revenue for providing public goods and services to the people of the state. However, this revenue type is largely determined by crude oil prices as well as improvement in the international petroleum market controlled by demand and supply but regulated by Organization for Petroleum Exporting Countries (OPEC). The implication of this is that the main source of revenue, for the state is out of the control of the federal government through whom the state receive revenue allocation, such that the revenue base cannot be increased at will or as need required. As a result of this, federal allocation upon which states of the federation depend has been unstable and decline most often beyond expectation (Ohiomu&Oluyemi, 2019).

Apart from this, there is inefficient utilization of debt finance, despite the establishment of the Debt Management Office, which makes the debt stockever increasing. For instance, the debt profile of Lagos 444.2b, Plateau 134.0b, Kano 107.7b, Delta 233.89b and Ogun 142.28b in 2019 and stood around 508.778, 137.7b, 116.9b, 248.40b and 153.49b in 2020 for the respective states aforementioned (Debt Management Office, 2019, 2020). Larger proportion of government revenue goes into recurrent activities rather than capital investment, even for state like Lagos state where there is record of largest amount of internally generated revenue. In this situation, the level of infrastructural facilities and improvement of the state that could enhance economic activities is not well enhanced.

Several researches has been carried out in the field on the subject matter of debt management however, most of these works do not analyze the interrelationship between federal allocation and debt of government. For instance, some studies (such as Opara, Nzota, Kanu, 2021; Imoisi, 2020; Chukwu, Ogbonnaya-Udo and Ubah, 2017; Ajayi, Okunlola, Nnwanji, Otekunrin, Oladipupo and Awonusi, 2016; Odo, Igberi&Anoke, 2016) examined effect of debt on either economic growth, development and/or infrastructural facilities while studies (such as Owolabi and Awoyinka, 2020; Olaoye and Bankole, 2019; Ojide and Ogbodo, 2015Olowolaju, Ajibola, Ishola&Falayi, 2014; Dang, 2013) investigated influence of federal allocation on either growth, development or budget implementation. Also, most of these studies conducted in Nigeria are either based on national (e.g. Opara, Nzotta and Kanu, 2021; Chukwu, Ogbonnaya-Udo&Uba, 2017) or one geopolitical zone (e.g. Olaoye&Bankole, 2019) or one state level data (e.g. Owolabi&Awoyinka, 2020; Olowolaju, Ajibola, Ishola&Falayi, 2014), which reflect that little attention has been given to a wide span of states across the six geopolitical zone of Nigeria. Lastly little attention has been given to tracing the effect previous level of federal allocation on the current level of debt management across states in Nigeria. Hence this study specifically examine the

(i) Static effect of federal allocation on debt management of states in Nigeria

(ii) Dynamic effect of federal allocation on debt management of states in Nigeria

2.0 Literature Review

Federal Allocation

Federal allocation generally represents the revenue generated in the federation account based on the collective resources (especially natural resources such as crude oil) of the country which is distributed among the three tiers of government, federal, state and local government. Dang (2013) explained federal allocation as

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the amount shared by the three tiers of government to meet government expenditure needs at each level of government. For the state government, federal allocation which is also referred to as statutory allocation is the share of revenue in the federal account that is distributed to the state government from the federal government. According to Olaoye and Bankole (2019) federal allocation is the amount received by the state government from the federal government for the purpose of assisting the state government in meeting their fiscal obligation within the state jurisdiction. Federal allocation is the amount shared to state government as well as other tiers from federal account to support national unity and rapid growth across all state, local government and federal government based on the revenue generated and accounted to the federal government from resource endowment of the country (Ohiomu&Oluyemi, 2019).

Public Debt Management

Public Debt Management is the most common way of planning and carrying out a system for judicious administration of public obligation to address financing issues of people in general, to accomplish the expense and hazard destinations and other administration objectives of the public obligation that it can build up, as creating and keeping a proficient market for government protections (Wheeler, 2004). The primary goal of public obligation the board ought to be to guarantee that public area monetary necessities are met at the most reduced conceivable expense, keeping a satisfactory danger level on medium and long haul. It is crucial that public obligation the board targets to be obviously expressed and, where conceivable, be fostered the medium-term key goals, which mirror the public authority's inclination on hazard, including strategy mandates of hazard the executives of public obligation. To make this achievable Nigeria government established the Debt Management Office in 2000 in order to ensure proper coordination and control of public debt which was formerly uncoordinated.

Public debt is the amount borrowed by government to bridge the gap between revenue and expenditure. According to Sogo (1999) public debt is the total government IOUs issued to individuals, organizations and governments outside their jurisdiction. In the word of Oyejide (2005), public debt is the amount of money in use in government spending which is not contributed by the government or belong to its sectors and agencies Public debt can also be described as government total borrowing from creditors to meet its finance need not provided through revenue sources (Mohammad &Ejike, 2019). In this sense, public debt arises when government borrow funds to finance deficit budget which arises from low proposed revenue relative to planned spending. borrowings have been portrayed as a significant instrument of financial approach accessible to government to subsidize the advancement of a country. Obligation is utilized in causing the settlement of consumptions that will eventually build efficiency and work on the development of the economy (Muhammad, Ruhaini, Nathan and Arshad, 2017). Public obligation which incorporates both inward (homegrown) and outer obligations is viewed as when the income acknowledged by the manageable is deficient for its projected uses (Rahman, 2012).

Theoretical Review

Dual Gap Theory

The dual gap theory was developed by Hollis Chenery (1996). The theory is based on the analysis of the domestic savings-investment gap and gap between export earnings and import requirements. The theory recognized foreign debt as a supplement to close the gap that may

exist between investment and savings. The theory also indicated that the gap between export and import is offset with the foreign exchange earnings. In relation to the study, investment for the government is the revenue generated while the investment is the government expenditure. This means public debt is a supplement to government revenue. This mean that the for excess expenditure over revenue, there will be need to meet goals with borrowing or dent financing, if expenditure is to be pursued or incurred as desired. The implication of this is that for a state with excess expenditure over revenue, debt will be incurred to cover the total expenditure for the fiscal year and if this deficit keeps occurring, there will be increase in the debt profile of the state. In essence, the theory implies that the level of revenue generated in a state will determine the amount of borrowing for the state.

Wagner's Theory of Increasing State Expenditure

This theory is developed by Adolph Wagner (1883) and is popularly known as Wagner's law of increasing state. The theory proposed that as genuine income builds up, there is a since a long time ago run propensity for the portion of public use to expand comparative with public pay (Wagner, 1883). As per Wagner, relative development of the public authority area is an innate quality of industrializing economies. Wagner outlined this with the instances of Great Britain, U.S.A, France, Germany and Japan. He reached the resolution that according to capita pay and result expansions in industrializing countries, the public areas of these countries fundamentally develop as an extent of absolute financial action.

The theory mirrored the developing significance of government exercises and expenditureas an inescapable element of a moderate state. As indicated by Wagner, there is an intrinsic inclination for the exercises of various layers of an administration (for example Focal and State legislatures) to increment both seriously and broadly. Prevailing public expenditure mirrors the prerequisite of a given recorded circumstance. Any adjustment of the public consumption mirrors the hidden changes in the financial design and improvement. The theorist legitimized public expenditure as far as genuine measures, for example, populace or transportation needs. It was pertinent just to current moderate legislatures which were keen on extending public area of the economy for its general advantages, and public consumption would become quicker than yield. This overall inclination of extending state exercises had an unequivocal long haul pattern, however monetary hardships could come in its direction.

The implication of this theory is that increase in government public ministries, departments and agencies will also increase the public expenditure of the government. However, government could be faced with the problem of financing expenditure because there is tendency of government expenditure to grow beyond the growth of revenue generated. In this situation, government will not neglect the expenditure it is not capable of financing but try to overcome the financial difficulty in order to achieve its expenditure target which keeps increasing. This in relation to the present study means that government revenue generated especially through federal allocation in an increasing state may not be enough to cover its expenditure. As such, state could try debt finance as a means to overcome financial difficulty in meeting expenditure demand. However, if this process continued it might be difficult for the state to management is debt profile since they are always eager to meet expenditure demand irrespective of the level of revenue.

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Empirical Review

Imoisi (2020) assessed association between fiscal policy and sustainability of public debt in Nigeria using data collected for the year 1970-2019. The study employed model which contained public debt as dependent variable, budget deficit, interest rate, real gross domestic product and inflation as explanatory variable. Data extracted were analyzed with Autoregressive Distributed Lag (ARDL) bound test co-integration approach which indicated that there exists long run relationship among the variables. Result also indicated that budget deficit has positive significant effect on public debt both in the long run and short run. However, result showed that interest rate, inflation and real gross domestic product had no significant effect on public debt. As such, it was recommended that government budget deficit financing through the internal and external finance means should be ascertained objectively.

Ajayi, Okunlola, Nnwanji, Otekunrin, Oladipo and Awonusi (2016) did a comparative analysis of public debt management and economic growth in Nigeria using data of the period 1983-2015. The study used real gross domestic product as dependent variable, external debt stock, domestic debt stock, external debt service payment, domestic capital formation and labour as explanatory variables. The study analyzed data with Johansen co-integration approach which showed long run relationship between public debt management and economic growth during military rule but low impact during civilian rule. Hence, the study recommended the need for public debt to be engaged in productive activities and developmental projects that will enhance economic growth of the country.

Opara, Nzotta and Kanu (2021) explored effect of domestic public debt on economic growth in Nigeria. Two regression model used in the study contained private investment (credit to private sector) and human development index as dependent variables respectively, domestic debt servicing, federal domestic debt and state domestic debt as explanatory variables. Data for the study covered 1981-2018 and were analyzed with Johansen co-integration approach and Ordinary Least Square. Result of the study showed that no long run relationship exist among the variables in the two models employed. Debt servicing has negative effect on the dependent variables. Result also indicated that federal and state domestic debt had positive effect on private investment and human development index, but the effect of federal domestic debt on human development index was insignificant. Hence, the study recommended that there is need for government to constraints the debt policy in order to avoid huge debt servicing that could undermine growth and development.

Olowolaju, Ajibola, Ishola&Falayi (2014) investigated federal government statutory fund allocation to states in Nigeria. The study focused on Ekiti state Nigeria and employed statutory allocation and internally generated revenue as explanatory variables and gross domestic product as dependent variables. Data used covered 2001-2010 and were evaluated with analysis of variance which indicated that statutory allocation and internally generated revenue has positive effect on gross domestic product, but effect of internally generated revenue was insignificant. The study therefore recommended that state government should enhance their means of generating internal revenue in order to ensure significant growth and development.

In another study Chukwu, Ogbonnaya-Udo and Ubah (2017) examined effect of public debt on public investment in Nigeria. Linear model used in the study

contained fixed investment as dependent variable, public debt, public debt to GDP ratio, budget deficit as explanatory variables. The study used data of the period 1985-2018 which were analyzed with ARDL bound test co-integration approach. Result of the study showed that there is long run association among the variables. Result also indicated that public debt has insignificant effect on public investment both on the short run and long run. Therefore, the study recommended that government should only take debt obligation as a last resort and when done should be engaged in only capital investment rather than recurrent purposes.

Owolabi and Awoyinka (2020) examined federal government statutory allocation and infrastructural development in Ogun state Nigeria. The study employed environmental development, education sector development, agricultural sector development and health sector development as proxies for infrastructural development and state statutory allocation as explanatory variable. Data of the study covered 2000-2018 and were analyzed with Autoregressive Distributed Lag (ARDL) bound test co-integration approach. Result indicated that federal statutory allocation has negative significant effect on the proxies of infrastructural development in Ogun state. Therefore, the study recommended that government should make more effort to reduce wastage and corruption in relation to public funds in order to correct the effect of statutory allocation on infrastructural development.

Olaoye and Bankole (2019) investigated statutory allocation and budget implementation in Southwest Nigeria. The study adopted data over the period 2008-2017 and analyzed data using static panel regression analysis and Granger causality test. Result showed that statutory allocation exerts insignificant positive impact on actual expenditure. Result of the study alsorevealed that there is no of causal relationship between statutory allocation and actual expenditure of southwest states in Nigeria. The study therefore recommended that state government should depend more on their revenue generating capacity in the process and planning of the budget so as to ensure increase in internally generated revenue that will contribute efficient to budget implementation.

Dang (2013) examined revenue allocation and economic development in Nigeria. The study particularly evaluated the impact of revenue allocation on economic development in Nigeria. The study utilized time series data of 1999-2012. The study analyzed data using Johansen Co-integration, Error Correction Model and Granger causality test. The concentrate then, at that point, showed that all factors of the review are co-coordinated and have a since quite a while ago run relationship that 87.62% of the short-run disequilibrium is amended yearly. The concentrate likewise showed that unidirectional causality runs from income allocation to real GDP in Nigeria. Hence, the review presumed that income allotments have huge causal relationship with monetary advancement in Nigeria, with just income assignment to states having critical negative relationship. Accordingly, the review suggested that more monetary control and an incentive for cash review ought to be done to limit wastages and debasement in the conditions of the alliance, to adjust the bearing of impact of states' income portion on financial turn of events.

Ojide and Ogbodo (2015) assessed federation account allocation in Nigeria. The study specifically evaluated the statistical growth evidence of federal government allocation share, state governments' allocation share, and state governments' internally generated revenue in

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Nigeria. the study adopted data over the period 1970-2009. The study analyzed data using regression and correlation analysis. The study showed that the federal government allocation share and the state governments' internally generated revenue have positive and significant association with growth, while state governments' allocation share has a negative and significant relationship with growth. Therefore, the study concluded that federal government will likely benefit economic performance of the nation more than the share to state government would do.

Odo, Igberi&Anoke (2016) checked public debt and public expenditure in Nigeria. The study used model which comprised total public debt as dependent variable, government capital expenditure, government recurrent expenditure and interest rate as explanatory variable. Data used covered 1980-2015 and were evaluated with Johansen co-integration method which showed that government capital and recurrent expenditure exerted positive significant effect on public debt. Result also indicated unidirectional relationship running from government expenditure components to public debt. Hence, the study concluded that government resort to debt as a result of budget deficit. Therefore, the study recommended among others that government should only borrow when to meet specified and important target and that they should enhance allocative efficiency in budget planning and implementation in order to minimize debt.

Akeem (2011) assessed revenue allocation formula and its impact on economic growth. The study used federal government share of federal account, state government share of federal account, investment, local government share of federal account, inflation rate and political instability (dummy). The study used secondary data evaluated with analysis of variance which showed that federal government share of federal account, state government share of federal account, and local government share of federal account had positive effect on economic growth but the effect of state government share of federal account was insignificant. Therefore, the study recommended that there is need for state government to enhance the utilization of federal allocation in order to ensure remarkable growth in the economy.

Sa'ad, Umar, Waziri and Maniam (2017) investigated external debt burden and its determinants in Nigeria. Model used comprised external debt as dependent variable, consumer price index, interest rate gross domestic product and money supply as explanatory variables. Data were collated for the year 1973-2013 and analyzed with ARDL bound test co-integration method. Result indicated that consumer price index and gross domestic product had negative impact on external debt but the impact of consumer price index was insignificant. Result also showed that interest rate and money supply had positive insignificant effect on external debt. Hence, the study recommended that external debt can be minimized through diversification of the economy by focusing on agricultural and solid mineral sector which would help enhance gross domestic product.

3.0 Research Methods

Model Specification

This study adapted the model of Odoh, Igberi and Anoke (2016) which specified public debt as a function of h government capital expenditure, government recurrent expenditure and interest rate as explanatory variable which were specified as

$$PD = b_0 + b_1 GCEX + b_2 GREX + b_3 INTR + e \quad (1)$$

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Where PD is Public Debt, GCEX means Government Capital Expenditure, GREX represents Government Recurrent Expenditure and INTR as interest rate, b's represents coefficients of estimation and e stands for stochastic error term

This study modified equation (i) by specifying debt management (measured in terms of ratio of debt to IGR), as a function of federal allocation, alongside control variables such as population size (measured in terms of no of people in the state); and state spread (measured in terms of no of local government areas)

$$DTIGR = \delta_0 + \delta_1 FAC_{it} + \delta_2 POPZ_{it} + \delta_3 STSP_{it} + u \quad ------ (2)$$

Where DTIGR is ratio of Debt to internally generated revenue, FAC as Federal Allocation; POPZ is population size, STSP states spread,δ's represents coefficients of estimates while u stands for stochastic error term.

Source of Data and Method of Data Analysis

This study sampled 18 states in the six geopolitical zones in Nigeria namely North-East, North-West, North Central, South-South, South-East and South-West, in which three (3) states were randomly sampled from each geopolitical zone in Nigeria. Specifically this study selected Benue state, Kogi state, and Kwara state for North central; Adamawa state, Bauchi state, and Borno state for North East, Jigawa state, Kaduna state and Kano state for North west; Abia state, Anambra state, and Ebonyi state for South East, AkwaIbom state, Bayelsa state, and cross river state for South South, while Ekiti state, lagos state and Ogun state were selected for South west. Secondary data were extracted from the Debt Management Office of Nigeria; FAAC allocation reports and National Bureau of statistics,over the period 10 years spanning from 2010-20219. Data were analyzed with correlation analysis, as well as the generalized method of moment (GMM) specifically the two–step system GMM.

4.0 Result

Table 1: *Correlation Statistics*

	DTIGR	FAC	POPZ	STSP
DTIGR	1.0000			
FAC	-0.1762	1.0000		
POPZ	-0.3561	-0.1178	1.0000	
STSP	-0.3106	-0.1142	0.6899	1.0000

Source:*Author's Computation (2021)*

Table1 report the correlation coefficients of pairs of variables used in the study, which reflect the nature of relationship between each pairs of variables. As reported in table 1 correlation coefficient stood at-0.1762for DTIGR and FAC which connotes that over the period covered in the study across the 28 states sampled ratio of debt to internally generated revenue moved predominantly in opposite direction with federal allocation. Other reported correlation coefficient stood at-0.3561, -0.3106, -0.1178, -0.1142 and 0.6899 for DTIGR and POPZ, DTIGR and STSP, FAC and POPZ, FAC and STSP, POPZ and STSPrespectively. The result among other thing also showed that there is little likelihood for multicollinearity among the variables, given the fact that none of the pairs exhibited very strong correlation. As such, inclusion of these variables for estimation, do not pose any threat to the fitness of the model.

Estimation Result

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Table 2:*System GMM Two-Step Estimation*

Variable	Coefficient	Corrected Standard Error	T-Stat	Probability
C	-3.228196	5.345351	-0.60	0.554
DTIGR(-1)	0.5479158*	0.1367421	4.01	0.001
FAC	-0.6027023	0.8365468	-0.72	0.481
FAC(-1)	1.238224	0.8191371	1.51	0.149
POPZ	-1.184977	0.9426302	-1.26	0.226
STSP	1.153034	1.613898	0.71	0.485

F-stat=43.36, Prob> chi2=0.000, No of Instrument=47

Source: *Author's Computation (2021)*

Table 2 presents the two-step GMM estimation result which reflects the effect both the static and dynamic effect of federal allocation on debt management across states in Nigeria. Specifically result showed that federal allocation exert insignificant negative effect on the ratio of debt to internally generated revenue to the tune of reported coefficient estimate of-0.6027023 ($p > 0.05$). which reflect the static effect on the of federal allocation on debt management of states sampled in the study.As shown in table 2, result for one period lagged federal allocation stood at1.238224 ($p > 0.05$), which connote that federal allocation has positive insignificant dynamic effect on debt management of states in Nigeria. In addition, one period lagged ratio of debt to internally generated revenue exerts significant positive effect on its current level, with reported coefficient estimate of 0.5479158 ($p < 0.05$), which connote that previous level of debt management has significant positive impact on the level of management in the current period, suggest the existence of significant autoregressive dynamic effect of debt management across states in Nigeria.

Robustness Test

Table 3:*Arellano Bond Test Result*

Order	Z-statistics	Probability
1	-2.56	0.010
2	-0.99	0.321

Source: *Author's Computation, (2021)*

In an attempt to validate the robustness of the estimated model there is need to ascertain the status of autocorrelation between successive values of error term of the estimated model, in the bid to prove the econometric viability of the capacity of the model to truly reveal the dynamic influence of the explanatory variables on the dependent variable. A cursory overview of the test results of Arellano Bond autocorrelation test presented in table 3 reveals that there is no evidence to reject the hypothesis of zero autocorrelation between successive values of the error term for the case of second order serial autocorrelation, as against the first order serial autocorrelation, thus establishing that the model is fit.

Table 4:*Sargan and Hansen Test Result*

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	Chi-Stat	**Probability**
Sargan test	71.11	0.002
Hansen test	11.20	0.1244

Source: *Author's Computation, (2021)*

Both Sargan and Hansen test result presented in table 4 showed the enough evidence that the instruments used in the estimation are valid. For the Sargan test, reported statistics of 71.11 ($p < 0.05$) connote rejection of the Sargan null hypothesis that the instrument are not robust. For Hansen test, reported statistics of 11.20($p > 0.05$) connote acceptance of the Hansen null hypothesis of robustness. Hence the two test result reflect that there is enough evidence to conclude that the instruments used in the estimation are valid, and that the estimated model is robust for investigating the dynamic interrelationship between debt management and federal allocation of states across Nigeria.

Discussion:

Estimation result showed that there on the static level federal allocation exerts insignificant negative effect on debt management of states in Nigeria as measured in terms of the ratio of debt to internally generated revenue of states. In clear terms result showed thatfor every percentage increase in federal allocation the ratio of debt to IGR of states sampled declined on the average by about 0.6%. this decline though not statistically significant reflect that other things head constant, the more the allocation from the federation account, the more the level of debt management reflected in terms of lower debt to IGR ratio. By implication this result showed that a state could in the immediate period managed the level debt if more allocation is appropriated from the federationaccount, however such level of debt management is not statistically significant.On the dynamic ground, result showed thatfederal allocation lagged by a period has insignificant positive effect on the ratio of debt to IGR, which suggest that the more the previous period's allocation from the federation account, the lower the level of debt management as measured in terms of rising ratio of debt to IGR ratio of states in Nigeria. By implication, this result showed that a rising allocation from the federation account has insignificant tendency to reduce the level state management the stock of debt.Also this study established that the previous level of debt management has significant positive effect on the current reality of debt management of states across Nigeria. This discovery reflects among other things that structure and practice of debt management in the past has significant effect on the present framework of debt management of states. Notably discoveries made in this study resonance with the submission of previous studies like Abdulkadir andAbdulazeez, (2019); Fosu (2010) to mention but few.

5.0 Conclusion and Recommendation

This study established that federal allocation does not significantly influence debt management of states in Nigeria, either on the static or dynamic ground, though in the immediate period increase in federal allocation reflect tendency for improved level of debt management in terms of lower ratio of debt to IGR. Thus, this study established that federal allocation has no significant effect on the level of debt management of states in Nigeria, and that the level of debt management in the current period could be a significant frontier of debt management looking forward given the established significant autoregressive effect of debt management on itself.Thus this study

recommended that federal government should set benchmark for debt accumulation at state level based on their capacity to generate revenue internally and also evaluate debt management frontiers of states across the nation so as to foster be management of resources across the and reduce over reliance of borrowing. In addition state government should be proactive in designing debt structure, this is necessary so as not to dampen future revenue generation and state performance stability by excessive debt accumulation and/or overhang.

REFERENCES

Abdulkadir, A.R. &Abdulazeez, M. (2019).An empirical analysis of the impact of public debt management strategies on Nigeria's debt profile.*International Journal of Economics and Financial Issues, 9*(2), 125-137

Ajayi, S. Okunlola, O. Nnwanji, T. Otekunrin, A. Oladipo, O. &Awonusi, F. (2016).Comparative analysis of public debt management and economic growth in Nigeria.

Akeem, U.O. (2011). Revenue allocation formula and its impact on economic growth process in Nigeria. *Journal of Economics and Sustainable Development, 2*(3), 29-38

Aminu, U., Ahmadu, A., &Salihu, M. (2013).External debt and domestic debt impact on the growth of the Nigerian economy. *International Journal of Educational Research, 1*(2), 11-31

Chukwu, K.O., Ogbonnaya-Udo, N. &Ubah, C.B. (2021).Effect of public debt on public investment in Nigeria.*Asian Journal of Economics, Business and Accounting, 2*(2), 98-114

Fatukasi, B., Kolawole, B.G., Falade, A.O.O. &Ayeomoni, I.O. (2020). Determinants of external debt in Nigeria: insecurity as the prevalent issue. *International Journal of Management Studies and Social Science Research, 2*(2), 1-8

Favor, E.O., Ideniyi, O.S., Oge, E.O. and Charity, I.A. (2017). Public debt and economic growth in Nigeria.*Asian Research Journal of Arts & Social Sciences, 4*(3), 1-16

Dang, D.Y. (2013). Revenue allocation and economic development in Nigeria: an empiricalstudy. SAGE Open, 1-7

Fagge, M. & Ibrahim, T. (2018). Public debt management in Nigeria: The impacts of institutional changes after exiting from the Paris Club in 2006. Munich Personal Repec Archive Paper No 100364. Retrieved from: https://mpra.ub.uni-muenchen.de/100364/

Fosu, A. K. (2010). The external debt-servicing constraint and public expenditure composition in sub-Saharan Africa.*African Development Review, 22*(3), 378-393

Idenyi, O.S., Igberi, C.O. and Anoke, C.I. (2016). Public debt and public expenditure in nigeria: a causality analysis. *Research Journal of Finance and Accounting, 7*(10), 27-38

Imoisi, A. (2020). Fiscal policy and sustainability of public debt: the Nigerian experience. Research Square, 1-12

Odo, S.I., Igberi, C.O. &Anoke, C.I. (2016).Public debt and public expenditure in Nigeria.*Research Journal of Finance and Accounting, 7*(10), 27-38

Ohiomu, S. &Oluyemi, S.A. (2019). Resolving revenue allocation challenges in Nigeria: implications for sustainable national development. *The American Economist, 64*(1), 142-153

Ojide, M.G. and Ogbodo, J.C. (2015). Federal account allocation in Nigeria: implication for growth. *Journal of Poverty, Investment and Development, 7*, 8-11

Olaoye, F.O. and Bankole, T. (2019).Statutory allocation and budget implementation in southwest Nigeria.*Open Journal of Social Sciences, 7*, 125-135

Olowolaju, P.S., Ajibola, O., Ishola, R.A. &Falayi, I. (2014).Federal government statutory fund allocation to states in Nigeria, West Africa.*American International Journal of Social Science, 3*(4), 152-164

Oluwatobi, S. and Ogunrinola, I. O. (2011). Government expenditure on human capitaldevelopment: implications for economic growth in Nigeria. *Journal of SustainableDevelopment, 4*, 72-80

Opara, I.V., Nzotta, S.M. &Kanu, S.I. (2021). Nigeria's domestic debts and economic development.*International Journal of Management Science and Business Administration, 7*(5), 7-22

Owolabi, S.A. &Awoyinka, G. (2020).Federal government statutory fund allocation and infrastructural development in Ogun state.*European Journal of Accounting, Auditing and Finance Research, 8*(11), 30-48

Richard, A.O and Eme, O.I (2015). State governors and revenue allocation formula in Nigeria: a case of the fourth republic. *International Journal of Accounting Research, 2*(7), 2015, 14-36

Sa'ad, S.A., Umar, A.T., Waziri, S.I. &Maniam, G.S. (2017). External debt burden and its determinants in Nigeria: an ARDL co-integration technique. *Journal of Economics and Sustainable Development, 8*(12), 31-37

Saifullahi, S.I. &Abubakar, M.A. (2013). Equitable budgetary allocation: a catalyst for achieving national development of Nigeria. *European Scientific Journal, 9*(7), 264-274

Muhammad, D.A.B., Ruhaini, M., Nathan, S.B. and Arshad, (2017).Real effects of government debt on sustainable economic growth in Malaysia.*Journal of International Studies,10*(3), 161-172

Rahman, N.H. (2012). How federal government's debt affect the level of economic growth? *International Journal of Trade, Economics and Finance, 3*(4), 323-326