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An Assessment of the Patterns and Determinants of Public Expenditures and Revenues in Nasarawa State of Nigeria: 1997-2004

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Abstract
The study has examined the patterns and determinants of Public Expenditure and revenues in Nasarawa State where it focuses on the statutory allocations received by the State government from the consolidated revenue accounts of the federation, the value added tax (VAT) proceeds and the internally generated revenues (IGR) on the one hand vis-a-vis the total expenditure disbursements of the State. The study employed regression analysis. The study subjected the annual budget estimate of Nasarawa State government (1997-2004) to a thorough scrutiny. The study discovered that the State government is over-dependent on the oil monies coming into the State from the consolidated revenue accounts of the federation and the value added tax proceeds in order to execute both its capital as well as the recurrent programmes. This study therefore recommends an over-haul in the entire processes of revenue collection by diversifying its internal revenue base in order to reduce the over-depended on the reven ues from the federation account. Also, the state government should revolutionize in solid minerals development, and hasten the development of it's tourism potentials.

Keywords: Expenditure, Revenue, Value Added Tax
JEL Classification: E62, H71

1. Introduction

This study of public expenditures and revenues in Nasarawa State of Nigeria focuses on the profile of monthly and yearly statutory allocations received by the State government from the Consolidated Revenue of the Federation (CRF), the Value Added Tax (VAT) proceeds and the Internally Generated Revenues (IGR) vis-a-vis the total expenditure disbursements to both the recurrent and capital programmes of the State. Some welfare Economists, such as Abizadeh and Yousef (1988), opines that governments exist to correct the failures of the free market in the efficient allocation of scarce resources, ensure equitable distribution of income and economic growth and stability. They further opine that government has three major functions to perform viz: allocation, distribution and stabilization. These roles are performed with the presumption that they would improve or maximize social welfare.

According to Garba (1995), public expenditures refer to the expenses which the government incurs for its own maintenance for the society and the economy as a whole. Garba went further to say that, public expenditures are important mechanisms through which governments use to have significant effects on the lives of the people in terms of their standard of living and better opportunities. The components of public expenditures are the recurrent capital expenditures.

In Nasarawa State for instance, the study discovered that most government hospitals and clinics lack essential drugs and equipment, while there is no portable drinking water in the major towns and villages. Similarly, there is epileptic and erratic power supply and lack of good access roads, drainages and bridges linking one place to another in order to transport both food and cash crops from the rural to the urban markets. Furthermore, the primary and secondary schools in the State are grossly inadequate. Where the schools are available, there are no qualified teachers and the laboratories are ill-equipped. To further compound problems, the state government has not provided fertilizers, pesticides and other agricultural inputs to our farmers in good record time given the fact that the States is an agrarian one. To further worsen the matter, as a newly created state, the government did not assist and encourage private developers nor has it on its own built sufficient houses for the civil servants who are trooping into the State capital in order to work at the various ministries and parastatals.

Evidently and more worrisome are the abandoned projects seen as common sights at the mercy of termites and other reptiles. On the who, contractors maintained that the State government failed to pay them promptly and adequately huge sums of money for executing various projects awarded to them across the State.

2. Literature Review

The study of public expenditures is one of the most interesting objects in the economic literature. A considerable number of Economists have engaged in extensive theorizing in order to provide some explanations as to why there is disequilibrium between the available revenues and physical projects executed by governments, either at the Federal, States or Local government levels.

Some researchers have developed and empirically tested various models to explain the public expenditure behaviour in developed countries such as Landau (1986), Fountas and Jyn-Linwu (1995), Musgrave (1969), and Wassdijk (1964). Other researchers have also carried out surveys on various states' public expenditures in order to unravel the mysteries as to why there is an uneven development in some states and why particular attention is not paid to the public sector. Among such indigenous scholars are Alade (1999), Aigbokhan (1996), and Lambo (1987).

The investment multiplier holds well not only for net investment, but also for additional government expenditures whether for the purposes of consumption, transfer or investment. Public expenditure is important for economic development of the country. Through public expenditures, most government's policies, programmes and objectives are achieved via the long-term development plans and poverty alleviation programmes.

Public expenditures are therefore, seen as a means of executing government's policies and programmes with the aid of the available revenues at any given period of time. In spite of its obvious importance, the study of the behaviour of public expenditure appears to have received little attention among Economists throughout the first half of the 20th century. However, there are two important and well-known theories of public expenditures. These are: Adolph Wagner (1971), law of expanding States activities and that of Wiseman and Peacock (1967) on the theory of concentration and displacement effect.

Empirical Studies of Determinants and Patterns of Public Expenditures

The determinants of public expenditures vary between developed and developing countries as well as among the developing countries overtime. It is assumed that as governments continue to expand their activities in order to improve the quality of life of the people, public expenditures are bound to increase. Hence, the public expenditure theories provide the analytical framework under which changes in government expenditures are viewed. Wagner (1917); Wiseman and Peacock (1961) propounded two of such theories.

Anyanwu (1999), examined the various facets of fiscal relationships among the various tiers of government in Nigeria using mainly descriptive tools. The study reveals that the degree of decentralization of spending is higher than the degree of decentralization of revenues, resulting to over dependence by the sub-national governments on central financial allocation for their expenditure needs. This according to the study leads to the problem of non- correspondence or vertical fiscal imbalance since there is a considerable divergence between the sources of revenue and functional expenditure obligations in the states and local governments. The study observed that, a cut in the capital expenditure component has adverse effect on capital formation.

Alade (1999) examines the causes of State Government's financial problems in Nigeria using descriptive statistics "between" 1980-1997. The study revealed that, state governments' expenditure have passed the potentials of their sources, leaving a substantial gap between their needs and fiscal capacity. It showed that while States revenue has declined in real terms, the demand for government services has continued to grow. The study observed that several factors are responsible for the increase in State governments' expenditures. For instance, the rising cost of providing public services due to inflation, unprecedented increase in the demand for public services as a result of the growing population, and the problem of over-staffed public sector.

Ndebbio (1998) examines the full impact of fiscal deficit, money supply and inflation in Nigeria for the period 1970-1992. Using the deficit, money supply and inflation, further results showed that, when the money stock (M2) was increased by 10%, the price level (PL) increased substantially, followed by significant increase in government expenditure (GE) and government revenue (GR). Imports (IMP) also increased though not as high as the rates of PL and GE. The study also showed that a decrease in money stock (M2) by 10% on the other hand, had a depressed impact on prices, government expenditures, government revenues and imports.

The study has therefore filled the gap in existing literature by considering other aggressive efforts aimed at boosting the State's weak internally generated revenues since it is believed that with a vibrant (IGR) in place, the state will depend less on the federation accounts for its survival which will in turn make it less vulnerable to all sorts of manipulations by the Federal government. Furthermore, it is believed that it will be less susceptible to the politics and vagaries of crude oil in the world market. Consequently, the state will be able to meet up the expenditure requirements for service provision and delivery to the people.

3. Methodology

This study used annual budget estimate of Nasarawa State government from 1997-2004. In determining the regression model, Total revenue (TR) was used as the dependent variable while capital expenditure (CE) and consolidated revenue funds (CRF) were used as the independent variables.

$TR = C + \beta_1 CE + \beta_2 CRF + e_i$ ………………………………………………… 1

Where, TR = Total Revenues, CE = Capital Expenditures, CRF = Consolidated Revenue Funds, ei = Stochastic error term with mean = O and variance o^{-2}

Table 1: Anova Table for Single - Factor Analysis

Sources of Variation	Sum of Squares (SS)	Degrees of Freedom (D.F)	Mean Squares (MS)	Variation or F- Ratio
Between Treatments	$SST = \sum_{J=1}^{r} \frac{T^{2j}}{n_j} - \frac{T^2 \ldots.}{N}$	r-1	$MST = \frac{SST}{r-1}$	$F^* = \frac{MST}{MSE}$
With-in Treatments (Erros)	$SSE = \sum_{J=1}^{r} \sum_{i=1}^{nj} X_{ij}^2 - \sum_{j=1} \frac{T^2 J}{nj}$	N-r	$MSE = \frac{SSE}{N-r}$	
Total	$SS_{Total} = \sum_{j=1}^{r} \sum_{i=1}^{nj} X_{ij}^2 - \frac{T^2}{N}$	N-l		

4, Results

Table 2: Revenue structure and contribution in Nasarawa State (1997-2004)

Sources of Variation	Sum of Squares	Df	Means Squares	F	Sig.
Between Groups	32541.477	2	16270.738	2722.712	0.000
Within Groups	125.495	21	5.976		
Total	32666.971	23			

Source: Using data obtained from Nasarawa state budget estimates
Note: Rev = Revenues

Table 3: Multiple Comparisons (Dependent Variable: REV)

(I) CAT	(J) CAT	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
1.00	2.00	5.5125	1.22229	0.000	2.9706	8.0544
	3.00	-75.2100	1.22229	0.000	-77.7519	-72.6681
2.00	1.00	-5.5125	1.22229	0.000	-8.0544	-2.9706
	3.00	-80.7225	1.22229	0.000	-83.2644	-78.1806
3.00	1.00	75.2100	1.22229	0.000	75.6681	77.7519
	2.00	80.7225	1.22229	0.000	78.1806	83.2644

Source: Using data obtained from Nasarawa State Budget Estimates
Note: Rev = Revenues; LSD = Least Square Difference; The mean difference is significant at 05 level.

From the result presented in Table 2, it shows that the F-statistic is 2722.71 with P = 0.000 which is less than 0.05 level of significance. This signifies that the null hypothesis is rejected because there is no difference in the three (3) components of revenues generated in Nasarawa state for the period under review and the alternative hypothesis is therefore accepted.

From the multiple comparison tests in Table 3, it also appears that there is significant difference among the three (3) groups of revenue components generated in Nasarawa state during the eight years of the research study. The three (3) revenue components in Nasarawa state are the consolidated.

Based on Table 2 and 3 and also Fig 1, it shows that bulk of the revenues in Nasarawa state is coming into the State on yearly basis from the consolidated revenue funds of the federation. Fig. 1 shows that the consolidated revenue (CRF) contributes about 80% to 89% 'between' 1997-2004. This clearly signifies that the state has a very weak internally generated revenue base. Based on the foregoing, it means that the state is vulnerable and susceptible to all kinds of manipulations by the Federal government because of the state's over- dependence and over-reliance on the consolidated revenues from the federation accounts. This shows that, the state government might not be able to stand on its own to execute most of its recurrent and capital programmes without receiving funding from the federation accounts. See table for the revenue sharing formula from the consolidated revenue accounts of the federation below.

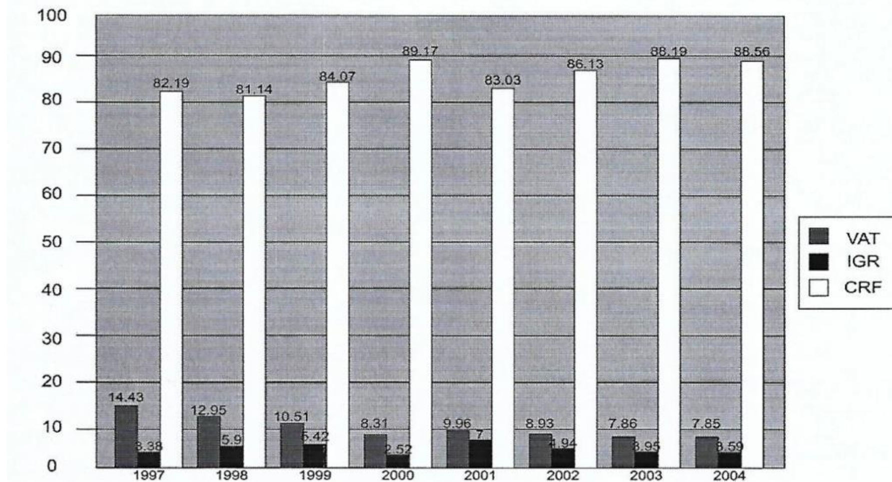
Revenue Sharing Formula from the Consolidated Revenue Accounts of the Federation

Table 4: Revenue Formula Table as at 2004

Tiers of Government	Old Formula	New Formula
Federal	53.69%	55.0%
State	31.10%	24.0%
Local Government	15.21%	21.0
Total	100%	100%

Source: Revenue Mobilization Allocation and Fiscal Commission

FIG: Pattern of Revenue Distribution in Nasarawa State in %



Source: Computed from Appendix 2 using data obtained from Nasarawa State Budget Estimates

As presented in Figure 1, it can be seen from the bar-chat that, in 1997, the consolidated revenue funds (CRF) came first with the state government having 82.12%, as the revenue received from the federation account. This was followed by the value added tax (VAT) proceeds which came second, with 14.43% of the total revenue. The last position went to the internally generated revenues (IGR) with 3.3% of the total revenue. This is actually not encouraging at all. It implies that the state government is seriously over-dependent on the consolidated revenue funds from the federation account in order to execute both its recurrent and capital programmes. It also shows that the state government will not be able to stand on its own without receiving funds from the federation account.

Similarly, Figure 1 shows that, the revenue pattern is the same throughout the study period. For instance, the consolidated revenue funds contributed about 81.1% in 1998, 84.0% in 1999, 89.1% in year 2000, 83.0% in 2001, 86.1% in 2002, 88.1% in 2003 and 88.56% in 2004. This therefore goes to show that the state government may not be able to stand on its own, without the consolidated revenues coming into the state from the federation account. The state government must generate revenues and reduce over dependence and over reliance on the oil monies coming into the state government coffers from the federation account.

Table 5: Recurrent and Capital Expenditures Comparison in Nasarawa State

Sources of Variation	Sum of Squares	D.F	Mean Squares	F	SIG
Between Groups	932.081	1	932.081	31.45	0.000
Within Groups	414.936	14	29.638		
Total	1347.016	15	-		

Source: Using data obtained from Nasarawa State Budget Estimates

Comparison is also made between the recurrent and capital expenditures profits of Nasarawa State government based on the annual budget estimates for the period of eight years 1997-2004.

From the SPSS results in Table 5, we identify that the F-statistics gave 31.45 and P = 0.000, which is less than the 05% level of significance. This shows that there is difference between the allocations to the recurrent and capital expenditures. Although, the result shows that, there is no significant difference between the allocations to the recurrent and capital expenditures, figure 2 in the bar chart shows that, the capital programmes between 1997 and 2004. The percentage difference on yearly basis between the recurrent and capital expenditures ought to have been very much in favour of the capital programmes, since priority is supposed to be given to the capital programmes as against the recurrent.

This is so because when, emphasis is given to the capital programmes, it means that priorities will be given to education, agriculture, health care, water supply, electricity, housing and roads/bridges will be provided to the people in order to improve the lives of the citizenry across the state. However, if the recurrent programmes are getting allocation almost at per with that of the capital programmes, it then means that, the bulk of the money coming into the state will be used to pay only salaries/wages and also settle the over-head cost of ministries and parastatals.

Discussion of Result Using Correlation Matrix

The correlation matrix shows that there is a strong positive relationship between the variables. A glance at Table 6 below reveals the Table degree of correlation.

Table 6: The Correlation Matrix of the Variables

	CE	CRF	TR	RE
CE	1.000000	0.946569	0.948645	0.960726
CRF	0.946569	1.000000	0.999692	0.944030
TR	0.948645	0.999692	1.000000	0.946348
RE	0.960726	0.944030	0.946348	1.000000

Source: Author's computation

The correlation matrix shows that, there is a strong positive relationship between the Capital Expenditure (CE) and Total Revenues (TR) and also between the Recurrent Expenditures (RE). Similarly, there is also a strong relationship between the Total Revenues (TR) and Recurrent Expenditures (RE) and a high positive correlation exist between the Consolidated Revenue Funds (CRF) and the Total Revenues. This therefore signifies that as one variable increases or decreases, the other one will also increase or decreases.

5. Conclusion and Recommendations

This study has examined the patterns and determinant of public expenditures and revenues in Nasarawa State of Nigeria. This study uses the analysis of variance (ANOVA) technique, regression analysis and the correlation technique. The findings revealed that Nasarawa State has a very weak and poor internally generated revenue mechanism among others. That, if adequate and proper

measures are not put in place to boost the internally generated revenue base of the state, then the government would have to resort to substantial borrowing in order to execute its capital as well as the recurrent programmes.

In order to boost and improve the Internally Generated Revenues (IGR), the entire processes involved in the collection of the state should be over-hauled completely. Accountability, prudence, economy, efficiency and effectiveness should be the guiding principles by all the operators of government machineries in the state. The state government should look inwards with respect to boosting its Internally Generated Revenues (IGR) in order to avoid over-reliance and over- dependence on the oil revenues which can make the state vulnerable and susceptible to the vagaries and instability of prices of crude oil in the international markets. The international market complex at Karu, near Abuja, should commence commercial activities immediately to beef up the state's IGR. In order to attract and stimulate private foreign investments, the state government should devote a large proportion of its annual budget for the provision of basic infrastructures and other services such as roads, health care, education, housing, water, electricity and industries.

The state government should revolutionize agriculture, encourage irrigation farming, and set up agro-based industries in order to boost the internally generated revenue base of the state. The state government should either increase taxes to raise revenues or reduce her expenditures to the size of its realizable revenues in order to avoid high fiscal deficits which may have destabilizing effects on the state's economy. The expenditure programmes of the state should always be tailored towards the available resources in order to achieve a fiscal balance. The state government should hasten the development of the tourism potentials i.e. the "FARIN-RUWA" water falls at Wamba in conjunction with the Federal Tourism Corporation. There should be deliberate policy by the state government to reduce recurrent expenditures and give more preference to the capital programmes since much of the spending in the recurrent expenditures may not improve the living standards of the people. It is our belief that effective implementation of the recommendations will go a long way in improving the living standards of the people of Nasarawa state in particular and Nigeria in general.

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