World Journal of Innovation And Modern Technology (WJIMT)
E-ISSN 2756-5491 P-ISSN 2682-5910 Vol 5. No. 1 2022 www.iiardjournals.org

Innovative Reforms in Budgeting and Budgetary Allocations for Public Secondary Schools Infrastructure

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Abstract
The budget is an economic tool which government as well as private organization use for planning and management of its resources. The educational subsector and secondary schools have been characterized by dwindling budgetary allocations, over the years. There now exist a gap between the UNESCO stipulated standard that 26% of the total budget be aside for the educational subsector; this has affected the efficiency and effectiveness of the budget as planning tool that forms a good basis, for the implementation of government programs. The research chose some empirical parameters, carried out analysis with a view to ascertaining if the chosen parameters could form basis for an effective planning and reforms in budgeting allocation exercise. Research findings established that the allocation of capital funds to secondary schools within the research period does not appear to have been carried out with due consideration to the chosen parameters. The research concludes that reforms take budgeting for physical infrastructure to school sites have propensity to enhance efficiency and effectiveness of capital funding for schools. The research recommends further study that explores an innovative budgetary regime that inputs demographics derived from anthropometrics as basis for needs assessments and subsequently for secondary schools physical infrastructure development.

Keywords: Physical infrastructure, budgets, secondary schools, traditional incremental line-item budgeting technique, reforms/innovations in budgeting.

INTRODUCTION

Physical infrastructure plays an important role in the development process of government and private organization. Nordberg (2000), also supports the above as assertion revealing that a vast number of developing countries have tried to use the construction sector to achieve sustainable economic growth and that implicit in the attainment of developmental goal is the development of physical infrastructure. Budgets and budgetary allocations provide the means through which all forms of capital projects are financed. Budgetary allocation is the fulcrum for physical infrastructure development. Budgetary allocations for secondary schools physical infrastructure development is however bedeviled with plethora of problems. Budgetary allocations as stipulated by the UNESCO standard that 26% of the country's budget be aside for the education subsector and by extension secondary schools have been undermined and grossly under implemented.

Amaechule's (2007) assertion further amplifies the situation, revealing that the Federal government budget within the period 2000-2005, was less than 10%, those had percentage allocations of 8.36, 7.0, 6.30, 4.75, 9.59 and 5.30 respectively. This statistics as observed is abysmally low. This has led to underfunding, overcrowding, and overstretching of facilities that threaten the survival and sustainable development of secondary schools.

(Academic Staff Union of Universities: ASUU (2002), Ezule (2003) and Ibrahim (2009)] have all lamented over the above situation and have attribute it to bad governance, observing further that the challenges of the subsector have transcended summits and retreats. Karani and Okebukola (1997), cited in Ibeneche (2009) have attributed the situation to that of underfunding that led to infrastructural inadequacy and quality drop. Mogbo's research works (1995) and (2001) on budgetary allocations established that demographics were not basis for the allocation of capital funds to public utilities in Lagos. Idiake's (2003) research also indicated that capital allocations of funds to secondary schools in Oyo state, Nigeria did not appear to have been carried out with due consideration to students' enrolment, number of schools and number of available classrooms in the state for the period under review. Mac-Barango (2013) from a study using simple regression established that student population was not given due cognizance when allocating capital funds for secondary schools applying multi-regression, the results of same study however established significance relationships between budgetary allocations and students population. The derived models from the multi-regression are however limited in real life situation. The predictability function of the derived equation is therefore likely to be limited. In a similar perspective Mac-Barango and Mbamali (2015), have connected the occurrence to unfavourable allocations that were negatively skewed towards capital allocation Mac-Barango (2013).

An important salient feature of the results of the studies mentioned above is that the statistical data for the budgetary allocations were obtained from budgeting exercise using the traditional line-item incremental technique. The observed deficiencies need to be addressed for obvious reasons. Secondary schools play important roles in the national development. See the assertion of El-Rufai (1989) on infrastructure and the productivity capacity of human societies as well as the consequential impact on the standard of living and the environment.

According to Cuadara (2005), secondary schools have social economic benefits as well as other opportunities. Cornell (2011), opines that secondary school is one of the process of gaining the right education. There is therefore an urgent need to begin to unravel the problems associated with budgetary allocations for capital projects for secondary schools. Previous research works on budgeting have focused on studies which established relationships between and amongst various components of budgets, analysis on subsectoral allocations from total budgets and the impact of macro-economic variables on budgets. This study is one of such efforts; it is an effort towards the achievement of effective budgetary allocations.

The results of this research on the research location (Rivers State of Nigeria) will also serve as a representative of other educationally backward states in the countries; the results could be applied to other states with some modifications.

The following defines the limits and bounds within which results hold. The period under review (2000-2007), kick starts a new era of democratic dispensation which places high premium on the expectation on the dividends of democracy as it concerns budgetary allocations for physical infrastructure. The research obtained demographic data from 244 secondary schools which was the existing total number. Students' enrolment statistics was taken from the 244

public schools, whilst data on other demographic variables were obtained from the 23 local government area councils of the using 2006 population census figures from National Population Commission. The traditional line-item incremental budgeting technique formed the basis of the statistics used for the budgetary allocations. The research did not consider allocations from interventionist bodies such as Education Trust Fund (ETF) and foreign grants and aids from donor agencies, such as interventions were not mandatory. They were also selective. The research locations Rivers State is located in the Oil rich Niger Delta Region of Nigeria.

The structure of the paper is as follows: first it gave a background account on the topic. Population and demographics and their impact on budgetary allocations for secondary schools physical infrastructure. Using conceptual as well as theoretical framework as basis, the paper deals with short falls in budgetary allocations and how that has impacted on secondary schools physical infrastructure development. Second, the paper undertakes a review of related literature on budgets, budgets as tools for stabilization and national developments, traditional line-item budgeting technique and the impact of population and other demographic parameters on physical infrastructure. Thirdly, it adopts methodology that reveals the relationship between budgetary allocations and the demographic variables. Fourthly, the components of the research were analyzed and the outcomes were published. Finally, conclusions arising from the analyzed issues as well as the reviews were drawn and recommendations offered.

REVIEW OF RELATED LITERATURE

Physical infrastructure: is one of the fundamental needs of an economy. The physical infrastructure constitutes the capital stocks of en economy. The physical infrastructure of the educational sub-sector of the economy includes schools and associated facilities for primary, secondary and tertiary institutions (Seeley 1983). Udegbunam (2002), has asserted that infrastructure plays a crucial role in any well-functioning national economy, revealing further that however differences exist between public social sector and private infrastructure. There is a link between public infrastructure and economic growth, it is a crucial factor in economic growth especially for developing countries like Nigeria. According to Owusonye (2010), infrastructures including schools have the common characteristics of being capital intensive and need high public investment at all levels of government.

Education places a significant role in national and economic development. (Academic Staff Union of Universities ASUU (2002), Ezejule (2003) and Kakakhel (2000), have observed that education plays a central role in national development, its economic, political as well as its socio-cultural transformation. Education is critical for achieving environmental, ethical awareness, values, attitudes, skills and behaviours consistent with sustainable development. In a related perspective the Rhodes (2010), has posited that education enhances the mental capacity of individuals, towards the achievement of specific objectives, he further revealed that through the assertion has been unproven, this was what Socrates was doing many centuries ago. According to Berg (2011), education leads to an optimal state of mind.

Secondary school represents the second tier of the educational system. Education has come to be widely recognized as a significant factor in economic development. Max and Jackson (2009), posited that education is a vital instrument in the development of an individual and the society. Education is the process of teaching and learning. It is a lifelong activity that begins and continues until a person's last day on earth. Secondary schools education according to Cuadara (2005), represents the secondier in formal educational settings and knowledge, it is a gateway to

opportunities and induce benefits of economic and social development. Secondary school serves as the link point between primary, tertiary and the labour market. Education for all global monitoring report (EFA 2011), has revealed that secondary education is a bridge for young people from the world of school to the world of work.

THE BUDGET AS AN ECONOMIC TOOL

Efficient budgetary systems and allocations form the fulcrum upon which the survival and sustenance of physical infrastructure for public institutions as well as private concerns. Public secondary schools are not exceptions; their continuous existence and survival are dependent on the budgetary system adopted by government and its agencies. Understating these issues revealed that budgeting for physical infrastructures is surrounded by great complexities which require critical analysis and planning that are geared towards undertaking an efficient budgeting allocation exercise (Mac-Barango and Mbamali 2015). The budget as an economic tool, serves multi dimensional functions. The budget is a planning, management and control tool use to stabilize the economy. The budget is also used to distribute income between the various strata of a nation. The budget is a tool for allocation of resources of government to various sectors and subsectors of the economy. Buhari (1993), defines a budget as a document indicating the total and composition of government expenditures and the sources from which such expenditure are expected to be financed in the course of the year. Umoren (1994), in a related perspective viewed the budget as a mandate for and a limit on expenditure, revealing further that in most cases, the actual spending generally should coincide quite closely with the budgetary appropriations. Wahab (2000), sees budgeting as the predetermination of proposed expenditure and incomes which translates into targets that have to be achieved over a period. A number of actions and processes are normally put in place in order to achieve realistic budgetary planning and control. Annual budgets can have surpluses or deficits. There could also be equilibrium between what was budget, with respect to expected revenue and the planned expenditure for executing government programmes. According to Buhari (1993), balanced budget is when a government plans its annual expenditures and revenues in such a way that both are equal, however where a government plans its annual expenditures and revenue in such a way that the expected revenues exceed expenditure, the budget is referred to surplus budget. When total intended expenditure for the year exceeds the anticipated revenues the budget is referred to a deficit budget. Mogbo (2001), also postulated and suggested that realistic budgets could be built through disciplined planning and research. The principle of cash flow, equal to work flow should be taken to account and projects should have sufficient budget for in-built factors for safety. A budget according to Akinpelu (2008), a budget is a plan relating to a period of time expressed in quantitative financial terms. Government expenditures are classified into three broad categories. Capital expenditure, recurrent expenditure, and transfer payment. Capital expenditure is for long term project, this form of investment benefits the country for many years. Recurrent expenditure covers payments on salaries and wages, cost of materials or supplies necessary to operate existing public services on day to day basis. Transfer expenditures cover payments for pension and other social responsibility cost of government. Adetola (1999), has opined that budgets are used for planning and controlling income and expenditure. He revealed further that it is through budgets that a company's plan and objectives can be converted into quantitative and monetary terms. Differences exist in the public and private capital expenditure patterns. For the government and corporate organization, construction capital budget is designed to formulate a

time-phased funds requirements and the sources form which these funds are to be allocated. The government or client capital budget includes the expenditure on preliminaries, procurement of land, client supply resources, consultant fees, contractors' payment and the cost of working capital. A contractor's budget on the other hand is resource cost and sales revenue oriented. (Akinpelu, 2008).

VARIABLES INFLUENCING BUDGETARY ALLOCATIONS FOR SECONDARY SCHOOLS PHYSICAL INFRASTRUCTURE

Budgets provide the financial means for secondary schools physical infrastructure. The budgetary provisions for secondary schools physical infrastructure is guided by analytic approach, that is research and planning based. The sequence of activities of such analysis is the same for various financial sources. The analysis will consider the total finances available, the proportion of capital and recurrent expenditures, personnel and overhead expenses. The analysis also appraises the proportion of capital budget that is side aside for secondary schools physical infrastructure. Economic analysis include the financial options that are append for sourcing, the impact of sourcing terms in capital finance. The analysis also include for macro-economic variables in the capital sum allocation. Appropriations for capital fending are closely tied to the requirements for physical infrastructure. Appropriations are in turn determined by the size, the intended user population, the geographical spread of the infrastructure. Physical infrastructure requirements for secondary schools. The budget and its capital allocations can also be influenced by the project phasing strategies.

Bruser (1987), has articulated an array of economic and financial variables which form good basis for undertaking an analysis on physical infrastructure financing: undertaking an economic analysis for all the different types of finance which are available or which are being sought, the adoption of same analytic approach, even when the options for financial sources differ. The variant financial sources differ. The country's internal resources (taxation) borrowing from national government or international banking systems or by a grant or loan from a donor or other institutions. Umoren (1994), has advocated that an economic analysis on physical infrastructure financing should be presented in the form of a budget, which outlines the plan of financial operation. UNESCO (1970), has highlighted the need integration of an efficient education planning process during considerations for the provision of secondary schools physical infrastructure. The considerations should focus on the variables of population, population growth, population density. Other variables. Fadayomi (1983), also collaborated asserting that educational planning comprises the provision of information on the educational system that useful for designing and evaluating appropriate policies and programmes relevant to the future development of education in society. The following are the kinds of information or data required by the educational planner:

(a) Statistics of educational system such as pupils, teachers, building and equipment cost (both recurrent and capital expenditure)
(b) Supplementary data for the calculation of forecasting of planning of demography and economy in the educational system.

Other variables are enrolment of students, increases in the number of subjects offered by schools and increase in the national state and local government population. Considerations of the impact of these variables on physical infrastructure are a function of the efficiency of the education planning. Education planning should therefore identify objectives and available

resources, examine the implication of alternative courses of choosing wisely among them: deciding specific targets to be met within specific time limits and fully developing the best means of systematically implementing the choices that are made. Bathurst and Butler (1980), were emphatic on the need for financial control during development, elucidating further that no project is likely to be successful unless the objectives are properly defined and the necessary allocations made for materials and labour. Barthurst Butler further revealed that the above assertion is no less true when applied to the economy of a country. It is imperative to the economy of a country. It is imperative for government to decide which objectives are to be met within its progrmmes, choosing between a number of conflicting and overlapping social needs and laying down the proportion of the nation's resources that is to be devoted to each. This chain involves at levels of responsibility, politicians, administrators, architects, surveyors and contractors. Apart from a common motivation to meet the requirements, the only factor common to all decision making is the expenditure of money. In short, finance acts as the frame work in which all the decisions are made. They stressed further that the financial control of development can be necessitated by a number of factor which include the need for new schools, the replace of war damaged and obsolete buildings, the movement of population from city centres to new suburbs, the creation of new towns, a general increase in the number of school children, rise in the birth rate, new educational concepts and chanses in leaving age. The development of expenditure limits. The development of expenditure limits, their applicability and the integration of the individual contracts into the over all capital programmes of government are influenced by the variables of the stage, type and the levels of completion of other projects. These variables influence the aggregate capital programme of government.

BUDGETING TECHNIQUES AND BUDGETARY ALLOCATION

Budgeting process and procedure provide the means of financing capital projects. Salawu (2005), has observed that budgeting techniques provide the framework for acquisition, allocation and utilization of resources by presenting decision rules and other operating criteria which governs the entire allocation procedure. Government funds its services, goods, program and projects through budgetary allocations adopting any of the budgetary philosophies and management techniques. The budgeting techniques are: (i) Planning programming budgeting (ii) Functional/programme budgeting (iii) Planning and performance budgeting (iv) Zero-based budgeting (v) Line-item budgeting or traditional budgeting. The line-item budgeting technique is the variant applied for the allocation of funds in the research location and within the period under review. Salawu (2005), provides an extant literature review on the process involved using the traditional line-item incremental budgeting approach highlighting the following as relevant headings: determination of government expenditure and revenue on an annual basis (2) Budget Formulation (3) Preparation of the financial analysis of the forwarded estimates (4) Responses to the call of circular. Identified weakness as discussed under the following headings: the policy formulation are done on annual basis (2) The technique takes care of only, current problems, losing sight of wholistic solutions by way of resource allocations, therefore expenditure authorization tend to follow the same trends. The weakness of the traditional budgeting system becomes manifest as relates to establishing the link between the control of expenditure for one year and the formulation of expenditure for the following year. In the annual circle of a traditional budget, this link is conceptually absent to the extent that continuity does not exist from one traditional budget year to the next.

EXTERNALITIES AND BUDGETARY ALLOCATIONS

The economic externalities of inflation, foreign exchange, balance of payment and government monetary mechanisms have propensities to impact on the quantum as well as the budgetary allocations for secondary schools. Hillebrandt (1974), has observed that government is the client for a large part of the construction industry which provides predominant goods and services, therefore relatively small changes in government policy may cause significant variations in construction industry work road. Seeley (1983), has also contended asserting that government either directly or through public agencies purchases about one-half of the output of the construction industry each year. Government uses it monetary policies (minimum lending rate, open market operations and hire purchase restrictions to alter the level of interest rates and to control the amount of credit restrictions. Taxation is an important tool in a government's fiscal policy and has significant implications. Apart from taxation government can influence the level of economic activities by regulating the amount of the spending. Shutt (1980), has agreed that the whole sphere of social benefits is under the direct control of government, via legislation and budgets.

METHODOLOGY

This work is a synthesis of literary research, as well as field studies; data processing and analysis. Literacy, research covered the review of existing knowledge on: (1) Budgets and its relevance to National development i.e. establishing tool as well as a control mechanism. (2) The place of budget in physical infrastructure development. (3) The impact of the line-item budgeting technique the traditional budgeting technique for infrastructure development. (4) The impact of population and other demographic variables on budgetary allocation. The field studies segment of the work reviewed: (1) The results of other analysis carried out on budgetary allocations for physical infrastructure development. (2) This research also carried out its analysis which borders on data on budgetary allocations and students population and other demographical parameters, obtained during field work. The data for this research was obtained using secondary method. The relevant budgetary parameters were obtained from published data from the ministry of economic planning (budget department). Whilst the data on students' population was obtained from school management board, all in Port-Harcourt (the administrative headquarters) of Rivers State, a state in Niger delta region of Nigeria. The time series of the research was within (2000-2007). The mean values of the parameters of each of the research components were obtained. This formed the basis for the analysis between the various research components (Budgetary values versus students' populations and other demographic parameters). The other demographic variables are (the number of schools, the geographical areas of each local government of the population densities). The student population per school as well as the values of the other demographic variables were arranged according to local government area within the study area, Rivers State of Nigeria. The mean values of population totals of each of the 244 public secondary schools were established. The mean values of the students' total population as well as those of the other demographic variables arranged according to local government area and on annual basis formed the basis for the analysis of data. The statistical software package (SPSS), was used in collation and analysis of the collected data during the field work. The statistical technique of regression was employed for the analysis of data.

The choose of the research parameters derives its premise that efficient budgetary systems and allocations form the fulcrum upon which the financing, survival and sustenance of public and private organizations are based. (Mac-Barango and Mbamali 2015). Public secondary schools system is not an exception. Amaehule's (2007), study has revealed that the budgetary allocation to the educational subsector have fallen short of UNESCO standard which stipulates that 26 percent of the budget be set aside for the sector. The empirical parameters chosen were in an attempt towards exploring other effective means of budgetary allocations that could bridge the observed short fall The time series 2000-2007, ushers in a new era of democratic dispensation, it was therefore considered appropriate to evaluate existing budgetary allocation procedure. Secondary schools aside its important role to national development, is a subsector of the educational sector, which derives its budgetary allocation from the total budget for Rivers State.

DATA PRESENTATION, ANALYSIS AND DISCUSSIONS.

Table 4.1: Rivers State Annual Budgets/Parameters (2000-2007).

Year	Total State Budget ₦	State Capital Budget ₦	State Recurrent Budget ₦	Total Education Budget ₦	Capital Budget for Education ₦	Recurrent Budget for Education ₦
2000	29,822,499,102	22,134,908,741	7,687,590,361	3,074,745,261	1,311,000,000	1,763,745,261
2001	46,854,000,000	32,607,191,053	14,246,908,173	838,904,173	69,467,666	144,227,507
2002	63,951,135,583	42,819,922,598	21,131,212,985	1,614,288,034	1,427,550,000	186,738,034
2003	68,124,299,624	48,090,307,337	20,033,992,287	2,206,888,743	1,990,050,000	216,838,743
2004	7,936,977,180	48,211,785,777	31,157,990,403	3,005,803,108	2,811,122,900	194,574,108
2005	96,750,000,000	64,575,751,373	32,174,248,627	2,355,601,952	2,156,675,000	198,926,952
2006	168,030,823,479	1,248,043,287,155	43,226,494,764	2,074,870,327	1,866,200,000	208,670,327
2007	183,384,098,500	140,146,098,324	43,283,000,176	2,942,677,456	2,723,700,000	218,977,456

Source: Author's Field Work (Annual Ministry of Economic Planning and Budget Department Port Harcourt).

Table 4.2: Rivers State Annual Budgetary Allocations of Some Budgetary Parameters for secondary schools (2000-2007).

Year	Secondary School Total Budget ₦	Secondary School Capital Budget ₦	Secondary Schools Recurrent Budget ₦	School Board Personal Cost ₦	Secondary Schools Overhead Budget ₦
2000	1,412,258,068	350,550,000	1,055,708,068	1,037,519,709	18,188,359
2001	2,773,134,464	150,221,666	2,622,912,798	2,429,288,484	179,970,735
2002	3,246,912,756	300,000,000	2,946,912,756	2,751,288,484	195,624,314
2003	3,209,257,032	15,000,000	3,194,257,032	2,917,076,017	54,831,015
2004	1,154,499,752	696,454,000	458,045,752	224,406,575	233,639,177
2005	3,259,437,928	629,000,000	2,630,437,928	235,936,966	244,020,804
2006	4,084,586,339	1,290,550,000	2,794,033,639	2,525,756,591	268,277,084
2007	4,258,849,407	775,000,000	3,483,849,407	3,212,414,523	271,434,884

Source: Author's Field Work (Annual Ministry of Economic Planning and Budget Department Port Harcourt).

Table 4.3 Annual Demographic Statistics of Public Secondary Schools in Rivers State (2000-2007).

YEAR	TSP	MSP	FSP	TTP	MTP	FTP	TNTP	MNTP	FNTP
2000	268,766	131,450	138,974	3,615	2,393	1,340	1,769	1,125	644
2001	238,385	137,996	144,465	3,729	2,393	1,341	1,769	1,125	644
2002	235,373	110,080	125,634	5,461	3,586	1,919	2,886	1,982	920
2003	246,743	115,512	132,385	5,479	3,542	1,919	2,898	1,989	906
2004	245,463	115,194	127,091	5,506	3,575	1,947	2,918	1,922	946
2005	258,601	124,897	133,770	5,507	3,573	1,933	2,862	1,936	946
2006	250,706	119,425	130,745	5,451	3,537	1,933	2,912	1,925	987
2007	135,249	64,822	67,541	3,423	2,383	1,036	1,755	1,114	645

Source: Author's Field Work (Annual School Register from School Management Board) Port Harcourt.

Table 4.4 Data Presentation Showing Parameters For Innovative Budgetary Approach

1	2	3	4	5	6	7	8	9	10
S/N	**L.G.A**	**NOS.SCH**	**NOS. STUDENTS**	**LGA.GEO. SIZE KM^2**	**LGA.POP. SIZE**	**SCH. POP. DENSITY**	**SCH. BOARD BUDGET**	**SCH. BOARD. CAP. BUDGET**	**STUDENT POP. DENSITY**
1	ABOLGA	11	6,911	704	282,998	0.0156	61,402,524.7	1,524,130.43	7.8168
2	ALGA – EAST	12	12,895	341	166,747	0.0352	61,402,524.7	1,524,130.43	37.8150
3	ALGA – WEST	13	8,634	403	249,425	0.0323	61,402,524.7	1,524,130.43	21.4240

4	AKULGA	6	2,242	1,443	156,006	4.1580	61,402,524.7	1,524,130.43	1.5537
5	ANOLGA	10	8,918	233	211,009	0.0429	61,402,524.7	1,524,130.43	38.2740
6	ASALGA	11	3,335	113	220,100	0.0973	61,402,524.7	1,524,130.43	29.5130
7	BONNY	4	4,225	642	215,358	6.2305	61,402,524.7	1,524,130.43	6.5810
8	DELGA	12	3,199	1,011	249,773	0.0119	61,402,524.7	1,524,130.43	3.1642
9	ELGA	19	20,275	138	190,884	0.1377	61,402,524.7	1,524,130.43	146.9200
10	ELELGA	6	9,982	805	249,454	7.4534	61,402,524.7	1,524,130.43	12.4000
11	EMOLGA	19	12,833	831	201,901	0.0229	61,402,524.7	1,524,130.43	15.4430
12	GOLGA	12	23,486	126	228,828	0.0952	61,402,524.7	1,524,130.43	186.3960
13	KELGA	13	15,933	655	189,726	0.0198	61,402,524.7	1,524,130.43	24.3250
14	KHALGA	22	29,233	560	249,217	0.0393	61,402,524.7	1,524,130.43	52.2020
15	OBALGA	16	42,279	260	464,789	0.0615	61,402,524.7	1,524,130.43	162.6120
16	OBOLGA	3	696	89	74,683	0.0337	61,402,524.7	1,524,130.43	7.8202
17	OKIRIKA	6	4,304	222	222,026	0.0270	61,402,524.7	1,524,130.43	19.3870
18	OMULGA	3	2,960	170	100,366	0.0176	61,402,524.7	1,524,130.43	17.4120
19	ONELGA	15	11,342	969	284,010	0.0155	61,402,524.7	1,524,130.43	11.7050
20	ONOLGA	3	1,132	130	151,511	0.0231	61,402,524.7	1,524,130.43	8.7077
21	OYILGA	4	4,050	248	122,687	0.0161	61,402,524.7	1,524,130.43	16.3310
22	PHALGA	15	27,696	109	541,115	0.1376	61,402,524.7	1,524,130.43	254.0920
23	TALGA	10	9,346	159	117,797	0.0629	61,402,524.7	1,524,130.43	58.7790

Source: Author's Field Work (Annual School Register from School Management Board) Port Harcourt.

Table 4.5 Presentation of Results of the (Innovative Budgetary Approach)

Exp No	Variables		Observations						Inferences	
	X	Y	Regression Equation	R^2	F_{cal}	F_{tab}	P_{value}	Rmk	Action on hyp	
1	No of student	No of schools	No of schools = 6.590 + 0.000 no of students	48.6	174.014	3.84	0.000	NS	Reject	

2	LGA. GEO. SIZE	No of schools	No of schools = 9.959 + 0.002 LGA. GEO. SIZE	1.0	1.926	3.84	0.167	SS	Accept
3	LGA. POP. SIZE	No of schools	No of schools = 4.802 + 2.62x10 $^{-005}$ LGA. POP. SIZE	24.5	59.042	3.84	0.000	NS	Reject
4	LGA. POP. DENSITY	No of schools	No of schools = 9.683 + 0.001 LGA. POP. DENSITY	3.70	7.045	3.84	0.009	SS	Accept
5	NT. POP. DENSITY	No of schools	No of schools = 9.169 + 0.033 STUDENT. POP. DENSITY	16.6	36.126	3.84	0.000	NS	Reject
6	LGA. GEO. SIZE	No of students	No of students = 12115.578 – 3.360 LGA. GEO. SIZE	1.60	2.772	3.84	0.098	SS	Accept
7	No of schools	School board budget	School board budget = 1x10^{008} + 3.37x10^{-011} no of schools	0.000	0.000	3.84	1.000	SS	Accept
8	No of schools	School board capital budget	School board capital budget = 1x10^{008} + 3.34x10^{-010} No of schools	0.000	0.000	3.84	1.000	SS	Accept
9	No of students	School board capital budget	School board capital budget = 9x10^{007} + 971.205 No of students	0.20	0.427	3.84	0.514	NS	Reject
10	No of students	School board budget	School board budget = 1x10^{008} – 417.028 No of students	0.80	1.502	3.84	0.222	SS	Accept
11	LGA. GEO. SIZE.	School board budget	School board budget = 1x10^{008} – 6.30x10^{-012} LGA. GEO. SIZE.	0.000	0.000	3.84	1.000	NS	Reject
12	LGA. GEO. SIZE.	School board capital budget	School board capital budget = 1x10^{008} – 1.38x10^{-012} LGA. GEO. SIZE.	0.000	0.000	3.84	1.000	NS	Reject
13	LGA. POP. DENSITY	School board capital budget	School board capital budget = 1x10^{008} – 1.99x10^{-012} LGA. POP. DENSITY	0.000	0.000	3.84	1.000	NS	Reject

14	LGA. POP. DENSITY	School board budget	School board budget = $1x10^{008} - 1.15x10^{-011}$ LGA. POP. DENSITY	0.000	0.000	3.84	1.000	NS	Reject
15	LGA. POP. SIZE	School board budget	School board budget = $1x10^{008} - 4.09x10^{-015}$ LGA. POP. SIZE	0.000	0.000	3.84	1.000	NS	Reject
16	LGA. POP. SIZE	School board capital budget	School board capital budget = $1x10^{008} - 1.30x10^{-015}$ LGA. POP. SIZE.	0.000	0.000	3.84	1.000	NS	Reject

Source: Author's Field Work (Annual School Register from School Management Board) Port Harcourt.

DISCUSSION OF RESULTS:

The relationships established between demographic parameters of (No of schools in each local government area, total no of students per L.G.A. Local government geographical size, local government population size and the school population density). And the budgetary parameters of (total budget of school's board, capital budget for school board) see table 4.5. Established that they were not significant. The established equations arising from the analysis cannot be used as predictive models.

The results of the tested parameters arising from this research is also in tandem with that of Idiake (2003), which also established non-significance between the analyzed parameters i.e. (student enrolment, number of school and number of available classrooms) in the then Oyo state of Nigeria, as the demographic parameters and the budgetary allocations for secondary education, within the research period. In that research, it was established that allocation of funds to secondary education does not appear to have been carried out with due consideration to student enrolment, number of schools and the number of available class rooms in the state for the period under review. He further postulated that the outcome of the research has probably resulted to inadequacy of building infrastructure prevalent in the state post primary schools. The study therefore suggests that the variables, number of schools, available classrooms and students enrolment tested should be considered when allocating funds to public secondary schools in the state. The average funds allocated to education sector in the state is about 6% of the total budget for the period under review, which is for from the target of 26% as stipulated by UNESCO. Based on the result, more funds should be allocated to physical infrastructure in view of the increasing enrolment resulting from free education policy of the Oyo state government. The results of this research are also in resonance with the result of Mac-Barango (2013). The equations arising from simple regression (from Mac-Barango's) work were not significant however those derived from multiple regressions amongst the parameters established significance. There is however a snag with the outcome of Mac-Barango's (2013) research in real situations, the predictability function of the derived equations, using student population and other demographic parameters were not the basis for budgetary allocations to secondary schools physical infrastructure development, thus the predictability of equations are limited. Mac-Barango's (2013) study, led to further probe; critical thinking that analyzes, if other demographic

parameters beyond the analyzed parameters could form basis for budgetary allocations, improve on the shortfalls in funding.

The works of several scholars and postulations have given credence to the results of this research, the outcome of the tested parameters, establishing that the relationships, between sub-sectorial (education and secondary schools) budgetary allocation for infrastructure were non-significant. This is indicative of an educational subsector that is crisis prone and by implication secondary schools due to capital funding required. Several literary postulations would appear to support the adoption of an innovative budgetary regime for secondary school physical infrastructure development. The above assertion has also put to test the perception that the adoption of management oriented budgeting systems have unlimited capacity to influence budgetary inadequacies/ shortfalls as occasioned through the adoption of line-item budgetary approach which has some inherent problems. Anyadike (2002), has postulated that a review of the Nigerian budget policy, revenue allocation policy, visions in perspective planning, capital project procurement guidelines and procedures and control of recurrent expenditure and subventions is desirable if we must achieve efficiency and comparative advantage in economic production of goods and services. We do not have a culture where resources are allocated based on objectively determined or planned requirement. We talk of allocation of money rather than set tasks from which resource requirements are determined. According to Omapariola (2003), Salawu (2005) and Folschar (2003), have observed that the traditional incremental line-item approach as a budgeting Technique is not very efficient, inadequate provisions of a preceding year are carried forward without the necessary adjustments that are based on realistic parameters and projections.

These limitations in budgetary allocations for physical infrastructure occasioned by the adoption of line-item budgeting technique could be well enhanced, brought to its barest minimum, through the adoptions of reforms in budgetary allocations mechanisms for physical infrastructure. Several developed democracies despite their efficient and enabling budgetary legislative mechanism have deliberately adopted reformative and innovations that are geared towards the allocation of capital funding for secondary schools. Adebayo (1981) and Akpan (1982) have asserted and were emphatic in the appropriateness of fine turning the budget and the adoption of professional inputs. Frank (2003), postulated and recognized the growth and development of more advanced budget philosophies as the rationale responsible for the evaluation of the effectiveness of the budgetary procedure towards the attainment of goals and objectives of expenditure profile and the resultant outcome of funds allocations.

Reforms and innovations in secondary schools capital financing in some developed democracies have decentralized and taken educational financing for secondary schools physical infrastructure to site levels. The largest share of education budget in the EU countries is allocated to secondary school education. The secondary school level receives roughly between 40 and 60 percent of all funds earmarked for educational institutions. Allocation of resources to each institution on the basis of a formula is part of a similar effort to rationalize resources while making the process of allocation more transparent and equitable. Brieseids *et-al* (2004), are in agreement with the arrangement of capital funding of secondary as obtainable in EU countries, but they cautioned, stating the need to exercising restrains, in the adoption and directly of the scenarios in the OECD countries. Adams (2008), has also reported that educational finance has extended beyond the hall of government, revealing further that charges be effected in the way state deliver resources to schools. Education finance needs to be redesigned to support student's

performance, complemented by a more fundamental analysis and approach to research management, one that steps back from incremental funding increases. Wikinson (2002), has also opined that capital funding to schools in the UK and USA have adopted decentralization policies that take budgeting to site level for school decision making. These reforms have necessitated changes in the educational standards, schools infrastructure are going through a period of significant changes. This has meant a five times increase in capital investment in school buildings. In the UK, through the local education authorities (LEA), funds are allocated to individual schools largely on the basis of pupil numbers. Krymbek et-al (2001) and Ziyaeu et-al (2000), have reported that capital funding and expenditure on education in the Kazakhstan and Uzbekistan is based on per student. The reform in education is with a view to increasing funds allocated for education. The state was also obliged to ensure a gradual rise in the expenditure norms per student in order to bring them closer to world standards. Bolade and Adelemo (1986), have asserted that reforms and innovations in budgetary allocations is to integrate demographic variables and take into cognizance socio-political factors. Folschar (2003) and Gonslaves (2006), have recognized the relevance and importance of political as well as socio-economic inputs in the famines of a country's budget. A nation's budget is not an abstractions it is a living reality. Okongwu (1986) and Okigbo (1986) Mogbo (2001), have postulated and warned that unless an efficient political and administrative machinery exists and unless well formulated plans are devised to absorb the inflow of financial assistance from the advanced countries, development work, will not work.

The observed limitations of the equations of this research, it would appear reasonable to deduce, are attributable to two factors: (1) The derivation of the budgetary allocation figures from the traditional line-item incremental technique. (2) The basis of the computation of infrastructure needs and subsequently budgetary allocations were not derived from student population that inputs anthropometrics as basis for needs assessment and subsequently cost.

SUMMARY OF FINDINGS

The following constitute the research findings: (1) Budgets are stabilization tools and budgetary allocation of funds to secondary schools infrastructure does not seem to have been carried out with due consideration to the demographic parameters of total students population, the total number of schools according to local government areas, the geographical size of local government areas, the statutory population of and schools population densities to establish the secondary schools total budget and secondary schools capital budget. (2) The established non-significant relationships have probably resulted to the inadequacy of physical infrastructure prevalent in the state secondary schools and this has led to crisis prone deterioration, overcrowding and over stretching. (3) There is a shortfall in the UNESCO stipulated standard, that 26% of the total budget be set aside (allocated) to education subsector, this by implication have a far reaching effect on secondary school education. (4) The shortfalls in the UNESCO stipulated standard, from previous studies, showed abysmal declines in the budgetary allocations. For example Idiake's (2003) study indicated that on the average only about 6% was allocated to education. Mac-Barango (2015), also established that in Rivers State, education subsector within the period under review showed dwindling budgetary allocations. (5) Budgets and budgetary allocations provide the fulcrum on which the survival and sustenance of public as well as private institutions are based. (6) The recurring shortfalls in budgetary allocations are probably due to the disbursement/allocation of funds through the traditional line-item budgeting technique, where

short falls from a preceding year are forwarded to the next year. (7) Developed democracies have introduced reforms or reformatory measures, (taking budgeting for secondary schools physical infrastructure to school site levels). These reforms have led to efficiency and effectiveness in the disbursement of funds of secondary schools physical infrastructure development.

CONCLUSION

The research concludes that budgets are tools that are used to achieve National growth and development. Budgets form the fulcrum upon which the survival and sustenance of public and private organization is hinged, secondary schools inclusive. There is shortfall in the UNESCO stipulated standard that 26% of the budget be set aside for the education subsector. The short falls in budgetary allocation is probably due to the disbursement of funds using the traditional line-item incremental budgeting technique. The research from the undertaken analysis established as follows: The relationships between the tested parameters for budgetary allocations and the demographic parameters for secondary schools were non-significant. This has probably resulted to inadequacy in physical infrastructure prevalent within the study period. Students' population/enrolment the total number of schools, the statutory population of local government areas, the student population densities and geographical size of each local government as the proposed innovative and other demographic variables were also not relevant parameters that determined budgetary allocations, within the period under review. The raw values of the budgetary allocation were products of the traditional incremental line-item technique. The predictability function of the derived equations (from the tested parameters) is therefore limited. Reforms that take budgetary allocation exercises for secondary education to school site, have propensity to enhance efficiency and effectiveness, this will enhance capital funding for the subsector.

RECOMMENDATION

The research arising from the conclusion, recommends the possible exploration and adoption of an innovative budgetary regime that inputs population demographics derived from anthropometrics as basis for needs assessments and subsequently capital funding for secondary schools physical infrastructure.

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