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Abstract

This is a report of an experiment that was carried out on the budget Capital allocation to Secondary Education, Student enrolment, number of Schools and available classroom in Oyo State. The work aims at establishing basis for suggesting efficient practical planning guidelines to the government of Oyo State. A test was carried out to examine whether or not there existed during the period under review, some statistical relationships between the capital budget allocation and the following variables: student enrolment, Numbers of schools and available classrooms. Using simple regression analysis method and testing at 95% confident limit, it was discovered that capital budget allocation has no significant linear relationships with students' enrolment, Number of schools and available classrooms. The research showed R-square of 0.90%, 46.10%, 0.8%, 18.2% and 4.06%, for education capital allocation versus students' enrolment; education capital allocation versus number of schools; education capital allocation versus number of available classroom; number of available classroom versus students' enrolment and students' enrolment versus number of schools respectively. From the study, it is reasonable to conclude that there is need for the government to allocate more fund to secondary education Capital projects and that in education planning of secondary schools the above variables should be considered in line with fund allocation.

Introduction

One major determinant of what happens to education is finance. If education is funded appropriately, the problem of access and quality would be solved. Before the introduction of UPE, funding, which of course included infrastructure, had been a shared responsibility among the school proprietors, the government and parents. With the UPE, government accepted full responsibility for education. Allocation to education has been on the decline in real terms, if full cognisance is taken of the sky-high rate of inflation. It is worth noting that when the default Western Region introduced the UPE in 1955, it spent 38.7% of its annual budget on education. The Eastern Region spent 28.4%; the North spent 20.5% of its annual budget on education while the Federal Government spent 18.7%. In 1960, education's budgetary allocations were 30.5%, 36.9%, 23.9% and 16.1% for the West, East, North and Federal Government respectively. Education in the Western Region was backed by a comprehensive plan; it therefore met with success. (Adesola, 2002).

Oyo State by virtue of being the sit of power of the then Western Region government must have been endowed with educational opportunities and successes. In the past, as highlighted, allocation to education was above the 26% of total annual budget specified by UNESCO, which meant adequate fund for both recurrent and capital expenditures. Today the allocation of funds and provision of infrastructure to education most especially secondary school education in the State are not unlikely to be without difficulties. The amount budgeted for education has not matched the astronomical rise in student enrolment over the period under consideration with accompanying need for more schools and classroom blocks. This is evidenced by the deplorable conditions of school building, high population density, the partitioning of auditorium for classrooms and lack of laboratory blocks.

These inadequacies of infrastructures in secondary schools have resulted in the falling standard of education. These problems could be linked to improper planning of available resources. Therefore, the criteria for resources allocation in the past should be examined with the aim of proffering solution to the problems. Budget remains the main measure by which the essential resources of men and materials are allocated for the accomplishment of almost all governmental goals. Perhaps it is no exaggeration to

Analysis of budgets allocation for public secondary schools in Oyo State(1992-1999) Idiako, J. E.
say that budgeting is synonymous with management since both are concerned with systematic, intelligent planning and control of resources (Adebayo, 1981). Therefore, the present level of educational development in the State needs critical examination with the aim to determine if planning of resources are done with due consideration to variables examined in this paper.

Physical Infrastructure Development

Physical infrastructure is a major factor in educational planning and development. To enhance effective and quality educational development, infrastructures and classroom construction must be done with the mind to meet population demand, basic facilities and conducive environment. The need for infrastructures or classrooms construction is a direct consequence of a growing population of school children enrolment (Adeboyeje, 1987).

A classroom is an important and a complex place in the school. It is a place of social intimacy where school children live, interact and share together for the purpose of learning. Asiedu (1992) posited that the development of classroom should aim to meet these social factors. A survey of public schools in the state showed that there is little or no effort by all stakeholders to meet the standard for classroom development. Therefore the task facing the state government in creating an enabling environment for efficient and effective secondary education is enormous. However, the efforts and contributions of educational agencies, Petroleum Trust Fund (PTF), and Education Tax Fund (ETF) have helped to create some positive impact in recent years towards meeting up with the set standards.

Budgeting: Capital Budget Allocation.

Budgeting could also be explained as cyclical decision-making process involving the allocation of limited financial resources to meet organizational goals and objectives. According to Steiss (1989) it is the systematic evaluation of prior commitment and their consequences in forms of anticipated achievements. Budget is classified under two major features, namely, the statement of recurrent and capital expenditures and incomes. The recurrent budget takes care of government finances while capital budget provided the government capital development proposal. Furthermore, recurrent budget is referred to as operating recurrent budget or revenue budget if it provides the basis upon which government may incur obligation and pay for them, such as payment of personal services, increase in the salaries and fringe benefits of public servants. On the other hand, capital budget is concerned with creation of long term asset, for instance, construction of new roads, schools, dams etc. (Mc Master, 1991).

Government budget deals with allocation of scarce resources among the various agencies in order to cater for the people. Since these resources are sometimes not sufficient to serve the needs of the people, there is therefore, an obvious need for application of the most tactical parameter for both decision-making as well as allocation of resources. It may be necessary to mention here that a relatively new development is the attempt to use the budgetary process as a tool for achieving the allocation of national resources, which is efficient in the economic sense. Government budgets, invariably affect the distribution of income, that is, the purchasing power of different sections of the populace. (Aiyedun, 1996).

From the foregoing, one may infer that budget allocation to education has two features: recurrent and capital allocations. The interest in this paper is on the capital allocation. In order to project the capital funds required for a new planning period an assessment and estimate of the physical need of the schools is necessary. These include evaluation for necessary repairs, modifications and additions to existing facilities and equipment in order to support qualitative changes in educational policies. In the assessment of physical needs, planners must see the possibility of accommodating more students in existing facilities by modifying the academic time-schedule, in other words applying the principle of space utilization before making any attempt to calculate the need for a new facility. The amount thus calculated forms the basis for capital allocation of funds. Whether the funds allocated is adequate or not is the question that needs to be answered in this paper. Hence this article set out to establish whether

there existed any relationships between the following pairs of parameters: capital budget allocation and enrolment of students; capital budget allocation and number of schools; capital budget allocation and numbers of available classrooms, and number of available classrooms and student enrolment.

Methodology

This study was limited to public secondary schools in Oyo State. The research involved reviewing relevant literature in order to provide a sound background to the study and also the assembly of published data on number of schools, population of students, number of classrooms and capital budget expenditure by the Planning, Research and Statistics Department, Ministry of Education Ibadan and Ministry of Finance and Economic Planning Oyo State, from 1992 – 1999, which was a period of military government. The data obtained were subjected to statistical analysis based on simple linear regression and Non-linear transformation (Logarithm, Cubic, quadratic) analysis.

Data Analysis, Results and Discussion

Table 1 shows number of schools, available classrooms and students' enrolment in Oyo state from 1992-1999, while Table 2, gives the figures for budget allocation to education capital, classroom construction and rehabilitation of classrooms in the state for the same period of time. The summary of results of linear and non-linear regression analyses for the five experiments is presented in Table 3. The data used for analysis are represented graphically as in figures 1 to 4.

The chart on the number of schools and capital allocation to education for the period 1992-1999, shown in fig1 revealed that capital allocation to education fluctuated over the period with 1998, having the highest allocation. This probably may have been due to sudden increase in the total budget for 1998, which is about 35% above that of 1997. However, there was a drop in the allocation for 1999, which probably could be traced to shift in capital allocation policy or emphasis.

The number of schools in the state maintained a fairly steady increase over the period with a sharp increase in 1995. In figures 2 and 4, the number of available classrooms rose in 1995 to the highest and dropped in the succeeding years in a fluctuating trend. These were probably planned to accommodate the high enrolment of students in 1994 and 1995, since the periods recorded high enrolment figures of 325,224 and 315,166 for 1994 and 1995, respectively.

In table 2, it is noticed from the regression analysis carried out at 95% confidence level, that there are no significant linear relationships between capital allocation to education and number of schools. There proved to be weak and positive correlation between the variables. The R^2 values for all regressions fell within 45% and 47% with all probability values $\{P_{values}\}$ ranging from $\{0.06 - 0.07\}$ greater than the 0.05 level of significance adopted by the study. It can be inferred from the positive linearity of regression equation that as capital allocation to education increases, the number of schools increases. Results from the analysis further showed that correlation between the variables were low with 'F' values calculated lower than the 'F' values tabulated. This means that there was no significant linear relationship between the variables studied. Result of the analysis base on experiment 2 indicates low R^2 ranging from 0.7% to 4% meaning that a change in capital allocation will not produce a corresponding number of available classrooms. The regression equation shows a negative linearity, which means that as capital allocation to education increases, the number of available classrooms decreases. Correlation between the variables were low with 'F' value calculated lower than the 'F' tabulated, revealing that there is no significant linear relationship between the variable tested.

In experiments 3, 4 and 5 the following variables were examined: capital allocation to education versus student enrolment, available classroom versus student enrolment as well as number of schools versus student enrolment. The trends of the result were not different from the earlier two experiments. Result of the analyses indicated low R^2 values ranging from 0.90% to 35%, a deduction that the variable investigated had weak statistical relationship. Also probability values $\{P_{value}\}$ ranging from 0.20 to 90 were gotten from the analyses, which were greater than the 0.05, level of significance. The calculated values of the 'F' statistic were lower than the tabulated values (see table 3). This showed

Analysis of budgets allocation for public secondary schools in Oyo State(1992-1999) Idiako, J. E. that there were no statistically significant linear and non-linear relationships between all variables investigated.

Conclusion and Recommendation

This research has shown that allocation of funds to secondary education does not appear to have been carried out with due consideration to student enrollment, number of school and number of available classrooms in the state for the period under review. This has probably resulted to the inadequacy of building infrastructure prevalent in the state post primary schools. The study therefore suggests that the variables: number of schools, available classrooms and student enrolment tested should be considered when allocating funds to public secondary schools in the State. The average fund allocation to the education sector in the state is about 6% of the total budget for the period under study, which is far from the target of 26% set by UNESCO. Therefore, more funds should be allocated to physical infrastructure in view of the increasing enrolment resulting from the free Education policy of the Oyo State Government. The short fall in funding could be solicited through Education Tax Fund, which is endowed with the responsibility to enhance educational facilities and infrastructure development.

Acknowledgment. The author wishes to express his thanks and gratitude to the Ministry of Finance and Economic Planning Ibadan as well as Ministry of Education Ibadan all of Oyo State for the supply of data and Mr. Ganiyu B. Olanrewaju of the Dept. of Quantity Surveying, Federal University of Technology, Minna for assistance in classification and analysis of data.

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Table 1: Shows Number of Schools, Available Classrooms and Student Enrolment in Secondary Schools in Oyo State

Year	Number of Schools	Number of Available Classrooms	Student's Enrolment
1992	309		
1993	310	6,324	243,331
1994	310	6,882	296,179
1995	324	6,774	325,224
1996	325	7,336	315,166
1997	326	6,760	300,860
1998	327	5,537	291,040
1999	327	6,711	299,076
		6,805	283,881

Source: Planning, Research and Statistics Department, Ministry of Education Ibadan Oyo State 2003.

Table 2: Shows Budget Allocation in Oyo State.

Year	Total Budget	Allocation to Education	Education Capital	Construction of Classrooms	Allocation to Rehabilitation of class
1992	1,106,937,350	95,000,000	48,817,530	3,920,000	860,000
1993	2,004,654,540	130,850,000	108,400,000	16,000,000	1,500,000
1994	2,487,868,160	114,350,770	78,900,000	16,000,000	2,512,160
1995	2,506,482,000	146,289,210	105,670,000	6,000,000	3,000,000
1996	4,093,618,100	252,485,000	209,000,000	11,000,000	20,000,000
1997	5,066,302,250	281,152,470	234,970,000	21,000,000	25,260,000
1998	7,799,694,068	626,679,970	579,497,500	10,380,000	47,000,000
1999	8,923,846,954	586,798,470	274,290,749	10,331,000	57,000,000

Source: Ministry of Finance and Economic Planning Oyo State 2003.

Table 3: Summary of Simple Regression Analysis Results

EXP NO	Variable		Type of analysis	Results of Experiment				Inference	RM	
	X	Y		Regression equation	R ² %	F _{tab}	F _{cal}			P _{value}
1.01	NSCH	EDU CAP	Linear	EDU CAP = 4218+13.8 NSCH.	46.14	5.99	5.14	0.064	Weak	NS
1.02			Logarith		45.94	5.99	5.09	0.065	Weak	NS
1.03			Quadratic		46.34	5.99	5.18	0.063	Weak	NS
1.04			Cubic		46.54	5.97	5.22	0.062	Weak	NS
2.01	Avclass	EDU CAP	Linear	EDU CAP=394 - 0.028Avclass	0.76	5.99	0.05	0.888	Very Weak	NS
2.02			Logarith		0.64	5.99	0.04	0.850	Very Weak	NS
2.03			Quadratic		3.16	5.99	0.08	0.923	Very Weak	NS
2.04			Cubic		3.54	5.99	0.09	0.914	Very Weak	NS
3.01	ENROL	EDU CAP	Linear	EDU CAP=745+ 0.067Enrol	0.92	5.99	0.06	0.822	Very Weak	NS
3.02			Logarith		1.55	5.99	0.09	0.769	Very Weak	NS
3.03			Quadratic		33.88	5.99	1.28	0.355	Very Weak	NS
3.04			Cubic		34.02	5.99	1.29	0.354	Very Weak	NS
4.01	AVCLASS	ENROL	Linear	Enrol=162+0.019 Avclass	18.18	5.99	1.33	0.292	Very Weak	NS
4.02			Logarith		16.53	5.99	1.18	0.318	Very Weak	NS
4.03			Quadratic		33.52	5.99	1.26	0.360	Very Weak	NS
4.04			Cubic		32.65	5.99	1.21	0.372	Very Weak	NS
5.01	ENROL	NSCH	Linear	Enrol=107+0.585 NSCH	4.06	5.99	0.25	0.632	Very Weak	NS
5.02			Logarith		4.13	5.99	0.26	0.629	Very Weak	NS
5.03			Quadratic		4.06	5.99	0.25	0.632	Very Weak	NS
5.04			Cubic		4.06	5.99	0.25	0.632	Very Weak	NS

Source: Author's Analysis of Data 2003.

NSCH: Number of schools; ENROL: Student enrolment; AVCLASS: Available classroom; EDUCAP: Education capital allocation .

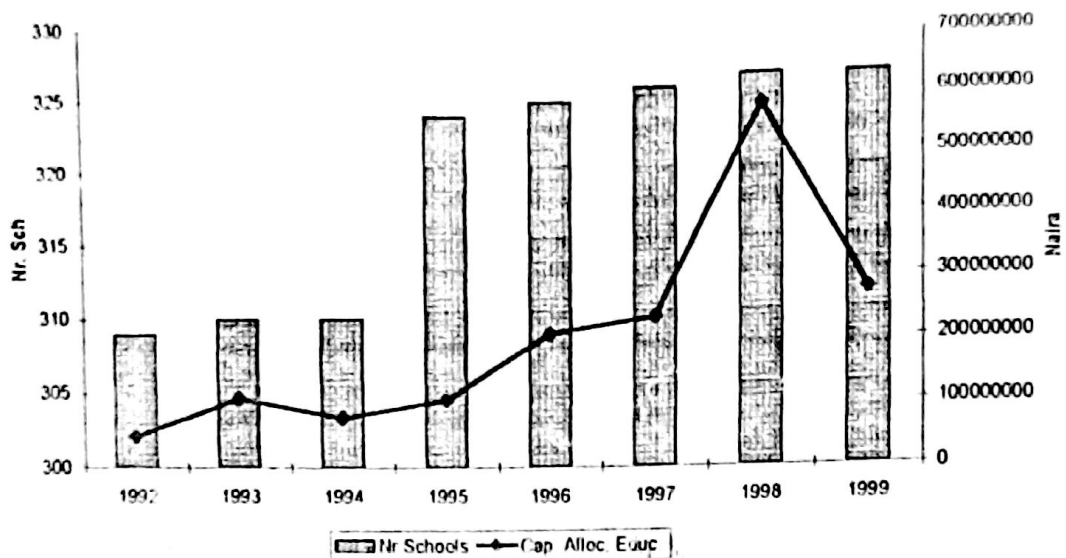


Fig. 1: Number of Schools and Capital Allocation to Education (1992-1999)

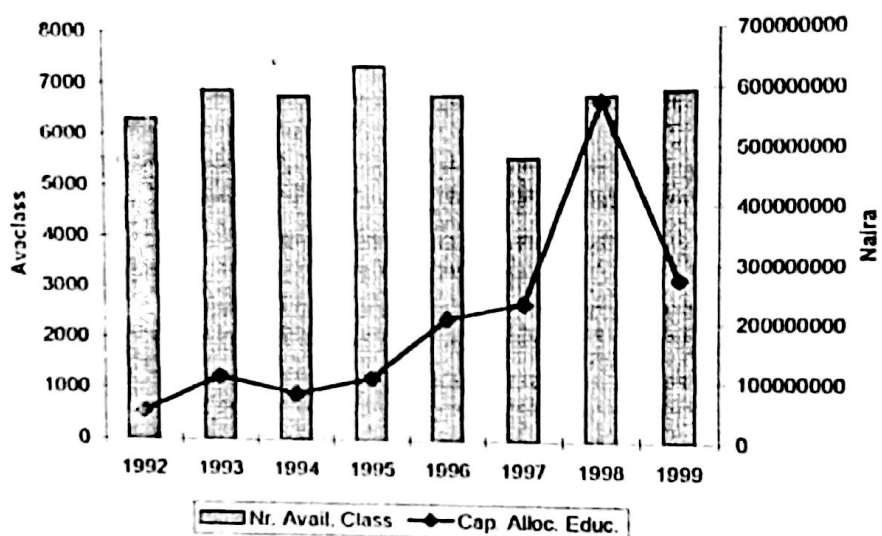


Fig. 2: Number of Available Classrooms and Capital Allocation to Education (1992-1999)

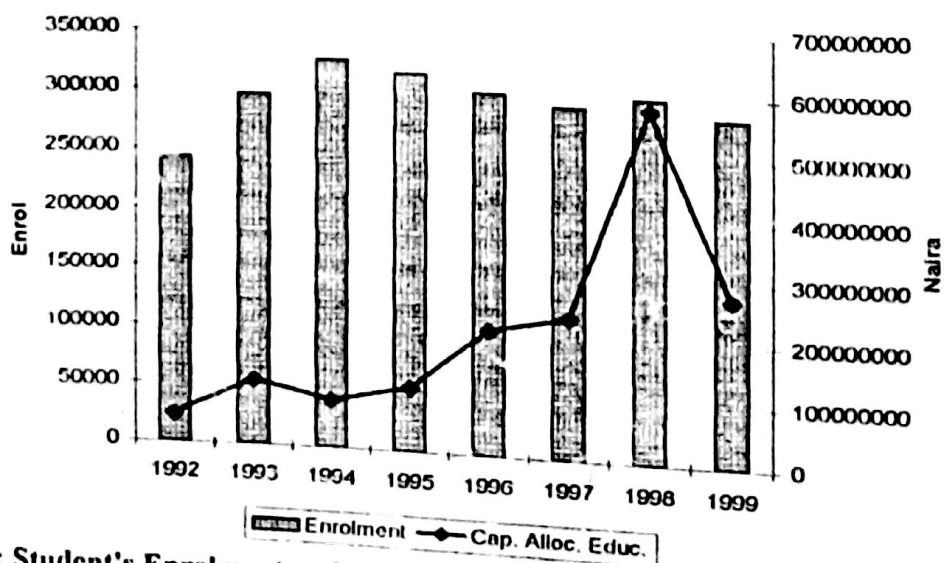


Fig. 3: Student's Enrolment and Capital Allocation to Education (1992-1999)

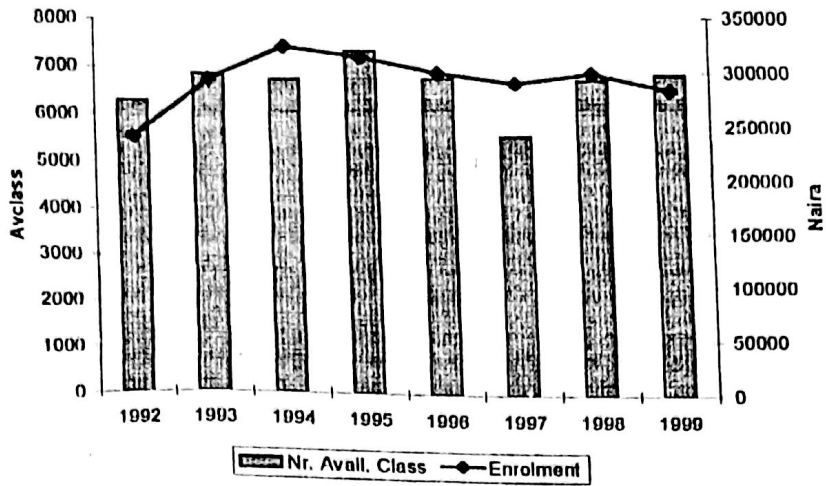


Fig. 4: Number of Available Classrooms and Student's Enrolment (1992-1999)