

Government Education Budget and the Sustainability of Student Enrollment in Public Secondary School in Bungoma County, Kenya

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Abstract

In Kenya, since 2008, the government has increased monies going to the education sector in collaboration with other foreign organizations in an effort to reduce the amount of money that households spend on their children who attend public secondary schools. In public secondary schools in Bungoma County, Kenya, this study aimed to determine how much the average government education spending affects the sustainability of student enrollment in secondary schools. A descriptive survey design was used for the investigation. The principals and household heads from Bungoma County's public secondary schools made up the target population. The 691 school principals and household heads in this study were chosen using a stratified random sampling procedure to ensure that the sample was representative. As instruments for gathering data, questionnaires, schedules for interviews and observations, and document analysis were all used. Expert judgment was used to determine validity. Through piloting, reliability was established. Statistics, both descriptive and inferential, were used to analyze the data. According to this survey, a secondary school student's Kshs 10,265 allowance is insufficient to keep them in school. According to the study's findings about government spending on each student, more students are enrolling in secondary school as government spending rises. As a result, this study suggests that, in order to raise the enrollment rate of pupils, the government or other educational stakeholders can assist parents who have children in first grade in purchasing a school uniform.

Keywords: Education Budget; Enrollment; Government; Sustainability

1. Introduction

Formal and informal education consumption are both components of public education. Government spending on elementary, secondary, and postsecondary education is referred to as formal education consumption. Government spending on education in general, including religion, culture, and other subjects is referred to as informal education consumption. The former is measured at the level of per student, whilst the latter is measured at the level of per capita, in accordance with their respective features. The age profile of the enrollment rate, which was predicted using SLID, was used to redistribute the total amount of public education spending across all school levels. The OECD's "Expenditure by Funding Source and Transaction Type, 2004-2007" provides government spending broken down by educational attainment. Public formal education consumption by age CGECf (a) is estimated by summing unit cost per student per level Cl (where l is education level, l{primary, secondary, postsecondary school}) weighted by the number of students by age in each level cgecf (a). The formula for computing public formal education consumption is: $CGECf(a) = \sum cgecf(a).cl$

By dividing public education consumption at each level by the anticipated enrollment of students at that level, the unit cost of public education consumption per student at each level of education is computed. The expected number of pupils is calculated by multiplying the population size by the enrolment rate for each age group. The unit cost of public

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education at each educational level is age-invariant. The number of persons enrolled in school under each age can be calculated by multiplying the enrollment rates by the size of the population by age. Person enrollment equals enrollment rate (a) * enrollment (a) (a).

Based on the population enrolled, the public education expense is distributed to each individual year of age. The Public Education Consumption, also known as the Public Formal Education Consumption by Age $E(a)$, is additionally calculated by adding the unit cost per student per level c_l weighted by the age distribution of students in each level $e_l(a)$, where l is a school level. By dividing public spending on education at that level by the reported number of pupils, one can estimate the unit cost per student at each level of education. It is assumed that the unit cost of education at each level is age-neutral. The total number of pupils in each level $e_l(a)$, broken down by age, is accessible from administrative data or, if appropriate, computed from a household survey.

Along with public formal education, the amount of public informal education consumed by age $Enfg(a)$ is calculated by dividing the overall amount of public informal education consumption by the total population by age. Everyone has access to public informal education because it is not age-targeted. By adding public formal education consumption by age and public informal education consumption by age, public education consumption by age is calculated. The government's total expenditure on education is then divided by the number of students enrolled in that level of education if data is available on an individual basis.

2. Material and Methods

The study was carried out in public secondary schools in Bungoma County. The inhabitants of the county value education highly and have invested in it to very great deal. The student enrolment in secondary schools in Bungoma County has not reached the hundred percent thresholds. The target population for this study was head teachers in national, extra-county, county and sub county secondary schools in Bungoma County and household heads. The national schools did not take part in the study since their enrolment rate is slightly higher compared to other category of schools in the study area. Therefore 231 Sub County, County and Extra County secondary schools were chosen for the study with a population of 9,884 school teachers and 228,188 household heads (Bungoma County staffing office, KNUT, KUPPET and Bungoma County TSC office, 2021). The study adopted a descriptive survey design. According to Orodho (2005) a descriptive research survey design is the most significant way of analyzing educational studies as educational programs operate in the social context.

Simple random sampling was adopted so that every respondent in the targeted population had an equal chance of being included into the size of sample. This technique was important since it helped the researcher to ensure that every respondent had an equal chance of being obtained. Random sampling was used because it enhanced the reliability and validity of data to be collected (Alreck & Settle, 1995). The sample size of 691 respondents which comprised of 82 school principals and 609 household heads participated in the study. The study used Interview schedule, questionnaire and document analysis as tools for data collection. The document analysis was used to obtain financial information from the Ministry of Education Science and Technology and school principals' office on funds allocated to the schools.

3. Results and Discussion

3.1. Average Government Education Expenditure and Student Enrolment Sustainability in Public Secondary Schools

The data on unit cost by the government is calculated by computing both recurrent expenditure and capital expenditure by the government. The amount of money generated by schools through income generating activities is also considered as expenditure by the government. This study sought to establish the average amount of money spent by government on every child who is in secondary school. This was done by totaling the recurrent expenditure and capital expenditure and dividing it by the number of students in schools. Using the NTA approach, all the amount of money that government spends on children who are in school is further disaggregated by age and by the gender of the students. This helps in planning and monitoring educational projects.

The computation of the unit cost of education from the government side requires data on the trend of student enrolment in the study schools in the last 4 years and the recurrent and capital expenditure. In order to establish the trend of students in schools in the years, 2017, 2018, 2019 and 2020 the school principals were asked to indicate the number of students in their schools and also government document such as development plans, economic year books like

statistical abstract, economic survey were analyzed. The responses on the trend of students in all public secondary school in Bungoma County, is as presented in Table 1.

Table 1 Trend of Student Enrolment in Public Secondary Schools-2017-2020

Enrolment	N	Mean	Std Dev	Min	Max
No of Students	92	185.543	95.231	102	450

Is it possible to present the findings of trend in a figure e.g., a graph or frequency.

The findings in Table 1, show that on average the trend of student enrolment shows that there are at least 185 students in every public secondary school in Bungoma County in the four study years. However, the minimum number of students in schools was 102 students while others have 450 students as the highest number.

Upon the establishing of the number of student enrolment in the study schools, the study sought to establish the amount of money that schools receive directly from the government and also from other sources. The school principals were asked to indicate whether they receive funds from government for FTSE. All the schools 100% indicated that they received the money for Free Day Secondary school. The results also show that on average every school received Kshs. 1,833,710 translating to Kshs 10,265 per student per year. This amount covers tuition and general-purpose expenses.

A part from receiving funds for FTSE, the study further sought to establish whether schools also received other funding. The principals were asked to indicate whether they received funds from other sources and the findings were presented in Figure 1.

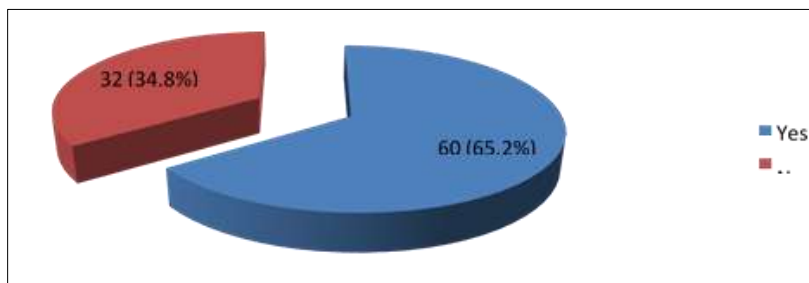


Figure 1 Number of School with Other Sources of Funds Source: Field Data 2021

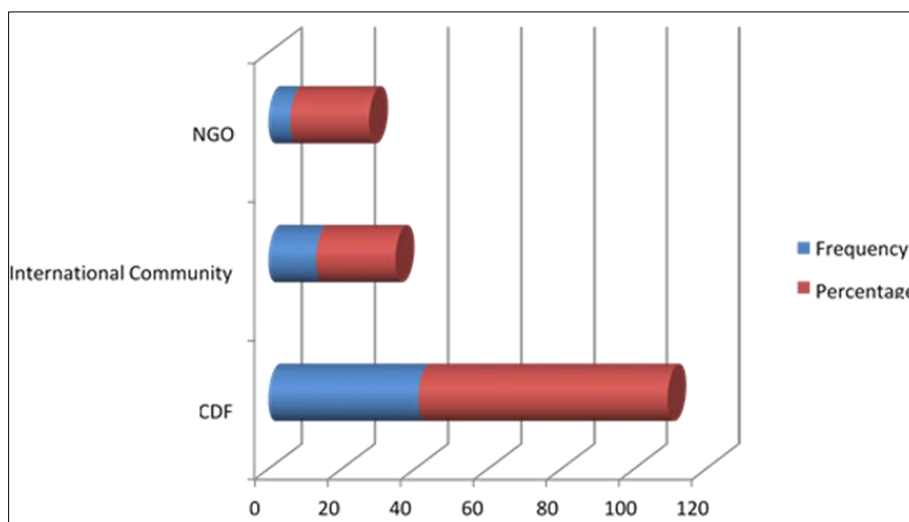


Figure 2 Other Sources of Funds Source: Field Data 2021

The results in Figure 2, show that majority of the Principals 60 (65.2%) asserted that their schools received funds from other sources while 32 (34.8%) indicated that they did not receive any funding from other sources. The study therefore sought to determine the other sources of funding received by the 60 study schools and the findings are as in Figure 2.

The findings in Figure 2 show that majority of schools 41 (68.3%) received money from CDF kitty, while 13 (21.7%) received additional funding from international community and 6 (10.0%) received from NGOs. This is an indication that schools' finances are also supplemented from other sources.

The study further sought to determine the average unit cost per student from the other sources of funding received by the 60 secondary schools and the findings were presented in Table 2

Table 2 Average Unit Cost per Student from other Sources of Funds

Enrolment	Obs	Mean	Std Dev	Min	Max
No of Students	60	2814.783	1583.378	832.465	7569.463

The findings in Table 2 show that on average students from the schools which received funds from other sources other than the government get Kshs 2,814 per year. However, the lowest student gets Kshs 832 while the highest gets Kshs 7,569 per year.

Besides, FTSE and money from grants, the study also sought to establish whether schools have income generating activities that may boost the school budget. Out of 92 schools 62 (68%) of them responded to the question, the results show that 30 (48.4%) of the schools have income generating activities while 32 (51.6%) do not have. The principals were further prompted to indicate the type of income activities that they undertake and the findings were presented in Table 3.

Table 3 Type of Income Generating Activities

		Response from Principals
	Frequency	Percentage
School Canteen	11	36.7
School Farm	19	63.3
Total	30	100.0

The findings in Table 3 show that 11 (27%) of schools with income generating activities relied on selling of goods in school canteens in order to boost school finances, while 19 (63.3%) relied on livestock rearing and cereal crop farming as an income generating activities.

The study further sought from school principals the amount they generated from income generating activities. The results show that, on average every school produces Kshs 437, 890 with the lowest school generating 18,000 and the highest school generating Ksh 1,658,000. This showed that schools have resulted in developing alternative ways of making money to support secondary schools.

The study also sought to establish the ways in which the money is spent in schools, the results shows that the money generated through income generating activities is spent for feeding students, carrying out maintenance and repair as well as paying non-teaching staff. All these activities are geared toward supporting education. The unit cost for the money generated through income generating activities totals to Kshs 946 per child per year.

In relation to the human resource as a cost aspect of education, the study sought to establish the number of teachers employed by TSC, BOM and also non-teaching staff. All these upscale the unit cost of education. The distribution of the human resource is presented in Table 4.

Table 4 Average Distribution of non-teaching and teaching staff

Category	N	Mean Std. Dev.	Std. Dev.
Non-Teaching Staff	92	9.569444	6.344808
Number of BOM Teachers	92	5.5	2.670480
Number of TSC employed Teachers	92	8.495726	4.541294

The findings in Table 4 show that on average every study school has 8 teachers employed by TSC, 9 non-teaching staff and 5 BOM teachers. This shows that the teachers' students' ratio is 1:36 meaning that everyone teachers there are 36 students. This implies that the students' teachers' ratio in Bungoma County was higher than the nation ration which is 1:32.

A study by Huisman and Smits (2009) established that pupil-teacher ratio is significant and negatively influences the level of school enrolment in Ghana. This means that when the pupil- teacher ratio is higher, fewer pupils are enrolled in schools and vice versa. The possible reason being that as the ratio of the pupil to teacher is high increases, teachers tend not to have attention for the children and this means that the performance of the children will be low. The low performance of the pupil normally discourages the parents to use their resources to send children to school but rather prefer they use them in their household duties. This relationship between pupil teacher ratio and school enrolment was confirmed in the work of Huisman and Smits (2009) who studied the effects of household and district level factors on primary school enrolment in developing country. In addition, the total number of teachers available in schools in the community tends to influence school enrolment in Ghana.

In areas where schools do not to have enough teachers, parent are discouraged from sending their children to school as they consider it as waste of resources and time to send their children to school without teachers available to teach them. This positive correlation between the number of teachers and school enrolment is in conformity with the works of Edmonds (2006), Ersado (2005) and Thorbecke and Charumilind (2002). This means that as public expenditure on education increases, the number of children enrolled in school also increases. In Ghana, the government has introduced various programmes such as school feeding programmes and free uniform distribution among others. The introduction of these programmes saw government expenditure on education increasing. These programmes in effect are encouraging most parents in Ghana to enroll their children in school as revealed in the study.

Apart from the unit cost from FTSE, income generating activities and contribution from other sources such as CFD, International bodies and church organization. Governments spend money on education thorough currents and development expenditure, the current expenditure takes care for day to day running of the ministry and payment of teachers' salaries. The development expenditure takes care of the assets for instance buildings. Since this money is spent on education for the students it's considered as part of education cost.

The total unit cost from the government comprises of FTSE, income generation activities, other sources like CDF and international bodies donations, recurrent and development expenditures. All this amounts to Kshs 26,496 per student. This amount is less than what the household spends to educate a child in a secondary day school. This implies that household spends more money on educating their children compared to what the government spends to educate students. The unit cost incurred by the government is as summarized in Table 5.

Table 5 Government Unit Cost on Education in Secondary School in Bungoma County

Source	Unit Cost per Student
Free Tuition Secondary Education Kit	10,265
Other Sources	2,814
School Income Generating Activities	946
Recurrent & Capital Development	12,496
Total	26,496

The findings in Table 5 show that on average the government spends more on every child on the recurrent and capital expenditure as indicated by Kshs 12,496 as compared to other sectors. The current expenditure constitutes expenditures incurred on consumable goods like materials and personal salaries, grants, interests and rent used up within an accounting period while development expenditure include purchased assets that include equipments, buildings that are expected to yield benefits over a longer period of time.

4. Conclusion

Based on the findings on the study, the study concludes that indeed the Kshs 10,265 given to each student in secondary school is too little to sustain a child in school.

Recommendations

- More day schools should be encouraged as opposed to boarding schools that lead to the increase in Unit cost of education.
- Other educational stake holders should subsidize the cost of school uniform as a strategy of increasing students' enrolment rate

Compliance with Ethical Standards

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Disclosure of conflict of interest

The authors declare no interest.

Statement of informed consent

The purpose and nature of the study was explained to the participants by the researcher. The researcher hence treated all the given information by the participants with due confidentiality to safeguard the participants' personal integrity in regard to the University's ethical considerations.

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