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Influence of Average Household Education Expenditure on Student Enrolment Sustainability in Public Secondary Schools in Bungoma County, Kenya

Wasilwa Bakari, Julius Maiyo, Duncan Wasike

Kibabii University, Bungoma, Kenya

ABSTRACT

The purpose of this study was to examine the extent to which average household education expenditure influence student enrolment sustainability in secondary schools. 8IThe study was guided by the theoretical and conceptual framework which borrows heavily from the concepts of human capital theory which was proposed by Schultz and developed extensively by Becker. This theory postulates that expenditure on training and education is costly and should be considered an investment since it is undertaken with the view to increasing personal incomes. The study adopted a descriptive survey design. The target population consisted of principals and household heads from public secondary schools in Bungoma County. In order to have a representative sample, this study employed a stratified random sampling to select 691 school principals and household heads. Questionnaires, interview and observation schedules and document analysis were used as data collection instruments. Validity was established through expert opinion. Reliability was established through piloting. Data were analyzed using descriptive and inferential statistics. The study established that there is a negative relationship between the average amount of money spent by household to educate a child in secondary school and student's enrolment rate in secondary schools. This implies that as the household expenditure in education increases the enrolment decreases. This study therefore recommends that government or other educational stake holders should support parents who have children in form one as a strategy of increasing students' enrolment rate.

KEYWORDS: *Influence, Enrolment Sustainability, Household Education Expenditure*

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1. INTRODUCTION

According to Lee, Ronald (2003), parents (or employers/guardians) are also responsible for paying for the cost of education, either directly through personal spending to support daily school activities or indirectly through taxes. To educate their children, parents must cover a variety of expenses. These include tuition, uniform costs, books and supplies, pocket money for meals, field trips, and other expenses. A lot of these costs are fairly standard because they are set by the schools, typically with help from PTAs and the government, but others of them, like extra reading materials and tuition, can vary greatly between pupils. Richer parents typically spend more on their kids' tuition as well as other educational supplies like computers and books.

The costs of private education, according to Lee, Ronald (2003), include tuition, books, fees, school supplies for all grade levels, including pre-school, and tutoring fees. Using the NTA approach, the precise methodology varies based on the facts that are available. For instance, self-improvement classes and reference materials are regarded as a part of unit cost in Taiwan. However, the typical approach to determining the unit cost of education borne by households entails multiplying the total cost of all education-related expenses incurred by the household. Regression modeling is used for this, as the following formula illustrates; CFE j = (a) (a) E j + (a) (a) NE j + (a) Ej represents the number of members of household j who are enrolled in school and Nej

represents the number of members of household j who are not enrolled in school and where CFEj represents the unit cost of education for an individual in a home. Spending on education outside of the regular educational system is represented by the number of individuals not enrolled. To guarantee that household consumption is allocated completely, this equation is calculated in homogeneous form (without an intercept).

For some age groups with extremely low or no enrollments, the regression approach may produce negative coefficients. If so, zero should be used in place of the negative coefficients to prevent negative expenditure. The education costs for each household j are divided among household member I using the regression estimations. For those who are enrolled, for instance, CFEij (x) = CFE j (x) / E j (a), where x denotes the age of the ith household member. Similar calculations are made for people who are not enrolled in school. However, the utilization model, which entails directly summing all the costs incurred on a person who has access to education, can be used when the data is provided on an individual basis. Data on cost elements such school uniforms, transportation fees, development fees, examination fees, and pocket money were collected per student for this study at the home level. The study will simply total up all of the cost components to determine the average amount of money spent by each student during their secondary education. The total cost for all the students in a given age will be divided by the total number of students in that age group to obtain the average cost by the age of the students. This will reveal the average unit cost for each student age group. Additionally, the data will be broken out according to the student's age. This will be accomplished by immediately summing up all of the education-related expenses by gender and dividing it by the proportion of pupils who identify as that gender. The survey data are mapped with the national data using the NTA methodology, therefore NTA (National Transfer Accounts). Due to the fact that the survey data was only collected in one Sub County, it was deemed inappropriate to map the survey data with national data for this study. The national representative survey data used in the NTA technique is mapped with the national account. However, NTA technique enables one to utilize regional data and then break it down by the age and gender of the pupils in cases where there is no national survey.

Various academics have calculated the unit cost of education using the NTA approach. In Canada, for example, Marcel, Patrick, and Qi Zhang (2015) used the NTA concept to determine the unit cost of education across all educational levels. Their findings show that private education spending rises significantly around the age of 18, reaches its peak at 21, and then sharply declines around the age of 23. The cost of private education per person after age 28 is less than $500 for every year included. According to a study by James, Jeromy, and Peter (2014) that also used the NTA concept, private education consumption in Australia is concentrated primarily among people under the age of 25 or students enrolled in primary, secondary, and post secondary education. Mwabu, Muriithi, and Mutegi (2010) established to develop education profiles by the age of the students using the Kenya Integrated Household Budget Survey (KIHBS) of 2005 and household survey of 1994. Their research showed that households spend more money on secondary education at age 18 than at any other age.

2. RESULTS AND DISCUSSIONS

2.1. Average Household Education Expenditure and Student Enrolment Sustainability in Public Secondary Schools

The objective of the study sought to establish the average household expenditure on every child in public secondary school and its influence on enrolment sustainability in public secondary schools in Bungoma County. As already demonstrated in the literature review, the household unit cost is calculated by totaling all the cost incurred by a household on individual student on matters of education. This includes totaling the cost on boarding fees, development fee, school uniforms, transport, books and other materials and pocket money. Therefore, the household education unit cost variables are as discussed under the following themes.

2.1.1. Boarding Fees by Type of School

The first household education unit cost is the boarding fees incurred by the households in relation to education. Therefore, the study sought to establish boarding fees in relation to the type of school which was significant to the study as it was more likely to influence enrolment sustainability in the study schools and the findings were presented in Figure 1

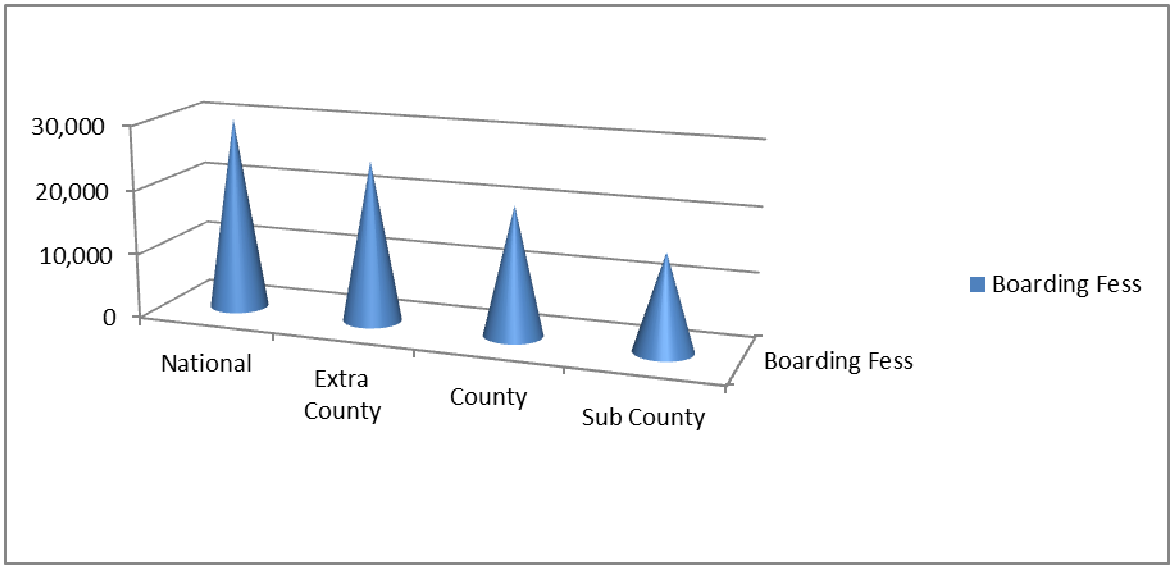

Figure 1: Boarding Fees by Type of School
Source: Field Data 2021

The statistics in Figure 1 shows that boarding fees decrease by category of schools meaning that household heads with students in national schools paid more boarding fees than the students in sub county secondary schools. Therefore, students in sub county schools pay on average less boarding fees. The results of the study show that there is a variation of boarding fees by the category of school of the student. These results are in line with the study by Kiage, Simatwa and Ayodo (2014) who established that the boarding fees in girls secondary school varies from one category of the school to another with least schools paying 11,200 and the highest school paying 14,200. However, in Bungoma County the household heads that pay least boarding fees pays Ksh 15,000 per year in sub county secondary schools and the highest pays Ksh 30,000 per year in national schools.

2.1.2. Transport Cost

The study sought to determine the transport cost as it is considered as one of the direct cost associated to education. This is when household heads or students travel to school or travel for activities associated to schooling such as academic trips; that cost is attributed to schooling and therefore considered as direct cost of schooling that is made by the household heads. In this case the household heads were asked to indicate the amount of money that they pay on transport for a particular child in public secondary school for the last twelve months in Bungoma County. The transport cost was therefore disaggregated by category of the school type or the class level of the students. This was done to find out whether there are transport cost differentials as per the category of schools and the findings were presented in Table 1.

Table 1: Transport Cost per Category of Schools

Category of School	Frequency	Mean	Minimum Cost	Maximum Cost
Day school	239	1677	500	20,000
Boarding School	301	3601	400	21,000

The findings in Table 1 show that the mean transport cost was higher for those students in the boarding schools as compared with their counter in day schools. The students in boarding schools on average spend Kshs 3,600 on transport as compared with Kshs 1,677 in day schools. In comparison there is a variance of Kshs 1,924 between the two categories of schools. The difference in transport costs can be attributed to the distance covered by students in boarding schools as compared with those in day schools. Therefore, on average students in boarding schools pays more on transport while reporting, closing to school and whenever they are sent home for fee balances. Students in day schools pay less as some walk to school and some schools are near their homes. Qualitative data from school principals also show that majority of boy students in day schools walked to school while others used their bicycles to ride to school thus reducing the cost of transport incurred by the students. This partly explains why girl students incur a slightly higher transport cost as compared to their male counterparts.

2.1.3. School Uniform Cost

In Kenya school uniform is one of the compulsory items that parents pay for their children in secondary schools. Therefore, every student is supposed to have school uniform an expense borne by the parents. School uniform therefore escalated the cost of education in Kenya. It was of interest for this study therefore to establish the

amount of money that parents spends on uniform for their children in school by gender, age, category of the school and also by the class level of the students. The parents were asked to indicate the amount of money that they spend on school uniform for their children and the mode of acquiring school uniform. On the mode of acquiring school uniform most of the parents said that in form one they normally pay money for school uniform directly to the schools where student is given the uniform after reporting to school. This includes the school uniform and games uniform. However, other parents indicated that at other class levels students buy uniform in the market and at lower prices that the uniform offered at school. The cost of uniform is presented in the subsequent sections. Therefore, the cost of school uniform analysis by type of school was important for this study, guided by the NTA methodology. To answer this question the household heads were asked to indicate the amount of money they spend to buy school uniform for their children and the findings were disaggregated by the type of school as presented in Table 2.

Table 2: Cost of Uniform by Type of School

Category of School	Frequency	Mean	Maximum Cost
Day school	239	9,780	2,337,420
Boarding School	301	14,000	4,214,000

The findings presented on Table 2 show that students in boarding schools spend more money on uniform than those in day school. The findings indicated that those students in day schools on average spend Ksh 9,780 on school uniform compared to Kshs 14,000 for those in boarding schools. This implies that children in boarding schools pays on average Kshs 4,220 higher on school uniform compared to the children in day schools.

2.1.4. Unit Cost of Pocket Money

Pocket money is the amount of money given to students on daily, weekly or monthly bases by their parents or guardians for their private use while at school. Students are supposed to consume this amount according to their own free will. Given that it is given to students when going to school, Pocket money can be considered as one of the cost incurred by a household to keep students at school. This study sought to establish whether pocket money varies by school type and whether there is a relationship between pocket money and household level of income. In relation to type of school and pocket money, the study sought to establish whether there is a difference between amount given to children in boarding schools and day schools. This is as summarized in Table 3

Table 3: Pocket Money per Type of School

Category of school	Frequency	Average Mean	Cumulative Cost
Day School	239	2,850	681,150
Boarding School	301	8,500	2,558,500

The findings in Table 3 show that there is a wide difference between the pocket money given to students in boarding schools compared to those in day schools. The results show that students in boarding schools on average receive Kshs, 8,500 per year compared to those in boarding school Ksh 2,850.

The study also sought to determine whether pocket money varied from one class to another, the variations of the pocket money per class is presented in Figure 2

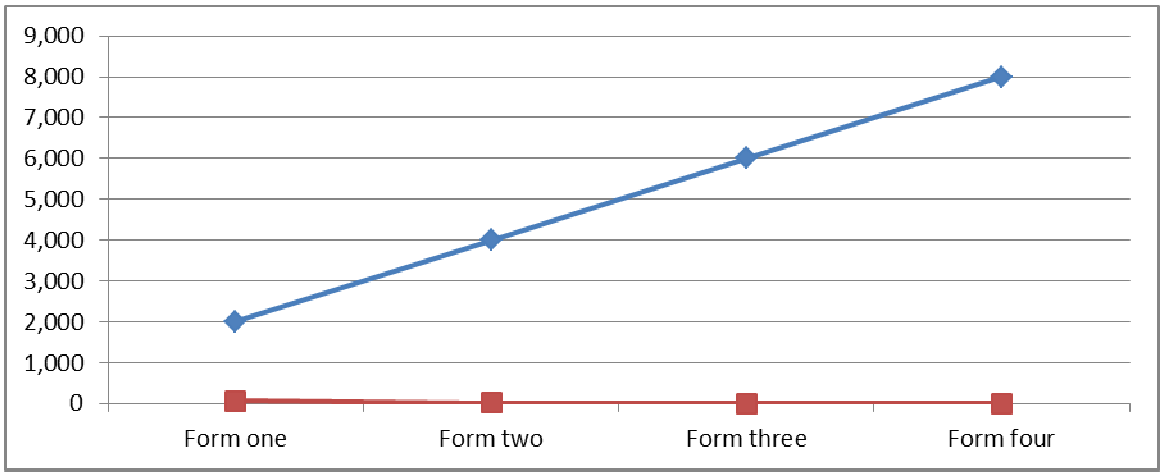

Figure 2: Pocket Money per Class
Source: Field Data 2021

The findings in Figure 2 show that pocket money increased by the level of education. On average students in form one are given around Ksh 2,000 pocket money and those in form 2 are given Ksh 4,000, form three Ksh 6,000 and those in form 4 are given Ksh 8,000. Thus, from the findings the pocket money for students varied by the level of class.

2.1.5. Unit Cost of Books

Text books are one of the unit cost of education in secondary schools. In the Kenyan education system students buy reference books such as Dictionary, *Kamus*i, Bible, Atlas and Hymn books as they join form one. In other classes students buy revision books to supplement the course books purchased by the school under the Free Tuition Secondary Education Kitty. In form three also students buy set books both for Kiswahili and English. All these books are bought by the parents/guardian. In order to establish the amount of money spend buying these books, the household heads were asked to indicate the amount of money they spend on buying books in one year period of schooling. In relation to the type of school and the cost of books, the study sought to establish whether there is a significant difference on the amount of money spent by parents who are in day school compared to those who are in boarding schools. The findings are presented in 4.

Table 4: Cost of Books per Type of School

Category of school	Frequency	Average Mean	Cumulative Cost
Day School	239	16,800	4,015,200
Boarding School	301	17,600	5,297,600

The findings in Table 4 indicated that parents with students in boarding schools spend more money on buying school books compared to the parents with students in day schools. The findings show that the parents in boarding schools on average spend Kshs 17,600 per year on buying books while those in day schools spend Kshs 16,800 a difference of Kshs 800 on average. This may be attributed to the conditions set before reporting to schools. Parents taking children to be admitted in boarding secondary schools are requested to produce all the items before admission failure to which a parent is sent home with their student. However, in day schools' admission is not very strict in relation to the presentation of the items bought.

Like all other costs associated to schooling, the study further sought to establish the trend of the cost of books by level of class from form one to form four. To this effect a cross tabulation was also done to establish the cost of book by level of class. The findings are presented in Figure 3

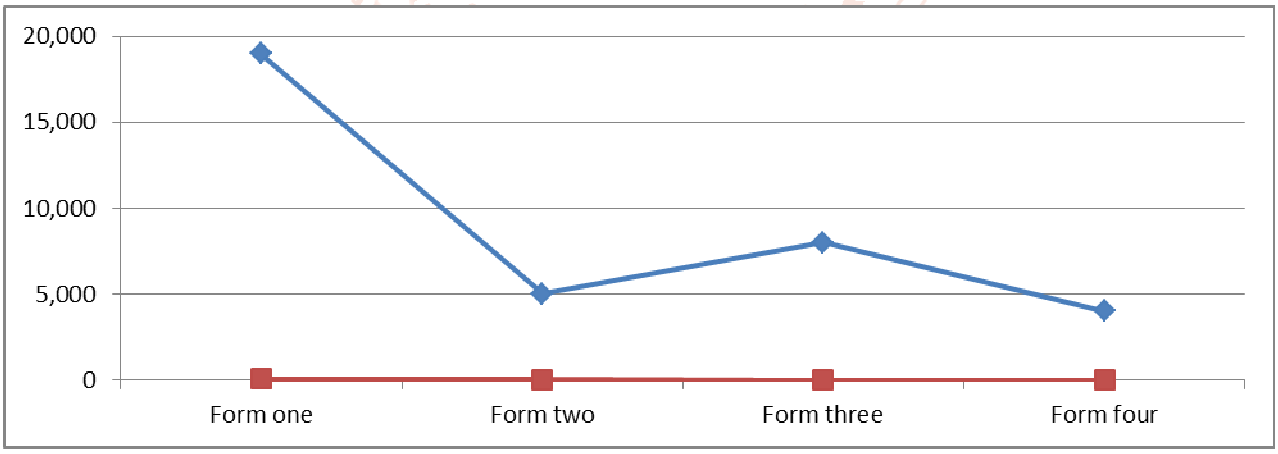

Figure 3: Unit Cost of Books per Class
Source: Field Data 2021

The results in Figure 3 show that on average parents who have students in form one spend almost thrice amount of money compared to those in form four when buying school books. Parents with children in form one spend Kshs 19,000 on books, followed by those with children in form three at Kshs 8,000. Form two and form four students have lower demands for books and parents pay less on books compared to those in forms one and three. In form two parents spends Kshs 5,000 and in form four, Kshs 4,000. Therefore, the cost on books is high in form one because this is the level when one is required to buy reference books such as the Bible, Atlas, *Kamusi,* Set Books, Mathematical Table and Dictionary among other books. The cost of books goes up in form three because one is required to buy literature books both for English and Kiswahili. This therefore up-scales the cost of education in form of the unit cost of books at this level.

3. CONCLUSION

The study established that there is a negative relationship between the average amount of money spent by household to educate a child in secondary school and student's enrolment rate in secondary schools. This implies that as the household expenditure in education increases the enrolment decreases.

4. RECOMMENDATION.

The study established that household spend on average more shillings on uniform at form one. This study therefore recommends that government or other educational stake holders should subsidize the cost of school uniform as a strategy of increasing students' enrolment rate

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