

Effects of Hidden Costs in Free Secondary Education on Transition and Completion Rates in Public Boarding Schools in Kisii County, Kenya

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Abstract

Financing secondary education is a great challenge to both government and households. In Kenya, whereas households meet a negligible cost to cater for Free Primary Education, it is not clearly established how much they pay for Free Secondary Education. Thus cost is a key barrier to transition to secondary school especially for the poor. The objective of the study was to establish the effect of the hidden costs on students' completion rates in public boarding schools in Kisii County. This study was based on Classical Liberal Theory of Equal opportunities advanced by Sherman and Wood (1982) which expresses the view that each child possesses inborn talents which accelerate them to social promotion hence all systems should be designed without any barriers. The study used correlational research design. The target population was 60 head teachers from 60 public boarding secondary schools in Kisii County, 641 class teachers and 240 PTA class representatives. Krejcie and Morgan's (1970) scientific statistical table, stratified and simple random sampling was used to select the required sample for the study of 52 head teachers, 234 class teachers and 148 PTA representatives. Questionnaires and interview schedules were used to collect data. The data was then analyzed by use of regression analysis. Pearson's correlation was used to measure the degree of the relationship. Statistical tests were done at $\alpha=0.05$. It was found that a significant positive relationship existed between hidden costs and students' transition and completion rates. It was recommended that since the established hidden costs negatively affect access, the Government of Kenya should increase FSE budgetary allocation to schools to ease parents' burden. Significantly, the study findings would enable education policy-makers and other stakeholders to cope with strategies for easing parents' cost-burden and ways of mobilizing FSE funds.

Key words: Hidden costs, transition rates, completion rates, Kisii County.

1. Introduction

According to UNESCO (2000), illiteracy has been identified as a factor that slows down the economic well being of a nation. It is on this premise that developed countries like North America and Western Europe have achieved almost universal secondary education, with an average net enrolment ratio (NER) exceeding 90% (UNESCO, 2007). In other regions—namely, Central and Eastern Europe and Central Asia—the average NER is between 82% and 85%. In the remaining regions the NERs are considerably lower: Latin American and the Caribbean (67%), East Asia and the Pacific (69%) the achievement is largely attributed to minimal hidden costs and adequate financing in secondary education by the concerned states(UNESCO, 2007).

Governments in Sub-Saharan Africa and their financial partners are also increasingly looking to make secondary education more widely accessible, more relevant, and of higher quality. Consequently Secondary participation rates in SSA have increased from 19 percent in 1999 to 30 percent in 2004 (SEIA 2007). However, the region faces many challenges in meeting the goal of further expansion of secondary education especially on cost implication. Only a handful of countries in the region—Botswana, Cape Verde, Mauritius, and South Africa for example—have achieved secondary education access rates as high as 80 percent for junior secondary. Some countries, such as Burundi, Burkina Faso, and Rwanda, have not even achieved rates of 20

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percent; Ethiopia has GER of 31%, Malawi 28%, Uganda 19%, Zambia 19% Senegal 21% and Lesotho 39% (SEIA, 2007). The transition rate to secondary school is 67.1 percent for East and Southern Africa and only 52.4 percent for West Africa. This trend contrasts sharply with the 98 percent worldwide (Holsinger & Cowell, 2000). In one out of every four African countries, just half of the children enroll at the end of the primary school level. In another 25 percent of African countries only one of three continue into the secondary school level and in three countries: Kenya, Tanzania and Burundi, less than 20 percent of the children do so (UNESCO, 2006). The reasons for this low transition are many. As UNESCO (2006) explicates some families cannot afford to keep their children in Secondary school.

In Kenya the provision of Educational opportunity has been the main objective of the government since independence. This is because education is considered by different stakeholders in Kenya as an important vehicle for self advancement, social, economic as well as political development.

The Sessional Paper No. 1 of 2005 on a Policy Framework for Education, Training and Research (Republic of Kenya, 2005) therefore proposed that secondary education be integrated as part of basic education. However, this will remain an uphill task unless the issue of transition from primary to secondary school is addressed. The government of Kenya is committed to the provision of quality education and training as a human right for all Kenyans in accordance with the Kenyan constitution (Republic of Kenya, 2010) and The Basic Education Act, no.14 of 2013 which underscores the right of every child to free and compulsory basic education as enshrined in the Constitution and the International Conventions such as EFA Goal, Millennium Development Goals (MDGs (MOEST, 2013).

The education sector report (MOEST, 2008) reveals that despite the progress made there are still challenges in terms of enhancing access, equity, quality, relevance and governance. The 2011 Economic Survey indicated that more than 400,000 pupils enrolled in 2003 did not complete class eight in 2010 due to either forced repetition or drop outs. The report further established that only 59 % of the beneficiaries who enrolled in 2003 completed class eight in the year 2010. This raises concern on high level of wastage (Republic of Kenya, 2011).

The government introduced Free Day Secondary Education as one of the education reform strategies. The government supplemented Kshs. 10,265 per student which were to be distributed against the various vote heads and parents were to meet the remainder of the needs; mostly uniforms, transport and feeding the students in school (MoEST, 2008). Despite this progress made the poor economic growth and the increase of inflation rates have made it difficult for parents to meet indirect costs in FSE (Republic of Kenya, 2001). The poverty index in Kenya as in 2012 stood at 49.8% (KIPPRA, 2013). Yet these are the citizens expected to meet the hidden cost of FSE. A report of the Ministerial Task Force on January 10th 2003 indicated that 1.5 million school going children were out of school mainly because of the numerous levies (MOE, 2003).

Despite the introduction of free day secondary education and bursary allocation, access and participation at secondary level have remained proportionately low compared to primary in Kenya. Analysis of the 2009 census data reveals that approximately 6.7 million children of school going age were out of school. Of these, 2.1 million (58%) were of pre-primary age, 1.9

million (23%) primary and 2.7 million (76%) secondary school age (Republic of Kenya, 2009). Based on this milieu, it was imperative to critically assess the extent to which the enhanced financing and indirect costs of secondary education has affected participation rates at secondary school level.

The main thesis postulated is that cost of education in Kenya has been cited as the main factor for low transition and completion rates and has continued to escalate over the years due to rising cost of living. The Kenya Economic Report reveals that the number of people falling into poverty has increased annually and is projected to rise for as long as poverty persists. For instance, in 2007, the number of poor people in the Kenyan population was estimated at 18.2 million, rising to 19.5 million and later 20.1 million in 2008 and 2010, respectively. Kisii County poverty index stands at 56 %. (Republic of Kenya, 2013).

Hundreds of orphans and poor children from Kisii County selected to join form one in top public secondary schools in 2015 academic year were unable to report prompting media attention who sort well wishers to support them. A Nation Media survey across Kisii county and nationally revealed shocking tales of children who scored high marks in the 2014 KCPE but were wasting away at home .Emmanuel Ondieki from Kisii County who scored 373 marks and admitted to Nairobi School could not raise Shs88,000, Ong'era Dominic who scored 367 and admitted to Mang'u High could not raise 90,365, Onchiri Nehemiah who scored 369 and admitted to Nakuru High could not raise Shs80,000 among others. This is an indictment of the country's skyrocketing education cost (Ouma et al, 2015).

The Education Sector Report 2014 indicated that the total resource requirement in the sector for 2014/2015 financial year is KSh344 billion but the gross ceiling was set at Ksh324 billion hence the sector resource deficit stands at Ksh19.8 billion (Oduor, 2014). Education Cabinet Secretary in a statement to the Parliamentary Committee on education indicated that parents will be required to support the provision of infrastructure as funds provided to the Ministry are inadequate (Wanzala, 2014).The nature, implication and extent of parental contribution (hidden costs) has not been established and quantified; thus it remains a hidden cost, a miscellaneous cost which is exclusive of the government's annual budget for education hence a gap in the FSE policy addressed by this study. This state of affairs has caused concern among the education stakeholders and government. It is due to this concern that the researcher chose to investigate the effects of hidden costs of FSE and their impact on transition and completion rates among selected boarding schools in Kisii County. Objectively the study sought to establish the effect of the hidden costs on students' completion rates among public boarding secondary schools in Kisii County.

3. Research Methodology

3.0 Research design

The study utilized the correlational research design. Orodho (2003) notes that correlational research design enables the researcher to assess the degree of relationship that exists between two or more variables. In this regard, it enabled the researcher to assess the effect of hidden costs of FSE on students' transition and completion rates being the variables in the study.

3.1 Research Locale

The study was carried out in public boarding secondary schools in Kisii County situated in western Kenya, Lake Region. It consists of nine Sub-Counties namely; Gucha South, Sameta, Masaba South, Kisii Central, Gucha, Kisii South, Nyamache, Marani and Kenyenia.

3.2 Target population

The target population for this study consisted of all the 60 head teachers from the 60 public boarding secondary schools in Kisii County, 641 class teachers and 240 PTA class representatives. Therefore the total population for the study was 941 subjects.

3.3 The study sample

Krejcie and Morgan (1970), have published a scientific formula and statistical table for determining sample size which was constructed using the following formula.

$$S = X_2 NP (1 - P) \div D^2 (N - 1) + X_2 P (1 - P).$$

S = required sample size.

X_2 = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841).

N = the population size.

P = the population proportion (assumed to be .50 since this would provide the maximum sample size).

D = the degree of accuracy expressed as a proportion (.05).

No calculations are needed to use the Krejcie and Morgan (1970) statistical table. To obtain the required sample size, a researcher needs to check through the corresponding values as the table is applicable to any defined population within a given range. Since the study was carried out in 60 public boarding secondary schools clustered in 9 sub-counties, a sample of 52 of the 60 schools was used using simple random sampling procedure in each stratum. The representative index of $N/60 \times 52 = P$ was used. This resulted to 52 schools; Gucha South 10, Sameta 3, Masaba South 7, Kisii Central 9, Gucha 3, Kisii South 4, Nyamache 3, Marani 4 and Kenyenia 3. Fifty two head teachers were selected automatically from the sampled schools.

The same method of proportionate random sampling and Krejcie and Morgan (1970) statistical table was used to select 234 out of 641 class teachers from each sampled school. The representative index of $N/641 \times 234 = P$ was used. This resulted to Gucha South 33, Sameta 18, Masaba South 32, Kisii Central 58, Gucha 11, Kisii South 24, Nyamache 11, Marani 12 and Kenyenia 33.

A sample of 148 PTA representatives out of 240 was selected using proportionate random sampling and Krejcie and Morgan (1970) statistical Table. The representative index of $N/240 \times 148 = P$ was used. This resulted to Gucha South 27, Sameta 10, Masaba South 20, Kisii Central

25, Gucha 7, Kisii South 12, Nyamache 10, Marani 12 and Kenyenyia 25. The above samples were proportionally selected from the nine Sub-Counties which represent the strata through a lottery technique (Table 1).

Table 1
Sampling Matrix

DESCRIPTION	POPULATION	SAMPLE SIZE	REPRESENTATIVE INDEX
Head teachers	60	52	$N/60 \times 52 = P$
Class teachers	641	234	$N/641 \times 234 = P$
PTA Reps	240	148	$N/240 \times 148 = P$

Source: Kisii County Education Office, 2015

3.4 Research instruments

The data was collected using both primary and secondary sources. Secondary data was collected from official documents from the Ministry of Education, the Central Bureau of Statistics (CBS), and the government records. Such data included information on student enrolment, drop-out rates and government expenditure on FSE.

3.4.1 Questionnaires

Questionnaires were used by the researcher to collect primary data; that was quantitative and qualitative data from the Head teachers and teachers.

3.4.2 Interview Schedules

Interview schedules were used to guide interviews to be conducted with the parents. The interview guides contained items covering all the objectives of the study. The interview schedule gathered data on the hidden costs of FSE in relation to educational costs met by parents.

3.5 Methods of Data Analysis

After all data was collected, the researcher conducted data cleaning. After data cleaning, the data was coded and entered in the computer for analysis using the Statistical Package for Social Sciences (SPSS) version 22. This research yielded both qualitative and quantitative data. The statistics used included frequency counts, means and percentages while for hypotheses regression analysis was used. In order to make reliable inferences from the data, the statistical tests were subjected to tests of significance level of 0.05 (Orodho,2005).The results of data analysis was presented using frequency distribution tables, pie charts and bar graphs.

4. Results and Discussion

The data collected sought to analyze the following hypothesis.

H_{01} : Hidden costs have no significant effect on students' completion rates among public boarding schools in Kisii County.

4.2 The impact of the hidden costs on students' completion rates

The researcher found it necessary to analyze this phenomenon in order to assess the impact of the hidden costs of FSE on students' completion rates. This study investigated the effect of the hidden costs to students' completion rates. To achieve this objective, questionnaires and interview schedules were used to capture responses from head teachers, class teachers and PTA representatives. Data was analyzed using simple linear regression to determine whether there was a relationship between the two variables. The completion rates were taken as the response variable while the hidden costs were taken as the predictor variable. The correlation between the two variables was calculated to determine the strength of the linear relationship between the two variables. The summarized descriptive statistical results of the completion trends in the 52 sampled schools in the nine sub-counties in Kisii County were presented in Table 2.

Table 2:

Total hidden costs and students who failed to complete the four year cycle

	Mean	Std. Deviation	N
NUMBER THAT FAILED TO COMPLETE THE FOUR YEARS	55.13	9.577	52
TOTAL HIDDEN COSTS FOR THE FOUR YEARS	62352.134	10048.4237	52

Information in Table 2 on descriptive statistics indicates that an average of 56 students failed to complete the four years of secondary school education at an average total hidden costs of KShs 62,352.13. The researcher found it worthwhile to analyze the correlations between completion rates and total hidden costs. The Pearson's correlation coefficient of .902 showed a strong positive linear correlation between the two variables; that is completion rates and hidden costs which implies that as one variable increased so did the other. Hence as the hidden costs increased the total number of students who failed to complete the four years of secondary school education also increased as shown in Table 3.

Table 3:
Correlations between completion rates and total hidden costs

		NUMBER THAT FAILED TO COMPLETE THE FOUR YEARS	TOTAL HIDDEN COSTS FOR THE FOUR YEARS
Pearson Correlation	NUMBER THAT FAILED TO COMPLETE THE FOUR YEARS	1.000	.902
	TOTAL HIDDEN COSTS FOR THE FOUR YEARS	.902	1.000
Sig. (1-tailed)	NUMBER THAT FAILED TO COMPLETE THE FOUR YEARS	.	.000
	TOTAL HIDDEN COSTS FOR THE FOUR YEARS	.000	.
N	NUMBER THAT FAILED TO COMPLETE THE FOUR YEARS	52	52
	TOTAL HIDDEN COSTS FOR THE FOUR YEARS	52	52

*Correlation is significant at the 0.01 level (1-tailed).

The findings in Table 3 reveal that the Pearson's correlation coefficient of .902 showed a strong positive linear correlation between the two variables of completion and hidden costs which implied that as one variable increased so did the other. Hence as the hidden costs increased the total number of students who failed to complete the four years of secondary school education also increased.

A model summary was generated from the correction established above where the predictor (constant) was the total hidden costs and dependent variable being number of students who failed to complete the four year circle of secondary education. In the model summary, the R square of .813 is multiplied by 100 to get 81.3 % of the total variation caused by the independent variable (hidden costs) being explained by the model and regression equation with a standard error of estimates of 2.232 as shown in Table 4 and Table 5.

Table 4:
Completion regression model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.902 ^a	.813	.810	2.232

*a. Predictor: (Constant), total hidden costs

*b. Dependent Variable: Students who failed to complete

Table 5:
Regression equation for coefficients for completion and total hidden costs

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.525	3.676		.417	.000
1 TOTAL HIDDEN COSTS FOR THE FOUR YEARS	.001	.000	.902	14.765	.000

*a. Dependent Variable: completion rates

The coefficients in the Table 5 were used in coming up with the model that best predicts the dependent variable from the independent variable that is;

$$y = a_0 + b1X$$

where y= Completion rates, a_0 = constant, and x= total hidden costs

$$\text{Therefore: } y = 1.53 + .001X$$

If the total hidden costs in a particular year and school were KShs 20,000, then the number of students who would fail to complete the four years of secondary education would be 21 and if they increased to KShs 35,000 then those who fail to complete would be 36. Therefore as the total hidden costs increased so did the number of students who failed to complete the four years of secondary education. Hence completion decreased with increase in total hidden costs. The significance level of .000 is less than .05 that is 95% confidence interval implying that the model is statistically significant as a predictor of the variables under study.

The the study hypothesized that hidden costs have no significant effect on students' completion rates among public boarding schools in Kisii County. This hypothesis was tested by using the regression analysis and it was shown that hidden costs and completion rates are highly correlated ($r=.902$). Based on the findings of the regression equation in Table 5, we reject the null hypothesis ($p<0.05$) of there being no significant effect of hidden costs on students' completion rates and therefore adopt the alternative hypothesis which states that hidden costs have significant effect on students' completion rates among public boarding schools in Kisii County. It therefore implies that hidden costs have a significant positive effect on completion rates.

The findings in Table 4 and Table 5 confirm the Education Cabinet Secretary's remarks while releasing the 2014 KCSE examination results whose batch comprised of the first lot to have enjoyed the full cycle of free learning from primary to secondary school enrolled in class one in 2003 and form one in 2011 respectively. He observed that completion rates at secondary school level remain a challenge. According to remarks by the Education Cabinet Secretary, during the year 2011 when the 2014 KCSE cohort joined Form One, a total of 521,601 students were admitted into secondary schools. Out of these, only 483,630 sat for KCSE in the year 2014, consequently 7.85 per cent had dropped out. This is besides the over 200,000 KCPE candidates who were not admitted to form one for one reason or the other (Jamah, 2015). According to the records from Kenya Bureau of Statistics, in 2003 during the inception of FPE programme, there were 7,117,300 pupils admitted to class one but at the end of the secondary cycle in 2014 KCSE

about 6.5 million students had dropped out. In 2010 when the same candidates were expected to sit for KCPE only 741,507 candidates were registered (Republic of Kenya, 2015).

5.0 Conclusion

5.1.1. Impact of the hidden costs of FSE on students' completion rates

The research objective was to analyze the impact of the hidden costs on students' completion rates. To achieve this objective the data collected was analyzed using simple linear regression to establish whether there was a relationship between the hidden costs and students completion rates. The completion rates were taken as the response variable while the hidden costs were taken as the predictor variable. The correlation between hidden costs and completion rates were calculated to determine the strength of the linear relationship between the two variables as shown in Table 3. The findings from the 208 observed cases in one cohort from year 2011 to 2014 revealed that an average of 56 students failed to complete the four year circle per school class at an average hidden cost of KShs 62,352.13 as shown in Table 2.

The study revealed that there was a correlation between hidden costs and students' completion rates in the 52 sampled schools. The Pearson's correlation coefficient of .902 as shown in Table 4 indicated that there was a strong positive linear correlation between completion rates and hidden costs. This implied that as hidden costs increased, the number of students who failed to complete the four year secondary course also increased. Twenty (13.5%) of the parents of the 148 sampled parents confirmed that their children had dropped out of school due to hidden costs. All the 234 (100%) of the sampled class teachers agreed that students were normally sent home to collect the hidden costs levies and some ended up dropping out of school altogether.

Conclusively from the foregoing research findings there were hidden costs on FSE which affect the effective implementation of FSE Programme especially completion rates in Kisii County hence educational wastage. Such costs included: Boarding fee, development fee, School uniforms, activity fee, extra tuition, Board of Management Teachers' salary, supplementary textbooks, exercise books for remedial work among others. The overall analysis indicates that there is evidence of educational wastage. Secondly, apart from inadequacy of the funds, the study has established that the government funds were inadequate were characterized by delays in disbursement and receipts.

Based on the results presented, the researcher recommends the following measures to make FSE more effective:

- 1) The government should formulate policies that can regulate charging indirect levies such as motivation fees which drain the underprivileged parents.
- 2) The government should increase the budgetary allocation for FSE programme given the high cost of living.

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