Influence of School Financial Resources on Student Academic Achievement in Kenya Certificate of Secondary Education Examination (KCSE) in Public Secondary Schools in Kenya

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Abstract

Issues of education funding and adequacy of school financial resources have been highly debated both in developing and developed countries. Policy makers, tax payers and other education stakeholders do wonder whether schools that receive the most in terms of financial resources produce most in terms of measurable student outcome. The purpose of this study was to establish whether there is a significant relationship between school financial resources and school KCSE mean score in public secondary schools in Kenya. The study adopted cross-sectional survey design and had a target population of all the 7,325 public secondary school principals in Kenya and 65,000 public secondary school teachers employed by Teachers Service Commission. The study used multistage sampling giving rise to a sample of 260 principals and 368 teachers. Data was collected using an observation guide and principal and teacher questionnaire. Data analysis was done using ANOVA and regression analysis. The study found statistical significant relationship between school financial resources and school KCSE mean score. School financial resources predicted school K.C.S.E. mean score at 11.1 percent. The study recommends the government to invest more to public secondary schools especially on school infrastructure and boarding costs to mitigate the effect of poverty in schools and ensure equitable provision of quality education for all. The government should provide free secondary education for all as opposed to the present free tuition secondary education
Keywords-school financial resources, student academic achievement

1. Introduction

Education is one of the major instruments for a country's economic and social development. It is the main source of human capital which is essential to sustained economic growth. Education contributes to reducing poverty and birthrates, increasing health, strengthening the institutions of civil society and national capacity building and improving governance (World Bank, 2008; 2007; 2005).

In particular, secondary education is a crucial tool for generating the opportunities and benefits of social and economic development (World Bank, 2007). It equips students with competencies, knowledge and skills necessary and relevant to the labor market while harnessing their attitude and values to ensure that they became active and productive citizens of their communities (World Bank, 2007; World Bank, 2008).

Veerspoor 2008 notes that quality of secondary education in Sub Sahara Africa faces many challenges ranging from teacher absenteeism, inadequate teaching and learning materials and lack of school physical facilities among other many. Veerspoor attributes challenges of education in Sub-Sahara Africa to poverty and inadequate school financial resources (Veerspoor 2008). Lewin 2008 also notes that quality of secondary education in Sub-Sahara Africa is low as compared to other parts of the world. According to Lewin, secondary school education in the Sub-Sahara Africa is expensive relative to the per capita Gross Domestic Product. Using Benin, Ghana, Zambia. Tanzania, Rwanda, and Uganda as country case studies, Lewin observes that secondary schools enroll just a quarter of the region's secondary school age children and those enrolled attend school irregularly with less than a third of a cohort completing secondary school. To mitigate the effects of poverty at school, Lewin advocates for increased budget allocations to secondary schools, introduction of subsidies and waivers for those who cannot afford to pay school fees, scholarships for low income children, fundraising by parents and teachers associations, alumni contributions, regulation of non-tuition fees and engaging in other school income generating activities.

In Kenya, provision of quality basic education has been the priority of the government since independence (Republic of Kenya 1999; 2007; 2010; 2013; Ministry of Education Science and Technology (MoEST) 2002; 2005; 2014; Ministry of Education (MoE) 2012). The introduction of Free Primary Education (FPE) in 2003 and Free Day Secondary Education (FDSE) in 2008 led to significant rise in secondary school enrolment in Kenya. Enrollment rose from 1.3 million students in 2008 to 2.1 million students in 2014 (MoEST, 2014). However, provision of quality education to the rapidly expanding secondary school population has remained a challenge in Kenya. (MoEST 2005; 2014; MoE 2012). Kenyan secondary schools are faced with limited access, high teacher absenteeism, poverty and high education costs and low education attainment with 72.9 percent of candidates not achieving the minimum grades of C+ and above for admission to university (MoEST, 2014).

In Kenya, the government and households are the main sources for financing secondary education (MoEST,

2005; MoEST 2014). In 2008, the unit cost of secondary education was estimated at KES 10,265 for day schools and KES 28,892 for boarding schools. Findings of the Mwiraria Task Force (2014) led to the current unit cost of KES 23,975 and KES 51,839 for day and boarding schools respectively. The charges exclude teachers' salaries (MOEST, 2014). The government remits free tuition capitation grant of KES 12,870 per pupil to all regular secondary schools, and households are charged school fees of KES 11,105 and KES 28,969 for day and boarding schools respectively. Parents pay for other expenditures items including uniform, transport, boarding expenses, examination fees, development and other levies charged by schools (MoEST, 2014).

Despite the guidelines on fees, most secondary schools continue to charge prohibitive fees and other levies from parents (Republic of Kenya, 1999; MoEST, 2014). While national schools charge as high as KES 120,000 per student per year, county and extra county schools charge as high as 93,317 and KES 62,393 respectively (MoEST, 2014). Bloating of school fees guidelines has led to demonstrations from all stakeholders against school principles (MOEST, 2014). The cost of secondary education therefore remains to be a deterrent to access, enrolment and retention in Kenyan secondary schools (Republic of Kenya, 1999; MoEST, 2005; MOEST, 2014). This study sought to establish the extent to which adequacy of school financial resources influence Kenya Certificate of Secondary Examination performance in Public secondary schools in Kenya.

Objective
To establish the extent to which school financial resources influence Kenya Certificate of Secondary Examination (KCSE) performance in public secondary schools in Kenya.

Hypothesis
There is no significant relationship between school financial resources and Kenya Certificate of Secondary Education (KCSE) performance in public secondary schools in Kenya

Significance of the study
The study could be significant to the Ministry of Education Science and Technology in that the findings can be used by national education administrators, planners and policy makers in allocation of education resources and formation of policies geared towards achieving quality education. The study could also be significant to secondary school principals as it addresses the contribution of school financial resources on quality of education, an administrative task in which they are most influential hence giving them an insight on how school resources blend to determine quality of school programmes. This study could also be useful to private education providers, sponsors and the school management for it will provide information on standards to be maintained in provision of quality education. The study findings could add to the existing knowledge on quality of education in Kenyan schools.

2. Research Methodology
Research Design
The study adopted the descriptive cross sectional research survey design. The study found the design most appropriate in data collection and testing the hypothesis quantitatively to establish the relationships; and allowed the variables under study to be measured as they naturally occur without being manipulated or controlled (Burns and Grove 2003)

Target population
Target population is the total group of subjects to whom the study wants to apply, the conclusion from the findings (Mugenda & Mugenda, 2003). The target population for this study was all the 7,325 public secondary schools in Kenya, comprising of 105 national schools, 283 extra-county schools and 5,699 sub-county schools. It also targeted 65,000 public secondary school teachers employed by Teachers Service Commission (TSC) and 7,325 principals (MoEST, 2014).

Sample size and sampling procedures
According to Orodho (2005), a sample is a small proportion of the target population selected using some systematic procedure that is used for selecting a given number of subjects from a target population as representative of that population. The study used multistage sampling. Purposive sampling was used to select three counties to represent high, medium and low social economic regions in Kenya. Social-economic potential of a region largely influences quality of education especially academic performance (UNESCO 2005; KIPPRA 2013). Consequently, Kitui (low), Kisii (medium) and Nairobi (high) counties were sampled based on county poverty incidence, county human development index and county poverty severity index (Wiesmann, Kiteme, & Mwangi, 2014). The 3 counties have school population (N) of 783 and 8617 teachers giving a sample population (n) of 260 schools and 368 teachers (Krejcie & Morgan, 1970). The school population and sample size is as shown in Table 1;

Table 1: School population and sample size

County	Population (N)			Sample (n)		
	Schools	Principals	Teachers	Schools	Principals	Teachers
Kitui	364	364	3991	121	121	171
Kisii	336	336	3072	111	111	131
Nairobi	83	83	1554	28	28	66
	783	783	8617	260	260	368

3. Findings of the study

To determine the extent to which school financial resources influence school KCSE mean score, a simple regression analysis was done on the two variables and results presented in Table 2.

Table 2: Influence of school financial resources on KCSE mean score

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.333[a]	0.111	0.112	2.470462

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	158.8	1	158.8	25.8	<0.001
	Residual	1193.6	194	6.153		
	Total	1352.4	195			

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.040	0.95		2.149	0.032
	School Financial Resources	1.820	0.357	.342	5.079	<0.001

a. Dependent Variable: Y_Mean KCSE Score
b. Predictors: (Constant), School Financial Resources

The model in Table 2 above was summarized into a regression equation of the form Y=a+bX where Y is the dependent variable (KCSE mean score, a- is the constant of regression equation, b - the value of the coefficient of the independent variable and X, the value of the independent variable).The independent variable in this case was school financial resources. Thus the regression analysis equation becomes.

Y= 2.04+1.820xschool financial resources. This implies that for every one-unit increase of school financial resources, KCSE mean score increases by 1.82 units. Therefore the more adequate the school financial resources, the higher the schools' KCSE mean score. Since $p<0.001$, then the relationship between school KCSE mean score and school financial resources is highly significant.

Since $R_2=0.111$, it also implied that school financial resources predicted school KCSE mean score by 11.1 percent. Therefore the study has established that there is a statistical significant relationship between school financial resources and school KCSE mean score.

The study used KCSE mean score as an indicator of quality of education thus we can also conclude that there is a statistical significant relationship between school financial resources and quality of education. This agrees with findings of the World Bank report (2008) that linked Tanzania's high performing schools to high budgetary allocations from the government and high financial support from parents, sponsors and other educational partners. The findings also concur with Veerspoor (2008) and Lewin (2008) who attributed low quality of education in Sub-Saharan countries to poverty and inadequate financial resources in schools. We therefore reject the null hypothesis that states that there is no significant relationship between school financial resources and KCSE mean score in public secondary schools in Kenya.

4. Conclusion

There is a statistical significant relationship between school financial resources and KCSE mean score in public secondary schools in Kenya.

5. Recommendations

1. The government should increase its budgetary allocations to secondary school education.
2. To mitigate the social-economic challenges of school and learners' background, it is necessary for the

government to provide free secondary education. This will ensure equity and quality education for all.

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