Relationship between Subsidized School Funding and Transition Rates in Kenyan Secondary Schools

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Abstract: This study investigated the relationship between subsidized school funding and transition rates from primary to secondary schools in Vihiga county, Kenya from 2008 to 2015. The study borrowed one of the basic tenets of Von Thunen’s Production Function Theory, which postulates a linear relationship between educational inputs and outputs. The descriptive survey research design was used to implement the study, whose target population included Sub-County Directors of Education, form three students, principals and teachers, all drawn from the 115 public secondary schools in Vihiga county, Kenya. The study sample comprised of 518 form three students, 102 teachers, 12 principals and 5 Sub-County Directors of Education. Saturated sampling technique was used to select the sub county directors of education, stratified random sampling for the schools, and simple random sampling for the students, teachers and principals. A questionnaire, an interview schedule and a document analysis guide were the main data collection instruments. Three weeks to the actual study, the three research instruments were piloted and found suitable for use in the actual study, as they were found to be both valid and reliable after assessment. Raw data were first analyzed descriptively, using frequencies, means and percentages, and then the null hypothesis tested inferentially, using Simple Linear Regression analysis. Results revealed a significant positive linear relationship between subsidized school funding and transition rate from primary to public secondary schools. On the basis of this revelation, it was recommended that the Ministry of Education reviews and enforces a more effective form one admission policy, which would ensure both day and boarding facilities receive the appropriate number of form one students without bias on either school category. This can be easily be achieved by allocating more funds to day schools, to enhance transition rate from primary to public day secondary schools.

Keywords: Transition Rate, Subsidized School Funding, Public Day School, Public Boarding School.

INTRODUCTION

Most scholars around the world view secondary school education as one of the most fundamental requirements of an all round individual. The latest statistics suggest that approximately 30% of the national budget is spent on secondary education [1]. This translates to around 200 US dollars per citizen aged between 5 and 19 years old. These statistics broadly reflect and reiterate the preferences of society as a whole and that the achievement of public policy targets in education should always be a matter of major concern by the government of the day [2]. According to World Bank [3], demand for Secondary education is soaring worldwide due to the fact that; many countries achieve universal primary schooling and the demand for education is moving to higher levels of education. On the other hand, Earthman [4] argues that poor performance of students is largely attributed to inadequate student to textbook ratio while Fafunwa [5] indicates that there is a big gap in quality resulting from; large number of students in crowded classrooms, using obsolete equipment and disillusioned teachers. However, it is common to find that test score variations within schools is much larger than across schools making learning among individual students so varied and hard to establish [6]. Secondary education therefore has the greatest ability to enhance an individual’s potential to participate effectively in nation building.

In many countries, quality secondary education is indispensable for individual and national development. In Britain, education up to secondary school level is fully financed by the government [7]. Parents are only required to ensure that children attend school. The education authority and central government are required by section 7 of the 1994 Act to make education facilities available. Parents are seen as the school’s prime legal clients until the child is 16 years of...
age. Section 36 of the children’s` act stipulates that it is the duty of the parent of every child of compulsory school going age to ensure their children access full time education suitable to their age, ability and aptitude, either by regular attendance or otherwise [4].

In many developed countries like England, Japan and the USA, governments have also generously invested in education so as to improve teaching and learning resources, infrastructure and to provide qualified and experienced teaching staff in an attempt to improve students’ academic achievement. For instance in Canada, it has been reported that heavy public expenditure in education has resulted to improved students achievement at international test compared to students from other countries. UNESCO [8] reported that the reforms agenda in public education in Canada have centered on government commitment to financing education.

In developing countries like South Africa, and Brazil, the general education policy was to increase educational resources with the view to provide opportunities for learning and significantly improve learning that the heavy expenditure on education may not have translated to better academic achievement. In Lesotho, for example, the payment of schools fees is different at different levels of education for instance, creches, are primarily private owned and parents have to pay fees of varying amounts. At primary level; from standard 1 to standard 7 fees, varies from school to school. Some parents cannot afford the school fees at those schools and there are organizations and government departments which identify needy students and pay for their school fees. Examples of such bodies are the National Manpower Development Secretariat, Social Welfare and the Ministry of Education and Training [9].

According to the Ministry of Education in Uganda, there are more than a half a million secondary school children who are studying under the USE policy in some 1471 schools. This is a vast improvement in terms of access to secondary education. However, the quality of education provided to Uganda students is still questionable even as the government tries to offer new subsidies to cover the education related costs [10, 11].

Benavot [12], opines that secondary education provides a bridge between primary, the labour market and tertiary education. As a bridge, decision makers face a basic choice of whether secondary education is to be the weakest link of the education system or its cornerstone. Quality of education tends to be evaluated in terms of the number of students passing and the expectation of parents is that their children perform well in national examination [13]. In addition, Kivuva [14] summarized the role of education as establishment of human resource base for the generation of wealth and improvement of quality of life.

The Government of Kenya introduced subsidized secondary school funding in 2008 with the aim of increasing enrolment and completion of secondary schools and raise the transition from primary to secondary schools to 70% [15]. The launch of the funding was meant to address illiteracy, improve quality of education, low transition rate from primary to secondary schools and low completion rates at the secondary level. This launch was guided by the sector policy guidelines articulated in sessional paper number. 1 of the year 2005, the Kenya Education Sector Support Programme (KESSP) and vision 2030 [16]. The Government of Kenya was informed by the conviction that secondary education plays a critical role in providing the link between academic and practical knowledge, skill development and the job market [15]. Those of school going age have no option other than attend school to acquire education that is fully funded by the government [17]. According to Ndiku and Muhavi [18], the implementation of free secondary education in Kenya saw many parents withdraw from paying additional levies to supplement the FSE due to misconception. This compromised internal efficiency in quality of education and encouraged drop-outs. High levels of corruption in government departments as well as some school administration have been accused of misappropriation of funds meant for free education. In the year 2011, the British government, which is one of the major donors in the Kenya Education Sector Support Programme (KESSP) hired independent consultants who worked with the Ministry of Education to audit the programme.

In Vihiga County, Kenya the interesting scenario however is there are more students in boarding schools than day school. According to Vihiga County Director of Education, as at the year 2014, the boarding schools have an average of 65 students per stream while day schools have an average of 30 students per stream, against the average national enrolment of 45 students per stream. The Government subsidy stands at Ksh. 10,265 for every student, regardless of the type of school they are enrolled in. Each student in day school pays an extra Ksh. 3,000 a student enrolled in boarding school pays and additional Ksh. 40,000 as at 2015. Despite the big disparity in the fees charged boarding schools as compared to day schools, most Kenyan parents prefer sending their children to the latter, despite them being more expensive.

**Statement of the Problem**

In Kenya, secondary school education is regarded as a very important level on the education ladder, as it prepares learners for their future careers. This has compelled the Kenyan government to invest heavily in secondary education by subsidizing school fees at this level. Sadly, some areas in the country are still recording low transition rates from primary to public secondary schools. Vihiga County is one such area, as it has the lowest transition rates when compared

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to other counties in western Kenya. This worrying situation begs the question “is the government of Kenya getting good returns from investing heavily in subsidized secondary education?” It is only by way of research that a satisfactory answer to this pertinent question can be given. No empirical study has been done so far in Vihiga County, to explain the relationship between the amount of money the government disbursed in subsidized secondary school funding up to now, and the transition rates between primary and secondary schools. It is against this background that this study was envisaged.

Objective of the Study

The main objective of this study was to determine the relationship between subsidized school funding and transition rates from primary to secondary schools in Vihiga County from 2008 to 2015. This objective was addressed using the following null hypothesis;

H₀: There is no significant relationship between subsidized school funding and transition rates from primary to secondary schools in Vihiga County from 2008 to 2015

REVIEW OF RELATED LITERATURE

Transition rate is the number of pupils admitted to form I in 2009 from primary school and expressed as a percentage of the total number of pupils who enrolled for KCPE in 2008 [19]. This section focuses on various studies that have looked at subsidized education and how it affects transition rate as herein defined. Katiwa [20] for instance, conducted a study to establish factors influencing pupils’ transition rates from primary to secondary schools in Kitui central sub-county, Kitui County, Kenya. Specifically, the study was set to establish how availability of Secondary school spaces affect transition rates from public primary schools to secondary schools, influence of gender on transition rates from public primary schools to secondary schools, how Parents and Teachers’ Association (PTA) levies affected the transition rates from public primary to secondary schools as well as finding out the influence of parental level of education on the transition rate from public primary to secondary schools. The study established that; transition from primary school to secondary schools was majorly determined by the availability of secondary school spaces as indicated by 91% of the respondents, gender of a child as indicated by 62%, PTA Levies as indicated by 53.1% as well as parental level of education as indicated by 86.2% of the respondents. The present study borrowed a methodology similar to that of Katiwa [20], to ascertain whether these findings apply to Vihiga County as well, because it currently faces the same problem of low transition rates.

Kikechi, Musera and Sindabi [21] investigated the factors affecting transition rates from primary to secondary school in Taita Taveta district, Kenya. Their study involved sample of 144 respondents consisting of 88 parents and 56 primary school head teachers in the district. The main tools of data collection were a questionnaire and interview schedule. Data analysis involved the use of percentages and a Chi-square. Their results indicated that an average of 40% of pupils fail to move to secondary schools every year after completing their primary school education and the most affected were girls. The main reasons for non-transition were noted to be; lack of funds to pay school levies, early marriages, long distance to school and lack of interest in schooling. The researchers saw the need for the government of Kenya to introduce several incentives among them subsidization of secondary education.

Another Kenyan study by Amisi [22] sought to establish the Socio-Economic factors influencing pupils transition rates from primary to secondary schools in Kisumu East Sub-County. Four objectives guided the study to establish the influence of family structure on transition rates; the influence of parental level of education on transition rates; the influence of pupils’ parental income on transition rates and finally the influence of pupils participation in domestic chores on transition rates from primary to secondary schools. The study was influenced by the fact that transition rates in Kisumu East Sub-County was low, at an average of 48.74 compared to the neighbouring Sub-Counties such as Kisumu West Sub-County at an average of 50.31 and Kisumu North Sub-County which is also at an average of 51.40. The study employed a descriptive survey research design, where the target population consisted of 68 head teachers of the public primary and 500 primary school teachers in Kisumu East Sub-County. The study findings indicated that some of the socio-economic factors had the highest influence on the transition of pupils from primary to secondary schools. These included; family structure, level of education, parental income level and participation of pupils in domestic chores. When looking at orphaned children sixty seven percent were found not to transit to secondary school. Parental level of education equally determined the transition rate, four percent of the teachers agreed that most of the parents have primary education.

Karimi and Ndirangu [23] on the other hand investigated why there had been low transition of pupils from primary to secondary schools in Ruiru District, despite the implementation of Free Primary Education in Kenya. Their study was guided by the Theory, which according to them, is basically concerned with problems of relationships, of structures and of interdependence, rather than with the constant attributes of objects. The study established that funds released by the government were not adequate to cater for human resource, physical facilities and teaching / learning resources. However, to ensure that all learners graduate in class eight (primary
school) and proceed to secondary schools, their study concluded that some schools introduced school feeding programmes to enhance retention and that the government of Kenya should allocate adequate funds to schools to ensure that Free Primary Education programme runs smoothly, without compromising quality of education, which eventually influences learners’ transition rate from one level to another. Their study further concluded that parents and community members should fully support pupils education and school development projects among other recommendations.

Dzombo [24] conducted a study to find out why most children in Kilifi County were not enrolled in school yet education was free, by looking at the factors that affected and influence enrolment, attendance and transition. The study sought to answer the following questions: What are the trends in enrolment, retention and attendance in Kilifi County since 2002? The study was a survey research guided by Human capital theory and Robert Merton’s goal means gap The Target population of the study comprised of all school age children who were in school and those not in schools, the teachers in the schools, Parents and education officials. A total of 4 schools were purposively selected, comprising of 2 schools located in the urban areas and two other schools located in the rural areas within the research location. The Class 8 and 5 students were purposively selected to participate, in the study. A sample of class teachers of the respective classes was also selected as respondents of the study. The head teachers for the respective schools were also selected to be interviewed. Purposive sampling technique was also used to select 2 education officials to participate in the research these officials were the District education officer and the Zonal education officer. Snowballing technique was used to get whose children are not in schools and the children themselves. Proportionate random sampling was used to select 125 pupils from the selected schools. Proportionate random sampling was also used to select the number of students per class and the gender distribution. Structured interviews were used to collect data from the respondents. Key informant guides were used to collect data from the key informants.

The study established that the schools still charged other levies apart from the school fees and these levies were charged to the parents. From the interviews with the respondents, it was established that the main factor affecting education in Kilifi County even with the introduction of Free Primary Education was the inability of the parents to afford the levies charged by the schools. This inability was confirmed by the respondents to be as a result of Poverty in the area. The study also found out that factors like truancy, deviancy, lack of knowledge on importance of and lack of monitoring were also major factors affecting education From the research findings, it was concluded that the parents were not involved in the implementation of Free Primary Education in schools to a large extent. It was also concluded that the community had not internalized the importance of education. Recommendations were made to look into the levies charged and the sensitization on importance of education to the community.

RESEARCH METHODOLOGY

Descriptive survey research design was used to implement the study, because it helps to establish the pertinent facts that the research intends to establish without necessarily manipulating the variables of the study [25]. The study location was Vihiga County, Kenya because schools in this area perform dismally in national examinations. This study targeted all public secondary schools in Vihiga County, since they all receive government subsidy, which was the main issue under investigation. The county has 41 boarding schools and 74 day schools. Therefore, all the school principals totaling to 115 of secondary schools were targeted for the study. The respondents targeted were the 5 sub-county directors of education, 115 principals, 1023 teachers and 5,175 Form 3 students totaling to 6318. Simple random sampling was used to sample Form 3 students in each of the sampled schools. Stratified sampling was used to place schools into two categories as per their status as either Boarding or Day Schools. Saturated sampling was on the other hand used to select all the 5 sub-county directors of education. Simple random sampling was used to select Form 3 students, teachers and principals. According to Kerlinger [26], 10-30% of the population is a representative sample. For this reason, a total of 637 respondents were selected and used to give the required data, 10% from each group.

This study used both primary and secondary sources of data. Thus, the following instruments were used to collect data; questionnaires, interview schedules and document analysis guides. The questionnaire was self designed, with both open ended and closed items and was administered to both teachers and students. The subjects responded to questions that had been placed on a five-point Likert- type scale. This scale allowed the respondents to rate the relationship between subsidized school funding and transition rate in Vihiga County. An oral Interview Schedule was used to collect data from for the principals and directors of education on the same subject, to supplement data collected from students and teachers. A document analysis guide was used to check records from the principals and the accounts office on the status of subsidized school funding. The records on Government subsidy, students’ fees payment, students’ enrollment, transition, education resources inventory and KCSE examination results were also scrutinized and important data captured.
A pilot study was carried out three weeks prior to the actual study, in 5 secondary schools one from each of the 5 sub-counties of Vihiga County, Kenya. The pilot schools and respondents were expunged from the study sampling frame before the actual study, so as to avoid redundancy and halo effect in the actual study [27]. All the research instruments were validated using the RASCH Model, while their reliability was assessed using the test retest method, in which the 0.7 coefficient as by George & Mallery [28] was set as threshold. The reliability analysis results indicated that all the three quantitative instruments surpassed the minimum acceptable reliability coefficients (questionnaire for teachers: r=0.746, questionnaire for students: r=0.846, Document analysis guide: r=0.818). These results implied that the quantitative research instruments that were used to collect data in this study were of good scholastic quality and if used again under the same research conditions, they would produce a similar set of results. Data were analyzed descriptively by use of frequencies, percentages and means, while the null hypothesis was tested inferentially using standard linear regression analysis. Simple Linear Regression was used because apart from the fact that the data collected with respect to this hypothesis met assumptions of this parametric test, the researchers were also interested in determining whether there was an association between the dependent and independent variables, and if so, to determine the equation linking these variables, using the regression model.

RESULTS AND DISCUSSION

The main objective of this study was to establish the relationship between subsidized school funding and transition rates from public primary to secondary schools in Vihiga County from 2009 to 2015. The null hypothesis was formulated from this objective as follows:

Ho: There is no significant relationship between subsidized school funding and transition rates from public primary to secondary schools in Vihiga County from 2008 to 2015.

To address this objective, all the sampled principals and students were asked to give their opinion on whether the students who received their invitation letters to join Form one showed positive response and the findings were as shown in Table-1.

<table>
<thead>
<tr>
<th>Opinion</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>%</td>
<td>F</td>
<td>%</td>
<td>F</td>
</tr>
<tr>
<td>Principals (n = 12)</td>
<td>1</td>
<td>8.3</td>
<td>8</td>
<td>66.7</td>
<td>0</td>
</tr>
<tr>
<td>Students (n = 518)</td>
<td>109</td>
<td>21.5</td>
<td>173</td>
<td>34.1</td>
<td>50</td>
</tr>
</tbody>
</table>

Results in Table-1 indicate that 1 (8.3%) and 109 (21.5%) of the principals and students respectively indicated that they strongly agree to the fact that students who received invitation to join Form one, reported while another 8 (66.7%) and 173 (34.1%) of the principals and students respectively agreed to the same fact. At the same time, 50 (9.8%) of the students remained undecided on the same, maybe because they lacked information. On the other hand, 1 (8.3%) and 131 (25.8%) of the principals and students respectively disagreed to the fact that students who received invitation to join Form one showed positive response while a further 2 (16.7%) and 45 (8.9%) of the principals and students respectively strongly disagreed with this fact. These findings clearly show that majority of the principals (over 70%) and students (over 55%) were of the opinion that the students who were invited to join Form one showed a positive response. Although most students show positive response, they report to other schools that get admission letters informally. This compromises the Ministry of Education’s admission policy and undermines the entire process of admission. In the same vein, the study sought to establish the transition rate for the previous five years and the results were as presented in Table-2.

<table>
<thead>
<tr>
<th>Year</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number that sat for KCPE</td>
<td>9,879</td>
<td>10,102</td>
<td>10,258</td>
<td>13,678</td>
<td>15,789</td>
<td>18,321</td>
<td>20,452</td>
</tr>
<tr>
<td>Number joined Form one</td>
<td>6,637</td>
<td>6,862</td>
<td>5,436</td>
<td>8,070</td>
<td>9,531</td>
<td>11,821</td>
<td>14,116</td>
</tr>
<tr>
<td>Transition rate (%)</td>
<td>67.18</td>
<td>68.93</td>
<td>52.99</td>
<td>60.37</td>
<td>69.02</td>
<td>69.02</td>
<td></td>
</tr>
</tbody>
</table>

Data in Table-2 indicates that in the year 2008 and 2009, the transition rate was 67.18% and 67.93% respectively which means that 67.18% of the students who sat for KCPE in 2008 and 67.93% of the students who sat for KCPE in 2009 joined Form one. In the year 2010, there was a transition rate of 52.99%. This means that 52.99% of the pupils who sat for KCPE examination joined Form one. This further implies that slightly over half of the KCPE candidates joined Form one. In the year 2011, the transition rate was 59.00% while in the year 2012, the transition rate improved slightly to 60.37%. In the year 2013 and 2014, the transition rate was 64.52% and 69.02% respectively. The findings clearly show that in the years 2008 and
2009, there was a slight improvement as from 67.18% to 67.93%. In the year, 2010, there was a decline in the number of KCPE candidates who joined Form one. After that there has been a steady improvement in transition rate since 2010 to 2014. This can be clearly associated with the influence of subsidized school funding. It can be summarized from the Table, that there was a slight improvement as from 2008 to 2009, then a drop in 2010 after which there was a continuous improvement in the number of KCPE candidates who joined Form one in Vihiga County. To find out whether there was an association between SSF ans transition rate, the null hypothesis was tested inferentially using simple linear regression analysis and the findings were as presented in Figure-1.

Figure-1 points out a positive linear association between SSF and transition rate from primary to secondary. The linear regression equation connecting SSF as the independent variable (x) and transition rate as the dependent variable (y) as the Figure shows is:

\[ y = 58.17 + 1.83x \]

This implies that subsidized school funding had a significant positive effect on the transition rate of the KCPE candidates in primary school to secondary school. The linear model can be used to predict the transition rate in any given year using this formula e.g. when subsidized school funding is, say one million, transition rate from primary to secondary would be 60.53% after computation using this formula. If however the funding was increased to, say 5 million, the transition rate would this time round be 67.32%, applying the same formula. These calculations clearly demonstrate that transition rate would increase to 67.32% if SSF was increased from 1 million to 5 million Kenya shillings. These findings provide evidence that there is a significant positive relationship between subsidized school funding and transition rate in the sense that an increase in the amount of funds would also lead to an increase in the transition rate from primary to public secondary school. These results are however in disagreement with the assertion of the study’s null hypothesis, which stated that there is no significant relationship between SSF and transition rates from public primary to secondary school in Vihiga county from 2009 to 2015. The null hypothesis was therefore rejected. However, it was clear from the subsequent oral interviews that were conducted from selected respondents that a good number of students do not join secondary schools. During interview, one of the SCDE had this to say,

“One of the main challenge we are facing is that some principals charge some levies and scare away some parents that can not afford. We are following up this issue but at the same time, consider the legal framework for some of them consult the parents during AGM and agree on the levies.”

The findings tally with those of Jibril [29], who revealed that from the onset, it was noted that delay in the release of the funds and failure to fund all activities by the GOK would pose a challenge to the efficient implementation of the programme. The findings are also in agreement with Akyampong [30] and Rollestoh [31] who revealed that children from poor households continue to be under represented in enrolments while Chimombo [32] argues that access to education continues to reflect household wealth.
One of the objectives of a study IPAR [33] included documentation of patterns of student enrolment by province and gender. The study, which adopted an exploratory approach, with a descriptive design involved four provinces, with one district purposively selected from each of the provinces. The key respondent sources included the Ministry of Education staff and opinion leaders at the community levels. Personal interviews based on unstructured interview schedules; group discussions and direct observation were used to complement the secondary data. The Statistical Package for Social Science (SPSS) computer programme was used in data analysis. Findings of this study revealed major regional and gender disparities, with best performing districts in the non-ASAL regions. Among the first 14 best performing districts in the country (ranked by GER), five were in Central Province, four in Rift-Valley, two in Western, two in Nyanza and only one in Coast Province. None of the districts with GER above the national mean figure of 20.5% were either from Nairobi (urban) or the predominantly ASAL North Eastern and Eastern Provinces.

The poorly performing districts were concentrated in the ASAL regions of North Eastern, Eastern and Coast Provinces. The districts with severe gender disparities as of 2000 included Wajir (GER: girls 2.7%, boys 8.8%); Mandera (GER: girls 3%, boys 6.9%) and Garissa (GER: girls 4.7%, boys13.1%) in North Eastern Province. In contrast, the districts with overall high GER and near gender parity were Kiambu, Nyeri, Nyandarua, Muranga, and Kirinyaga in Central Province; Taita-Taveta in Coast Province and Kakamega in Western Province.

CONCLUSION AND RECOMMENDATION

The study established a significant positive linear association between SSF and transition rate. This means an increase in the disbursement of funds towards subsidization of education in public secondary schools in Kenyan secondary schools will consequently lead to higher transitions rates from primary to public secondary schools as compared to what is being witnessed currently. In fact, to ensure 100% transition rate, the government should invest an average of Ksh. 22.86 Millions towards this course. This can be easily be achieved by allocating more funds to day schools, to enhance transition rate from primary to public day secondary schools.

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