THE EFFECTS OF HOME BASED SOCIO-ECONOMIC FACTORS ON ENROLLMENT OF MALE STUDENT IN SECONDARY SCHOOL IN KIRINYAGA COUNTY CENTRAL REGION OF KENYA

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ABSTRACT

The male student enrollment in Kirinyaga County, Central region of Kenya has been increasing at a decreasing rate. It has been observed that more females than males are participating in education in secondary schools. This situation is unique and peculiar and a reversal of the gains made at primary levels where more male students than female students were enrolled. According to research, students enrollment is attributed to socio-economic factors that are home based factors in nature. Thus, this study is an attempt to determine the socio-economic factors that influence the enrollment of male students at the secondary level of education in Kirinyaga County, Central region of Kenya. The objective of the study was to find out the effects and relationship between home-based socio-economic factors and male student enrollment. The study employed cross sectional survey as a research design based on primary data collected among the participating standard eight students who completed primary school in the year 2014. The target population consisted of 12,195 standard eight students, (2014 cohort) from 195 public primary schools. The research was based on literature review of studies and reports from various scholars, which affirmed that certain issues affecting male student enrollment were closely correlated with home based factors. Data collection was based on sample size of 391 of which 391 questionnaires were administered and 352 responded. The analysis applied included inferential statistics, descriptive analysis and interpretation of the data. The results from the findings indicated that household income, parental education, parental occupation, influenced the low enrollment of male students in secondary schools in Kirinyaga County. The study recommended that, households be encouraged to do savings and investment so as to increase the house hold income and therefore provide for education requirements for both primary and secondary schools.

Key Words: *student enrollment, socio-economic factors, home based factors, household income*

INTRODUCTION

The public debate surrounding equity in educational enrollment and especially the increasing interest and focus on the under-achievement of male students in education continues to escalate in intensity and scope. Enrollment data indicate a course of legitimate concern about enrolments levels for male student's (National Centre for Education Statistics, 2010). A research conducted in rural China by Glewwe and Kremer (2006) found that poor and resource constrained children are more than three times likely to drop out of school than other children from well to do families. The links between wealth and school retention have been described in more detail by Colclough, Rose and Tembon (2000).

In African tradition "amongst those out-of-school, the mean wealth index for school drop-outs was generally higher than for those who had never enrolled children at school were, on average, from better-off households than those who had dropped out, who were, in turn, from richer backgrounds than school-age children who had never enrolled". Poor households tend to have lower demand for schooling than richer households: whatever the benefits of

schooling, the costs, for them, are more difficult to meet than is the case for richer households. The pressure on children from poorer backgrounds in particular, to withdraw from school increases as they get older, particularly as the opportunity cost of their time increases (Colclough et al, 2000). In Africa traditional schooling has been found to have links with socio-economic factors. According to Barrera-Osorio et al. (2011) the most important of these factors include direct and opportunity costs of schooling, limited employment opportunities, socio-economic status, parental and family investment behavior, the economic value of girls, rural and urban residence and the level of parental education.

The relationship between certain household characteristics, poverty and school enrollment has been empirical evidence from other countries is rich and the main results seem to be in agreement with a prior expectation of a close link between poverty and female student's dropout. The World Bank (2004) observed that there is a link between children's educational attainment, enrolments, retention completion and household characteristics and poverty (Garba & Sanda, 2007). A research study conducted by Sanda and Garba (2007) based on data collected from 600 rural households of Sokoto State, Nigeria provided empirical evidence on the extent to which poverty and household demographic characteristics may affect educational attainment and school attendance of children. The results confirmed significant gender difference in educational attainment and school attendance, with female children at a serious disadvantage.

The household income may play a leading role in the low enrollment of male students in education. Due to global economic meltdown, many economic activities in Kenya have been adversely affected, for instance, the coffee and tea sector. The two have been the main economic sectors in Kenya for a long time, but the global economic depression coupled with poor pricing have forced residents to abandon them and seek other income generating activities. As claimed by KNUT (2009), the absence of major economic activities in some parts of the country has led to poverty in many households. Children, especially male students in those households, have opted to drop out of school at an early age and are forced by poverty to seek manual/casual employment either at local plantations, jua kali or in the neighbouring urban areas, in order to supplement the household income. This claim is also supported by the leadership in the region. According to the leaders this situation results in poor enrolment both in primary and secondary school levels of education as shown by the aforementioned data on GER, NER and KCSE registration (KNUT, 2009).

Educational levels of the parents have been found to be an influential factor on their children's education. According to Ersado (2005), educational level of household members is an influential factor particularly on children and it determines their access to schooling. The notion is widely accepted as the most consistent determinant of child education. Besides, a higher parental or household head level of education is associated with increased access to education (Ainsworth et al, 2005; Al Samarrai & Peasgood, 1998; Ersado, 2005; Connelly &Zheng, 2003; Grant & Hallman, 2006; Hunter & May, 2003; Duryea, 2003; Rose & Al Samarrai, 2001; Seetharamu, 1984 cited in Chugh, 2004). Parental education and retention in school has been linked together by putting forward many reasons and opinions of scholars. It

has been observed that non-educated parents cannot provide the support or often do not appreciate the benefits of schooling (Juneja, 2001; Pryor & Ampiah, 2003).

According to Al Samarrai and Peasgood (1998: 395) the probability of girls enrolling in primary school can be increased by 9.7% and secondary by 17.6% by their married mother's primary education and it has no significant effect on the enrollment of boys. They claim that, by educated mothers giving preference to girls "schooling, means that, mothers have a relatively stronger preference for their daughters" education and that their education affords them increased household decision-making power and increased economic status. Glick and Shan's (2000) research results were in line with Al Samarai and Peas good (1998) in their research finding in urban poor environment in West Africa. The outcomes of his research favored the female children by relating the improvements in fathers" education to the schooling of both sons and daughter. But mother education has significant impact only on daughters-schooling. In order to bolster sustained access to education for many children, Ersado (2005) suggested the provision of adult education programmers to counter the educational deficit facing many households.

Research studies shows that there is a high correlation between earnings and parental levels of education (Hanushek & Kain, 2007). He argues that parents with more education are likely to earn more than parents with low levels of education. This is due to the various opportunities that require knowledge and skills, thus a household with a low level of education will have low income which may be inadequate to educate all children at the secondary school education. In most cases the parent may opt to educate some of his children particularly girls and abscond boys since boys can be employed easily in informal sectors from which they can supplement parental income. This may lead to fewer enrollments of boys in the secondary school level of education.

Fertility rate may be an influencing factor in enrolment. According to Coleman and Ernest (1966), highly educated parents are less likely to have a big family while parents with a low level of education are more likely to have large families. The household income for the family with low level of education may not be able to support the needs of all family members especially the cost of education. Thus, in such a family the participation rate is minimal since the derived income is consumed by the basic needs (Coleman, Ernest, Carol, McPartland, Mood, Weinfeld & York, 1966).

STATEMENT OF THE PROBLEM

In Kirinyaga County, Central Region of Kenya much of the literature indicate a better transition rate for female than male students. This is contrary to the national and global patterns of enrolment. Enrolment statistics shows that the male student enrolment is increasing at a decreasing rate while that of female is increasing at an increasing rate. This situation in Kirinyaga County in Central region of Kenya is peculiar. The number of male students participating in secondary school is low as compared to the same number that graduated from primary school. This contrasts the natural expectation as explained by the following facts. The population of females (school going age) is lower in Kirinyaga county, Central region of Kenya yet more females than males are enrolled against the normal distribution of the population of the official school going age (Ministry of Education, 2009).

Further, the enrollment of females at primary school is low in most regions of Kenya, but their enrollment has not shifted in transition to secondary school as indicated by their enrollment trend. The enrollment indicators at the primary level show that more males than females are enrolled against the population trend in Kirinyaga county Central region. One would expect the same trend to continue from primary to secondary level. The fact that there is a continuous trend of female students outshining male students at secondary level enrollment attracts concern. In addition it is only in Central region where, with the exception of North Eastern, there is a consistent trend of female students outshining male students in secondary school enrolment. Lastly, the regional leadership outcry (KNUT, 2014; Mwai, 2010; Ongeri, 2011) on male enrollment trend is weighty and shows that there is a problem in male enrollment and therefore a gap to fill. According to regional educationists, the male students' enrollment in Kirinyaga County (central region) is unique. This situation attracts attention and concern as to why it is happening. Thus this study is set to determine the factors affecting the enrollment of males in secondary schools in Kirinyaga County with a key concern that home based factors could be a key driver to low enrolment in the region.

OBJECTIVE OF THE STUDY

The objective of this study was to determine the impact of home based factors that is, parental occupation, parental education, household head income, family size and age on enrolment of male students in secondary school in Kirinyanga County, Central region of Kenya.

SIGNIFICANCE OF THE STUDY

The result from this research is of paramount importance to policy formation and implementation regarding factors influencing economic growth and development. This is due to the fact that human capital development is an important ingredient to economic growth as outlined in Vision 2030 in Kenya.

RESEARCH METHODOLOGY

Research Design

The study adopted a cross-sectional research design. The target population was 12,915 (standard 8 students 2014), from 195 public primary schools in Kirinyaga County Central Region. This was derived from statistical abstracts in the county Education Office (Kirinyaga).The tracer method of data collection was used to collect data from students and from among the 195 public primary schools. The students were traced from schools to their homesteads. The headteachers from the selected 6 schools were used to identify the students. Data collection instrument was based on a structured questionnaire that solicited responses from individual students and the head of the institutions from the sampled students.

To validate the instrument, the sampling validity was based on Mugenda and Mugenda (1999) postulation. The instrument was given to two groups of experts; one group was required to assess what concept the instrument was trying to measure. The other group was asked to determine whether the set of items or check list accurately represented the concept under study, when the two groups concur, then the instrument was considered valid. The pilot

study was done in Laikipia West Sub County, this is because the region has a similar socio-economic set-up to Kirinyaga County. To test reliability, Crombach's alpha reliability correlation coefficient was used, which indicated 0.777 co-efficient which is recommended for newly developed question (Sekaran, 2003).

Data Analysis

The tracer method of data collection was used through questionnaires, while the head teachers from the selected 6 schools out of the 195 public primary schools were used to identify the students who completed standard 8 in 2014. Once the data was collected it was coded, cleaned and entered into a computer program where Binary Logit Regression and Principal Component Analysis was performed to analyse the data using Statistical Package of Social Sciences (SPSS) in order to test the strength of the dependent variable. The choice of Binary Logit Regression Model was guided by the fact that the dependent variable is a discrete and dummy which required maximum likelihood estimation (Pindyck & Rubinfeld, 1985). To perform both descriptive and inferential statistics, SPSS and STATA computer packages were used. SPSS was mainly used for descriptive statistics while STATA was used for inferential statistics which included odd ratios and P-values. Descriptive statistics included percentages, frequencies, mean and standard deviation while the inferential statistics included chi-square, cross-tabulation and Binary Logit Regression.

FINDINGS AND DISCUSSION

Relationship between Household Head Income and Enrolment

The analysis on the relationship between house-hold head income and enrollment established statistical significant relationship between male student enrollment and house-hold lead income. That the household head income is to a large extent, a determinant of enrollment of male students and thus an important predictor of male student enrolment as indicated by descriptive and logistic regression models respectively.

Descriptive Analysis on Home Based Factors and Male Enrolment

The respondents were asked to what extent home based factors influenced individuals to join or not to join secondary schools. Table 1 shows that 49.4% of the respondents indicated that household income influenced school enrollment to a very great extent, while 44.3% to a great extent and 2.6% indicated to a fairly extent. Only 2.8% of the respondents that felt that household income do not influence school enrollment at all. This agrees with Glewwe and Kreme (2006) who indicated that poor and resource constrained children are more than three times likely to drop out of school than other children from well to do families. In addition 71% of the respondents indicated that parental occupation influenced school enrollment to a great extent while 22.4% indicated to a very great extent. This sums up to 93.4% of those who indicated parental occupation influenced student's enrollment to a great extent. In the same breath, the World Bank (2004) observed that there is a link between children's educational attainment, enrolments, retention completion and household characteristics and poverty.

Table 1: Home Based Factors and Male Enrollment Descriptive

Statement	Not at all	Little extent	Fairly great extent	Great Extent	Very Great Extent	Mean (S.D.)
Household head income	2.8%	0.9%	2.6%	44.3%	49.4%	4.37 (0.823)
Parental occupation	2.8%	1.1%	2.6%	71.0%	22.4%	4.09 (0.738)
Average	2.8%	1.0%	2.6%	57.7%	35.9%	4.23 (0.781)

Notes: Standard deviations in parentheses

Means of greater than 1 and less than 1.5 implied that the home based factors influenced student enrollment to no extent. Means of greater than 1.5 and less than 2.5 implied that home based factors influenced student enrollment to a little extent. Means greater than 2.5 and less than 3.5 implied that home based factors influenced student enrollment to a moderate extent. Means greater than 3.5 and less than 4.5 implied that home based factors influenced student enrollment to a greater extent. The means of greater than 4.5 implied that home based factors influenced student enrollment to a very great extent. The standard deviation on the other hand describes the distribution of the response in relation to the mean. It provides an indication of how far the individual responses to each factor vary from the mean. A standard deviation of near 1 indicates that the responses are moderately distributed, while that near 0 indicates that there is no consensus on the responses obtained. An average of 0.781 for all statements on home based factors indicates that the responses are moderately distributed.

Marginal Effects of Change in the Home Based Explanatory Variables on Male Enrolment

Table 2: Logistic Regression Model: Perceived Effect of Home Based Factors on Enrolment

Independent variable	Enrollment status (1=enrolled, 0= not enrolled)	
	dy/dx value (odds ratio)	Marginal effects (Change in probability)
Household head income	-.411339***	-.0037618**
Parental occupation	1.057647	.0096724
Constant	2.095513	-

Notes:

$y = Pr(enrolment)\ (predict) = .99076962$

(#) dy/dx is for discrete change of dummy variable from 0 to 1

***, ** and * indicate statistical significance of parameters at 0.01, 0.05 and 0.10 levels respectively

Number of obs   =   351

Pseudo R2   =   0.0468

LR chi2(2)=23.5***

The model was able to predict enrollment status for 99.07% of respondents meaning that it had high accuracy. The joint effect of home based factors on change in enrollment status specifically to home based factors was statistically significant [LR Chi2 (2, d.f.) = 23.5]. The odd of enrollment was lower among respondents with a strong belief that income of their household head strongly influenced their enrollment status, (ceteris paribus). Indeed the probability of enrollment declined by -.0037618 among respondents who rated income of household head to have high influence on their enrolment.

Respondents who believed that parental occupation strongly influenced their enrollment status had odds of enrollment to secondary school. The probability of enrollment increased by 0.0096724 among respondents who rated parental occupation has high influence on their enrolment. A more meaningful understanding of this analysis came from significance of independent variables whereby, the coefficient of income of household heads is statistically highly significant. This makes household income a more important predictor of male enrollment to secondary schools than occupation of the parents. Similar findings were observed by Obasuyi and Igbudu (2012) who researched into perceptions of Nigerian secondary school students on the socio-economic and socio-cultural factors hindering educational achievement with an engendered approach. Using a sample of 504 respondents in 12 secondary educational institutions it emerged that both males and females perceived socio-economic factors as important influences to their secondary education. For example, "poverty determines a student's parental socio-economic status which borders on whether or not they can eat adequately; acquire school materials; pay for tuition and opportunity costs in terms of time spent in school". In line with this, Achoka (2007) found that, inability to pay school fees due to poverty and anti-social hazards of violence, sexually transmitted diseases and drug-abuse were important causes of low enrollment to secondary schools in Kenya. Other factors include peer influence and indiscipline associated with a certain school. Achoka (2007) concluded that the principal plays a vital role as an advisor and developer to ensure that secondary school principal should put academic and co-curriculum programmes are attractive and competitive in order to fully occupy all students while at school.

CONCLUSIONS

On the basis of the foregoing findings the following conclusion was drawn. To start with, the transition for male students from primary schools to secondary schools in Kirinyaga County has remained low over the years. This study concluded that, many students completing primary education do not progress to secondary school due to high levels of poverty among the parents probably due to low levels of house hold income coupled by ungainful parental occupation. Secondly, low levels of parental education and poverty were found to be a hindrance to male students' enrollment to secondary schools, besides not encouraging their children to continue with secondary education hence providing their children with a fertile ground for them to be engaged in informal employment. It therefore calls for some concerted action to change the parental attitude toward their children's education. The study established that the cost of education is a hindrance toward transition to secondary schools in the county. Many poor households had difficulties meeting the requirements for enrolling their children

in form one. There is need for more government support on the issue of education, targeting the poor households since is an effective way of breaking the vicious cycle of poverty.

RECOMMENDATIONS

1. The household should be encouraged to come up with new strategies of increasing their earnings so as to enhance their income and therefore ability to pay fees for their children. This can be communicated during stakeholders meetings in the school and other stakeholder barazas.

2. There is need to enhance the economic situation of the household so that they are able to cater for educational needs of their children. The government should enhance assistance to those students from poor families such as free tuition. This will ensure that they advance in secondary school and reduce dropout rate along with associated wastage of human resources.

3. The government, private sector and Non- governmental organizations should intervene and provide more funds in the schools as bursaries so as to help boys from low income families finish their education. The study recommends intervention and implementation of an effective framework for participatory rural development that will ensure access, retention and completion rates of secondary school students. They include provision of bursaries to students from the Constituency Development Fund, commercial banks and civil society.

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