Status of Girls Enrolment in Secondary and Post Secondary School Education

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Abstract: *Education is one of the most powerful forces for the empowerment of women. Female education is a crucial condition for family well being, maintenance and sustainable development. The study focused on the factors determining the enrollment of the girls in secondary school education in Kenya. The study sought to status of girls enrolment in secondary and post secondary school education. In the study both qualitative and quantitative techniques were employed. Survey data collected by the central bureau of statistics was used. The logit model was used and regression was run on the STATA computer program and then a test for the statistical significance of the various variables done. The study concluded that the level of education attained by the parents of the child determined the enrollment of that child in secondary schools. The level of education; age and child labour were very significant determinants of girls enrollment in secondary school level of education; social and economic conditions determined the enrollment of girls in secondary school education. The study recommended that adult literacy classes should be organized in the country to sensitize mothers, who had not gone to school on the importance of educating their daughters. Another recommendation was that early marriages should be completely discouraged and parents found marrying off their daughters before they are 18 years should face prosecution. The government and the local communities should take stern measures to discourage child labour.*

Keywords: status, female, enrollment, secondary school

1. Introduction

Over time the Kenyan education system has witnessed several changes in structure and curriculum. Within the last thirty-five years, the education sector has undergone about ten reviews by special commissions and working parties set by the government (GoK 1964, 1976, 1981, 1988, 1999). The rationale for the several reviews has been to improve the efficiency and effectiveness of the education sector. In the prevailing system, that is. 8-4-4, primary education is supposed to start at the age of 6 and consists of 8 years (This is followed by 4 years of secondary education. This level involves children between the ages of 13-19 years. It forms the second cycle of the education system and the transitional stage between elementary education and higher education, training and the world of work. The level, therefore paves the way for higher education, which is imparted through a variety of technical-institutes, polytechnics and universities. University education i«~ Kenya consists of a four-year cycle.

Despite the Government of Kenya's desire to expand educational opportunities, for Kenyans; the main objective was to meet national human resource needs. In primary education, for example, efforts were made to avoid its rapid expansion to meet general popular demand. Although enrollment did not rise, the rate of increase over the period 1964/69 was only 20% from 1,010,889 in 1964 to 1,209,670 in 1969 (see statistical abstract 1971). As much as the human resource utilization model was appropriate, its overemphasis led to curtailing of the expansion in primary education in the face of the popular demand.

Education being a social service, it is the responsibility of the central Government to ensure that the service is provided to all citizens, no matter their social or economic status. Research on education shows that rich people tend to benefit more from social services than the poor.

Secondly, differential costs and benefits arising from the fact that the absolute costs to consume are higher to the poor than to the rich and that the benefits are higher for the rich than the poor due to lack of awareness on the part of the poor. Thirdly, this arises due to a government expenditure pattern which targets services whose access is severely limited and lastly it is due to rationing especially so in education using the examination score which precludes the participation of the poor given that examination- scores and incomes are not only related but also highly and positively correlated as evidenced by Knight and Sabot (1990), among other studies.

The social returns to basic education are more than the returns to higher education. More specifically, research shows that countries with high school enrollments among women invariably enjoy low rates of fertility, low child and maternal mortality, improved nutritional and health status for families and longer life expectancy (King, 1990).

At the same time, both the poor and the rich view education hi Kenya as the only avenue through which they* can attain and maintain economic power. The guarantee of equality of access to education for girls and women thus has two compelling imperatives. The first is rooted in the empowerment and advancement of women as a fundamental human right and centers on equity considerations. The second is focused on efficiency and growth benefits and the full and effective participation of girls and women as agents and beneficiaries of development, both of which are central to sustainable human sent-er-ed— development.

After independence in Kenya, the privileged few were able to pursue education at the expense of the majority who were both ignorant and also lacked the opportunity to attend school especially the girls and the poor. This has contributed to the widening gap between the rich and the poor and also between the sexes in education in post independent in Kenya. Had the government placed an equal emphasis on

access to education to all and also on all the education sectors, we envisage an independent Kenya with very high literacy levels for both sexes. This was, however, not the case. The benefits that come with a literate society especially where there is equality in literacy levels between the sexes cannot be gainsaid.

2. The Research Problem

Since independence the government of Kenya has devoted a substantial fraction of its resources to the education sector. Between 1991-2000, public expenditure on education accounted for 28.2 percent of total government expenditure. The continued investments in the sector over time have led to the establishment of a comprehensive network of schools and resulted in an impressive expansion of coverage and access to education at all levels. In addition, the government has made tremendous efforts to improve girls' education, including affirmative action in the expansion of facilities to enable girls to study science and technical subjects and also a policy to allow girls who drop out of school due to pregnancy to continue with their education. These and, other efforts have yielded benefits, with girls' enrollment rate increasing from 41 percent in 1988 to 46 percent in 1995 at the secondary school level.

However, the enrollment of girls especially at the secondary school level is still very low as compared to that of boys. According to the population census of 1999, a total of 861,200 students were attending secondary school, of which 458,136 (53.2%) were boys and 403,064 (47%) were girls. The figures portray significant gender disparity at the secondary school level. It has been argued that different factors such as socio-economic, socio-cultural, school, political and the legal institutional aspects are responsible for the low girls' enrollment in secondary school .education However, there seems to be little empirical evidence relating to the extent to which these factors impact on girls' education in Kenya. It is not clear to what extent these factors determine the enrollment decisions of parents, and prescriptive policies are therefore the wrong approach, hence the essence necessitates research in bridging this gap.

The study will assist in identifying the recent changes in the education of girls in Kenya. It is also likely to provide a platform for further research and debate relating to improving the education/status of girls. The study also tried to identify the most effective policy interventions that may be used to improve the enrollment of girls in secondary school level of-education and prevent any further decline in secondary school enrollment rates.

3. Methodology

3.1 Data Source and Type

The study uses the Welfare Monitoring Survey data of 1997 collected by the Central Bureau of Statistics and the Human Resources and Social Services Department, of the Ministry of Finance and Planning. In general the survey was designed to elicit general information from households on demographic and social amenities, household assets, household expenditure and incomes. It also sought to elicit

information on school attendance of the household members such as the literacy status of the household members, reasons for not currently being in school, highest level reached among others. The data collected was by administering questionnaires and the survey was supervised by more than 40 professionals drawn from the Kenya Bureau of statistics with support from respective districts' statistical officers.

3.2 Sample

The sample used in the study consists of population in the age bracket 13-22 (secondary school going age) comprising both boys and girls. The aim was to compare their enrollment ratios and show the disparity in enrollment between the sexes. Since sampling was done by CBS, it was necessary to have computerized data on the latest school enrollments by Form where each household had a unique household number. This data was provided in the Welfare Monitoring Survey of 1997, which was stratified according to the eight administrative provinces and all the districts. The provinces are referred to as regions for the sake of uniformity given that the data was collected for planning purposes. Before doing a detailed analysis of the girls' school going age-children it was necessary to examine the overall enrollment of children in secondary school level of education irrespective of their ages.

Table 1: Percentage distribution of female Children aged 13-22 years by secondary school attendance

Age in completed years	Not Stated	Primary school	Secondary school	Technical	University	Total Count
13.00	5.5	93.0	1.6			697
14.00	5.6	88.5	6.0			719
15.00	7.5	80.3	12.1	0.2		604
16.00	12.5	65.7	21.7	0.2		591
17.00	17.4	53.8	27.9	0.9		448
18.00	25.4	41.7	31.7	1.0	0.2	508
19.00	31.4	36.8	29.4	2.4		296
20.00	41.1	31.7	25.8	0.9	0.6	341
21.00	49.7	25.7	19.4	4.2	1.0	191
22.00	48.9	28.9	18.9	1.1	2.2	180
Total	17.9	64.0	17.2	0.7	0.2	4575

Sex of the member = Female
Source: Author's own computation based on Welfare Monitoring Survey 1997

From the sample taken it was found that the children in the ages 13 -22 who were attending school were 6795. Out of these, 3124 were girls and 3671 were boys. From the computation it is also clear that not all the children in these age categories were actually in secondary school. The highest percentage (76.1%) reported were in primary level of education whereas a mere 22.3 percent was in secondary school level. This therefore prompted the researcher to use the age category of 13-22.

Data was also computed on the availability and quality of secondary school teachers, the percentage distribution of children who have ever attended \ attending school vis-a-vis student teacher ratio (interaction of variables) of secondary school. The logistic regression was used for data analysis. It is apparent that some of these variables are subject to

measurement problems and we proceed with the analysis with this shortcoming at the back of our minds.

3.4 The Model

The demand function was estimated using the logistic regression model. The logistic regression model was run using the STATA computer programme using the following demand function: -

$$E = f\,(FE, Me, YP, P, EG, Fs, R, DP, A) \qquad (1)$$

Where
E = School Enrollment of girls
Fe = Highest level of education of the father
ME = Highest level of education of the mother
P = Secondary school expenditure
Fs = Household size
R = Region
D = Child labour
Y = gainful employment of parents Ru = Rural Residence A = Age of the child

The Dependent variable, E, is school enrollment for girls at any given time period measured by a girl effectively enrolled in secondary school. According to the education system in Kenya, one joins secondary level of education at the age of 14 years and the education cycle at this level takes a maximum of 4 years if there are no repetitions.

The dependent variable takes the value of 1 if a female is enrolled at the secondary school level and 0 otherwise. The logistic equation can predict the occurrence of the event, which is the enrollment of a girl within a particular household with a given set of characteristics possible. The explanatory variables are expected to have the following results. The variables are grouped into 4 categories. The first category includes the characteristics of the girl. These characteristics include; age, the job she was engaged in the last 12 months before the survey. In this study, age is measured in years and the focus is in the age group 13-22 years. It is expected that being older reduces the chances of girls being enrolled in school.

The second category of the variables includes the household characteristics such as the household income, costs of schooling and the type of school they enroll their daughters in. In the study parental employment was taken as a proxy to measures household wealth. The schooling costs include; fees, uniforms, books, transport, boarding and "harambee".

The third category includes characteristics that relate to the parents of a child. These characteristics were given in the welfare monitoring survey and included the highest level of education attained by the mother and the father. This is measured by the highest grade reached primary, secondary, or university. More educated parents are expected to enroll their daughters in school. Lastly, the study also looked at the demographic characteristics, which included the household size, the geographical region or location.

3.5 Descriptive Statistics

In this section, the aim of the study was to find out the relative importance of the different factors determining the enrollment of girls in secondary school education. Using regression analysis, it is possible to ascertain from all the factors examined in the above section in what direction they affect the enrollment of girls in secondary school education, and the magnitude of the associations. It should be noted that because of the nature of the dependent variable, that is, categorical and dichotomous, logistic regression is one of the appropriate analysis that could be applied to the data. The demand for education by the households was assessed by observing the number of children in the household effectively enrolled in secondary school at any given time. The dependent variable in the demand function (1), is a binary variable, which has a value 1 if a female student was effectively enrolled in school at the time of the survey. The variable has a value of 0 otherwise. In Kenya formal education is undertaken in four stages. Pre-primary stage takes the first 2 years and children are enrolled at the age of four years. Primary education start at the age of six and takes eight years. Secondary education is the third stage and enrolls children from the age of 14 years. It takes a period of four years. This is then followed by university or tertiary education that takes another four years.

4. Research Findings

Table 1: Undergraduate student enrollment in Kenya's National Universities, 1990/91: Gender Ratios by Subject

Subject	Male	Female	Total	Male/Female Ratio
Agriculture	1564	526	2093	34
Horticulture	319	70	389	22
Fisheries	21	2	23	10
Forestry	153	26	179	17
Wildlife Management	104	17	121	16
Wood Technology	90	9	99	10
Product. Technology	106	4	110	4
Architecture	266	15	281	6
Building Economics	85	10	95	12
Land Economics	82	40	122	49
Design	75	56	131	75
Arts & cultural studies	6263	2103	8366	34
Anthropology	331	123	454	37
Fine art	29	9	38	31
B.Ed. (Art)	7040	4995	12035	71
B.Ed (Science)	1304	488	1792	37
B.Ed (Home Econ.)	5	271	276	54.2
B.Ed (Technology)	172	8	180	5
B.Ed (Home Sc. Tech.)	34	15	49	44
E.Ed. (Art-Ext. Design)	180	90	270	50
Information Technology	161	67	228	42
Law	545	204	749	37
Commerce	1450	429	1879	30
Science	2961	468	3429	16
Elect. And Comp. Tech.	112	3	115	3
Engineering	1346	74	1420	5
Vet. Medicine	492	140	632	28
Medicine	686	156	842	23
Dental Surgery	96	54	150	56
Pharmacy	176	55	234	31
TOTAL	**26254**	**10527**	**36781**	**40**

Source: CBS, Economic Survey, 1991.

Even though the gross enrollment rates in Kenya are relatively high by regional levels,   j these have been achieved in the recent past when the negative impact of the manpower   utilization model had taken its toll. This is just a reflection of the curtailed demand for basic education, under the human resource utilization model.

Kenya's high average economie growth rate of 6.5 percent up to the late 1980's, coupled with a vibrant "Harambee" spirit, led to notable achievements in the education sector with a significant growth of the number of educational institutions, student enrollment and high quality education at all levels. The gross enrollment rate (GER) increased from 47 percent at independence to 101.8 percent in 1984 at the primary education level and from 2 percent to 29.4 percent at the secondary school level over estimated trained human resource cannot be said to represent the priority needs of the country. Many can no longer be accommodated in the existing labour market. In as much as the manpower utilization model was intended, unfortunately it was over emphasized.

Some of those who are pushed out of schooling after primary are eligible to join Youth Polytechnics (YPs). Currently, there are about 600 YPs in the country, with majority (368) receiving some of government assistance. Enrollment statistics for Muranga YP shows that girls are again disadvantaged with about a third (36.33 percent) of the 1167 students being female (MRTT, 1994).

5. Conclusion

An analysis of the demand and supply factors that interact to determine the enrollment of the girl-child in secondary school level of education revealed the following. Only about 22.3 percent of the secondary school going age-population was actually currently attending school. That even those children who were currently attending school, a relatively big number were engaged involved in some secondary activity. It is apparent that while boys and girls may occupy the same physical space, it is wrong to assume that they occupy the same social space or undergo the same teaching experience.

In the study, secondary school enrollment varied widely regionally and by district. Children's age strongly affected school enrollment for the girl-child. Age was the most important determinant of enrollment at secondary school level of education. As the child grows older there is an increased tendency to enrol fewer girls in secondary school level of education. This seems to support the earlier assertion made that school enrollment decreases for older girls. This would be due to the fear that parents have of having girls getting pregnant or getting married pre-maturely. When it comes to such girls the parents who are not able to push them through the education system, withdraw them so as they can give a helping hand in household chores or give way to younger siblings so that they can also enrol in school. The academic failure of such girls is likely to be excused on the argument that they will in any case be getting married and hence little need for academic qualifications.

Adult literacy classes should be organised for mothers to sensitize them on the importance of educating their daughters. This would help in improving their attitudes towards the education of their daughters. There is need to promote advocacy and social mobilisation for girls education. To achieve this, seminars should be held in all regions of Kenya, to raise the awareness of the society about the economic and social benefits of girls' education, and the economic and social costs of keeping girls out of school. There is need to convince parents that the benefits of educating daughters outweigh the costs.

There is need to reduce the costs of education so that the private returns of girls' education are greater. Concrete steps should be taken to ensure that parents do not keep their children working without sending them to school. Any parent found to be involving their children in income generating activities instead of sending them to school should be punished. More stringent rules against child-labour should be introduced into the Kenyan laws thus reducing the involvement of minors in the labour force, an aspect that claims more girls from schools. The Government should offer parents incentives to send their daughters to school. In the long term the parents will begin to realise that an educated is

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