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Girls' schooling in rural Bangladesh

Simeen Mahmud
Bangladesh Institute of Development Studies
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1 Introduction

One of the most striking recent changes in Bangladesh is the near universalisation of basic schooling and the closing of the gender gap in school attendance in a society characterized by social and economic devaluation of women and girls and restrictions on their public mobility. Most primary school age children and half of secondary school age children in Bangladesh today attend school with girls outnumbering boys. The gross enrolment rate[1] at the primary level (grades1-5) is close to 100 percent (the net enrolment rate is 85%). Female enrolment at the secondary level (grades 6-12) has also increased quite considerably, gross enrolment rising from 13.6 percent in the 1990s to 46.9 percent in 2000, with 5 million girls enrolled in 2000 representing 49.7 percent of total enrolment (Unesco 2003). Rapid and consistently rising demand for children's education since the early 1980s, a major force in Bangladesh's rapid demographic transition, has been crucial in this profound social transformation (S Mahmud 2004; Hossain and Kabeer 2004). State interventions to subsidize the cost of schooling and create a more favourable environment for girls' schooling have also been key (Amin and Sedgh 1998; Khandker et al 2001), suggesting an interdependence between the forces of demand and supply in determining enrollment levels.

Despite girl's increased access to basic education, however, only two thirds of all girls enrolled at the primary level finish grade 5 and are eligible for secondary school, and of them not all enter secondary school. Hence, gross enrollment at the secondary level is not only much lower compared to the primary level but declines with rising grade, standing at 60 percent in grades 6-8, 51 percent in grades 9-10 and 48 percent in grades 11-12 in 2000 (WB 2003). A major reason why girls' gross enrolment in secondary school is much lower is that more than one third of girls entering secondary school dropout before completing grade 10[2]. Moreover, while enrolment at secondary level has significantly improved for girls, both in an absolute sense and relative to boys, educational attainment in terms of repetition and performance have been poorer compared to the primary level; the repetition rate was more than twice that at the primary level at 11 percent (Alam and Begum 2004).

This means that although households and parents are investing in girls' schooling at the younger ages (under 12), they are less inclined to do so for older adolescent girls. Thus, the cost benefit trade-offs for girls' secondary schooling continue to vary from household to household, causing differential levels of school enrolment and continuation, indicating that government subsidies reduce some costs of girls' school but cannot equalize these trade offs. Despite financial incentives schooling behaviour of adolescent girls are mediated by many other

[1] Children enrolled in grade as a percentage of all children in target age group.
[2] In 2000 the drop out rate for girls in grades 6-10 continued to be very high (38%) and higher relative to boys (37% total).

factors at the community, household and individual levels that do not come into play for younger girls. Different school outcomes also carry different implications for girl's current and future wellbeing.

This paper examines schooling behaviour of adolescent girls in rural Bangladesh to understand the factors behind different schooling outcomes and their possible impact on girls' wellbeing.

2 Rising demand for girls' education: what does it mean?

The tremendous rise in school participation is a fairly recent phenomenon in Bangladesh. Primary school enrolment rates increased gradually and with considerable fluctuations until the 1980s; then rose rapidly and consistently doubling in the last decade from merely 46 per cent in 1991 to nearly 100 percent in 2000 (Hossain and Kabeer 2004, pp 4093). The rise in secondary school enrollment was even faster, increasing more than three-fold in the decade of the 1990s. The transition rate from primary to secondary level, which is the number enrolled in grade 6 as a percent of the number completing grade 5, increased steadily during this period and also attests to rising demand for girls' secondary school[3]. Moreover, with the exception of grades 11-12 girls' gross enrolment exceeded that of boys for all grades in secondary school[4] and the female advantage was seen in both poor and non-poor households (WB 2003). Hence, all evidence indicates that the demand for girl's education at secondary levels has actually been rising; and the more surprising change is that the rate of increase is faster for girls' than for boys. This is indeed remarkable in a society fraught with gender disparity and lower parental investments on daughters than on sons.

Rising school participation indicates that household decision making with respect to investing in girl's education is undergoing rapid change. When parents are under resource constraints and children start work early schooling is a conscious parental decision based on real costs and perceived benefits of schooling. Parents will send children to school so long as benefits outweigh costs and will stop doing so when the benefits cannot adequately compensate for the costs. Both demand and supply side factors operate in the parental decision by influencing these 'costs' and 'benefits'. In Bangladesh parents face higher costs but lower benefits from girls' education because of son preference, perceptions of lower social returns from girls' education and higher direct returns to parents from investing in sons' education (Mannan 1988).

Costs of schooling are real, readily identified and immediately experienced. Costs include direct money costs for fees and books and indirect money costs of better clothing, better food, and private tuition to improve performance. There are

[3] The transition rate from primary to secondary was 79% in 1994, and 83% in 1995, and estimated to be 83% in 1997, from national educational statistics collected by BANBEIS (WB 1999, pp21).
[4] Estimates based on 2000 Household Income and Expenditure Survey.

also non-money costs in terms of the opportunity costs of long work days or foregone income (paid work for boys and unpaid work for girls), low returns from schooling and the costs of delayed marriage for girls (higher dowry, greater insecurity). Benefits of girl's education, on the other hand, are less real since they are more perceived than actual and less experienced because they are usually deferred (long term), and harder to pinpoint. They include vague notions of being included or of not being different, being equipped to get along in the world, a possible fallback against lack of material resources, a way of keeping boys out of trouble (in urban slums) and girls busy until marriage. Returns from investment in education, especially girls' education, are also less visible and less concrete than returns from other types of household investment in human capital such as investment on health, nutrition, housing, etc.

In Bangladesh demand side factors that influence the cost-benefit calculations of girls' schooling operate at the community, household and individual levels. Community factors are norms regarding girls' public mobility and marriage, perceptions about relative returns from education, practice of sending girls to school, and even cultural preference for sons. Household level constraining factors are poverty and vulnerability, household need for labour, and parental aspirations. Household vulnerability or exposure to risk (from events like bad harvest, loss of investment, sudden illness, death, flood) is particularly seen as an important determinant of schooling by increasing the need to diversify investment on children (Amin and Arends-Kuenning 2001). Individual characteristics include work responsibility, which increases the opportunity cost of schooling (this may also be seen as a household factor), attitudes about marriage and work, own aspirations and interest in getting an education.

There is evidence that from the early 1980s changes in some of the above factors led to a reappraisal of parental decisions regarding investment in children[5]. Schooling of children was a conscious investment, even in poor families, to acquire skills needed for non-farm employment[6]. During the 1980s most of the costs of investing in children were borne by parents themselves, and it is only since the early 1990s that some of the costs was mitigated by increased access to public services and financial incentives[7].

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[5] The expansion from the early 1980s into new non-farm occupations, mostly low-productivity self-employment, absorbed the growing numbers of landless rural workers and diversified the income sources of the poor, but overcrowding in these activities undermined productivity growth and limited scope for children's labour contributions. Thus, children's economic contribution to poor households started to decline in rural areas due to lack of marketable skills and low labour productivity. Transfer of rural land poor to urban areas also meant that children had to acquire new marketable skills in order to be employable in the urban settings (Mahmud 2004).

[6] In the Matlab area the percentage of children with schooling increased from 51 percent to 71 percent between 1976 and 1996 (Razzaque et al 1998, pp58). Other evidence of increased conscious parental investment in children includes the widespread use of ORS and rapid uptake of immunization to improve health and survival prospects of children, with closing gender gaps as well.

[7] Programmes like the Food For Education and FSSP provided financial incentives to parents to send children, especially daughters, to school.

Supply side factors that influence the cost-benefit equation operate primarily through school provisioning (curriculum, quality of teaching, performance monitoring) that attempts to enhance the returns from education and through exogenous policy and programme that attempts to increase access and mitigate costs of schooling arising from structural, household and individual barriers. Government action to promote a favourable environment for girls' school participation (slogans like 'education for all'), expansion in the number of schools and subsidies to reduce the short run costs of education (food/cash for education, free tuition, stipends for girls) have actually been quite successful in influencing household cost-benefit calculations (Amin and Sedgh 1998, Khandker et al 2001). Girls' enrolment and retention have generally increased, but perhaps at a cost to boys[8]. Supply side interventions have reinforced the value of education generally, and the value of girls' education specifically in a society that invests less on girls than on boys[9]. They also appear to have strengthened the idea that education was a necessity to get on in life, and even the idea that education was an equalizer in a highly stratified society by contributing to the belief that education was now a universal right whereas in the past it was thought to be the prerogative of the wealthy.

Unfortunately, supply side factors can affect demand for girls' education only up to a limit; they can homogenize aspirations but cannot equalize the cost-benefit trade-off faced by households. Cost mitigating interventions increase the preference for girls schooling in some households only (girls from non-poor households are able to take advantage to a greater extent) and are not very important in ultra poor and very poor households (N Hossain 2005). Financial incentives unintentionally exclude the poorest girls because of fairly restrictive criteria that are difficult to meet without incurring additional expenditure, like private tuition to maintain the minimum grade level and pass public examinations. It is hardly surprising, therefore, that even while secondary school enrollment of girls has expanded tremendously discontinuation and repetition rates have not diminished (S Amin et al 2002). There is also little evidence that supply side efforts have a positive effect on school performance, suggested by the disturbing trend of girls' declining performance in public examinations and relatively poorer learning capabilities (particularly in numeracy) compared to boys[10].

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[8] School enrolment rate for girls increased 14 percent per year after the introduction of the programme and had a positive impact in closing the gender gap at the secondary school level, accelerating the trend that had already existed before the programme was introduced (Khandker et al 2001). One additional year of programme duration increased the probability of girls continuing school by 60 percent, while reducing boys survival in school by 14 percent[8] (Khandker et al 2001).

[9] A common response of villagers to questions on the value of education was "Why would the government pay the poor to go to school, or girls to go to school, if it was not important?" (Amin and Sedgh 1998).

[10] The SSC pass rate for girls dropped from 52 percent in 1998 to 45 percent in 2002, while the HSC pass rate fell from 37 to 27 percent. Moreover, girls score less in tests to assess learning associated with schooling, especially in numeracy, but girls appear to benefit more from each additional year of school relative to boys (Amin and Sedgh 1998).

Thus, we observe some girls never enroll, some enroll but discontinue for different reasons (again related to household socio economic status), some leave temporarily and return to repeat a grade, while some continue to complete the required grades and take the public examination. Hence, demand side factors/barriers remain important causing household demand for girls' education to be differentiated and fragile, reflected in differential schooling behaviour and outcomes for girls even when they share the same social and policy context.

3 Data and methods

This paper explores the household decision on girls' schooling focusing primarily on the demand side factors that constrain or promote school enrollment and school continuation of adolescent girls in rural areas of Bangladesh. The study uses data from a panel survey of nearly 3000 adolescent girls (between ages 13 and 22)[11] in rural areas in three regions of Bangladesh: Chapainawabganj in the northwest, Sherpur in north central and Chittagong in the southeast. The surveys were designed to inform policy and programming on a range of issues important for adolescents in the areas of education, health, work and livelihoods, and social life. The baseline survey was conducted between January and June 2001 on randomly selected adolescents residing in 90 villages (for a description of the baseline survey experimental design see S Amin et al 2002).

The follow-up survey was conducted from January to June 2003 after the programs had been implemented in the intervention villages. 2386 females respondents who had been successfully interviewed in the baseline survey were contacted for a follow-up interview, and 2214 of these respondents were successfully interviewed[12]. A detailed community profile was also conducted at this time for each village in which the survey was undertaken. The community profile was based on interviews with at least three key informants from the community including programme personnel involved in the particular intervention. Since the program was directed towards adolescent girls only females were interviewed in the follow-up survey (see S Amin and L Suran 2004).

In this analysis of school behaviour only respondents between the ages of 15 and 22 were included in the analysis to avoid age-related outcomes that could potentially bias the results. In addition, only those respondents who were

[11] The survey chose the age of 13 rather than the usual age of 10 as the starting point because the planned intervention was to target girls 13 and older. The ending age range was deliberately chosen to be later than the usual cutoff age of 19 for adolescent surveys because previous experience in adolescent research showed that age reporting is problematic and many respondents who are younger or older report their age to be 20. This is particularly problematic when survey respondents do not know their age and the interviewer has to estimate it as was the case with most of our respondents.

[12] 584 of the 2386 respondents with whom follow-up interviews had been attempted had migrated, mostly due to marriage. Interviewers asked about the new location of these migrated respondents, and 476 were successfully interviewed.

successfully interviewed in both rounds of data collection were included in the analysis[13]. Since purposive sampling was used to ensure that program membership could be adequately analyzed (purposively sampled respondents represented 15 percent of the study population in the initial survey and 23 percent in the follow-up survey) respondents were weighted according to whether they had been randomly or purposively sampled. In addition, respondents were also weighted by age to ensure that bias due to age would not be present.

We are interested in examining schooling behaviour of adolescent girls, particularly school enrollment and discontinuation, within the existing policy environment favouring girls secondary education (free tuition and stipends to all girls enrolled in grades 6-10). We distinguish between discontinuation due to marriage related reasons (actual marriage and marriage discussion) and discontinuation due to other reasons (too costly, parents did not allow, no interest in school), because marriage is the single most frequent cause for school dropout of girls. The dependent variable 'girls' school outcome' is constructed from school status in the baseline and follow up surveys. There are five comparison categories for school outcome as follows:

never enrolled
past school attendance (enrolled and dropout before 2001)
recent school dropout for marriage (enrolled in 2001, dropout in 2003)
recent school dropout for other reasons (enrolled in 2001, dropout in 2003)
continuous school attendance (enrolled in 2001 and 2003)

School outcome depends upon several background variables whose effects have to be controlled in order to estimate net effects of the explanatory variables on girls' schooling behaviour. Selected background variables were age, marital status and household wealth at the time of the baseline survey and region of residence. These were identified on the basis of findings from the baseline survey (S Amin et al 2002). It is assumed that girls' school attendance declines with age, and is lower for married girls and for girls in poorer households. It is also very likely to vary by region because of differing levels of poverty, economic activity and infrastructure.

Factors that influence the household cost-benefit calculations of girls' education are taken as explanatory variables for schooling behaviour; these have been identified at three levels: community, household and individual. There are three community factors: the proportion of villagers literate, which is a proxy for the value accorded to education by the community; the distance to high school from the village, which is an indicator of school availability; and the distance to main road from the village, or remoteness, which is a measure for exposure to outside

[13] In order to ensure that respondents had been accurately identified in the follow-up survey, responses to a number of variables such as parents' education and number of siblings were matched between the two surveys.

ideas and information. It is assumed that higher the village literacy level, the nearer the high school and less remote the village the lower will be the cost of girls' education at the household level.

Household factors include: household food shortage, an indicator of vulnerability; father's financial support, another indicator of vulnerability; and parents' education which is a proxy for parental aspirations. It is expected that vulnerable households experience relatively higher cost of schooling while parents who have high aspirations for children's education perceive relatively greater benefits from schooling.

Finally, individual factors include: participation in productive work and participation in paid work which measures adolescent girls' other work responsibility; aspiration for a salaried job which reflects high educational aspiration since salaried jobs require some education; preference for girls' age at marriage of 18 or more which indicates a relatively modern attitude or capacity to think beyond the norm of early marriage for girls; and lack of interest in school which reflects low value given to education. Girls who participate in paid work and productive work are assumed to experience a relatively higher opportunity cost of schooling. It is assumed that girls who aspire to a salaried job and have a modern attitude about girls' marriage perceive relatively greater benefits of education, while girls who are disinterested in school perceive relatively smaller benefits of education.

Girls' schooling behaviour is explained through multivariate regression techniques using multinomial logistic regressions[14] of school outcomes on the above community, household and individual factors. The results are presented in the Annex tables, where the estimated parameters of the coefficients are converted into odds ratios by exponentiating them. They are also known as relative risk ratios (rrr). The rrr is the relative risk or odds of being in the dependent variable category of interest and not being in the base or reference category (never enrolled), for the dummy independent variable versus the omitted category of the independent variable. The magnitudes of the estimated odds ratios show the relative size of the effects of explanatory variables on school outcome. Only estimates significant at the 5% level or below are indicated with a * mark.

4 Results

School attendance: 2001 level and trends

[14] Multinomial logit/logistic models (MNLMs) involve response (outcome) variables with more than two categories. They are multi equation models. A response variable (in this case school outcome) with *k* categories will generate *k-1* equations. Each of these *k-1* equations is a binary logistic regression comparing a group with the reference group (in this case never enrolled). MNLMs simultaneously estimate the *k-1* logits.

Table 1 presents the distribution of adolescents by current school status at the time of the baseline in 2001. Over a third of rural adolescent girls in the study population were enrolled in school, while more than one fifth had never enrolled and 43 percent had attended in the past and discontinued. A comparison of the proportions currently in school and never enrolled for ages 13-15 and 19-22 shows that school attendance by adolescent girls has become almost a norm from quite low levels of educational attainment even a few years ago, confirming that expansion in adolescent girl's school attendance is indeed a very recent change. The majority of girls (83%) attended formal mainstream schools while 12 percent were enrolled in religious schools (madrasah) and 5 percent in NGO informal schools. Formal schools follow curricula designed by the government; NGO schools follow special curricula designed by each NGO; madrasahs follow a standard nationalized curriculum with special emphasis on Islamic religious education. The vast majority of girls enrolled in school are beneficiaries of school financial incentives: 88 percent receive a stipend and all receive free tuition. While tuition waiver is given to all girls the criteria for receiving stipends are more stringent (minimum attendance and performance are required).

Table 1: Distribution of adolescents by current school status in 2001, rural Bangladesh

School status 2001	Age group			
	13-15	16-18	19-22	All ages
Girls				
Never attended school	8	20	37	27
Currently in school	71	25	7	35
Attended in past, discontinued	22	55	56	43
Number	919	706	919	2544
Boys				
Never attended school	19	25	32	24
Currently in school	57	37	21	43
Attended in past, discontinued	24	38	47	34
Number	778	549	402	1729

Source: S Amin, S Mahmud and L Huq 2002

The sample for the analysis of schooling behaviour consists of 2183 girls between the ages of 15 and 22 who were interviewed in both surveys. Figure 1 (Annex) compares change in overall levels of school participation in this sample between 2001 and 2003. There was an increase in the level of current school attendance and a decline in the level of 'never attended school'. The increase in the proportion of past school attendance indicates an increase in the proportion of school dropout. Thus, girls' school attendance has increased generally in the

two year period for the study sample, either because girls never enrolled had joined school or because girls who had dropped out (not in school in 2001) had returned and were in school in 2003.

Marriage remained the most important reason for girl's school discontinuation in both surveys and its importance did not decline (41% in 2001 and 42% in 2003). Other important reasons for discontinuation were: schooling is too costly (16% in both surveys), girls were not interested in school (16% and 12% respectively) and parents did not allow (20% and 13% respectively). It may be noted that lack of interest in school as a reason for discontinuation declined in importance both among parents and among adolescent girls, perhaps in response to government programmes that mitigate some of the immediate costs of school.

Qualitative case studies show that respondents for whom marriage discussions had been held were much more likely to have dropped out between the two surveys. The importance of marriage seems to take precedence over education and the issue of dowry appears to be a significant factor in schooling decisions; girls who expect to pay dowry are dropped out of school at higher rates than those who did not expect to pay dowry at marriage. It seems unlikely that government programmes will significantly undermine the importance of marriage in the lives of the respondents until more time has passed and cultural values have changed (Midline report 2004).

School outcomes according to background variables

The distribution of the sample of 2183 adolescent girls according to the five school outcome categories and some selected background variables at the time of the baseline survey are shown in Table 2.

Table 2: Distribution of adolescent girls (15-22 years old and interviewed in both surveys) according to school outcomes and selected background variables

School outcomes	Weighted proportion %	Mean age (years)	% married	% in richest HH wealth quartile	% in poorest HH wealth quartile	% in HHs owning land
continuous school attendee	25	14.5		43	6	97
recent school dropout for marriage	7	14.3		44	3	95
recent school dropout for other reasons	9	15.1		30	14	94
past school attendance	39	17.9		23	18	81
Never enrolled	20	18.6		5	40	74
Total	100			27	18	86
N	2183					

20 percent of sample adolescent girls had never enrolled in school. Of the remaining 80 percent that had ever enrolled nearly half (39%) had attended school in the past and dropped out before the baseline survey and had probably never entered secondary school. 30 percent of those enrolled or one quarter of adolescent girls in the total sample were in school at both surveys (designated as continuous school attendance), and the remaining one fifth (16% of the total sample) had dropped out of school by the time of the follow up survey in 2003, 7 percent dropping out for marriage and 9 percent for other reasons.

Girls in school at the time of the baseline survey, i.e. recent school dropouts and continuous attendees, were of similar average age about 14/15 years and were 3-4 years younger than girls who never enrolled or attended school in the past. They were also more likely to be unmarried. These girls were more likely to belong to households owning land and to households in the highest wealth quartile, particularly compared to girls who never enrolled. Recent dropouts for other reasons were more likely to belong to poorer households than girls who were still in school or had recently dropped out for marriage. Hence, the distinction of recent dropouts by reason appears to be further justified on the grounds that girls who discontinue school for other reasons belong to relatively poorer households.

Annex Table 1 presents multinomial logistic regression results for school outcomes regressed on the background variables. Married girls were less likely to be in school in 2001 (relative to never enrolled), compared to unmarried girls, regardless of whether they discontinue later, but equally likely to have attended school in the past (before 2001) as unmarried girls. It is to be noted that the negative effect of marriage is much larger on school continuation than on school enrollment. Thus, marriage tends to depress the probability of school enrollment in recent years and the negative effect is larger in the case of school continuation. The likelihood of enrolling in school, whether in the past or recently and irrespective of dropping out or continuation, declines as the girl gets older. Girls in Sherpur were less likely to be in school in 2001 (regardless of continuation) but equally likely to be in school in the past compared to girls in Chapai. Girls in Chittagong were more likely to be in school in the past but less likely to be a recent dropout for marriage compared to girls in Chapai. Hence, there are systematic variations in school behaviour according to region, with the lowest school enrollment in Sherpur and the highest in Chittagong. School continuation is also lower in Sherpur compared to the other regions.

Girls in the wealthiest household (fourth quartile) are more likely to enroll in school both in the past and recently, regardless of whether they continue or not, and the positive effect is greatest on school continuation compared to girls in the poorest households (first quartile). For girls in the moderate wealthy households compared to girls in the poorest households similar positive effects of smaller size operate, except that the likelihood of being a recent dropout for marriage is similar. The magnitude of the wealth effect on the probabilities of the different

school outcomes increases with the level of household wealth. Thus, household wealth increases the chances of enrolling in school and the positive wealth effect on school continuation is relatively much larger. Interestingly, household wealth does not appear to lower the chance of girls enrolling and then dropping out, either for marriage or for other reasons, as one would expect. However, it is only in the richest families that girls are more likely to enroll and dropout for marriage, relative to never enrolling, indicating that discontinuation because of marriage is more common for the very wealthy families.

These background controls are entered into all the subsequent regression models, and all the coefficients are seen to be quite consistent in both magnitude and sign, with some slight exceptions for the region dummies. Therefore, they are not reported again for the separate regressions on each of the explanatory variables. The values of the model chi square with degrees of freedom (between 32 and 40) are highly significant and the pseudo R square ranges from .30 to .37. Hence, the estimates of the odds ratios are taken to be quite robust.

School outcomes and community factors

Table 3 shows the bivariate relationship between girls' school outcomes and selected community factors. Schooling outcomes are indeed related to the community factors, but the differences are greater with respect to enrollment and non enrollment rather than school discontinuation and retention. Girls who never enroll are less likely to have a high school in the village, their village is more remote and education is less common among the villagers compared to the four enrolled categories. The differences in proportion with a high school in the village and proportion of villagers literate between the category 'continuous school attendee' and those who drop out are in the right direction but smaller, and the difference in village remoteness, measured by distance from main road, is not very clear.

Table 3: Distribution of adolescent girls (15-22 years) according to school outcome and selected community variables

School outcomes	% with school in village	Distance of village from main road (km)	% village population literate
continuous school attendee	38	2.01	49
recent school dropout for marriage	36	2.17	45
recent school dropout for other reasons	35	1.61	45
past school attendance	37	2.1	43
Never enrolled	28	2.91	35

Annex table 2 presents multinomial logistic regression results for school outcomes regressed on the explanatory community factors. Girls residing in villages with the highest literacy level (fourth quartile) are more likely to be enrolled even if they discontinue later and more likely to continue in school compared to girls residing in villages with the lowest literacy level (first quartile). The magnitude of this positive effect rises as the level of village literacy level increases. Thus, the value accorded to education by the community in which girls live has a positive effect on the likelihood of both school enrollment and school continuation.

The distance of the high school from the village lowers the likelihood of girls' past school attendance, relative to never being enrolled, but has no effect on recent attendance and school continuation. This indicates that non availability of school in terms of distance is no longer a barrier to girls' school enrollment and continuation now as it was in the past. Distance to the main road from the village depresses the chance of past school attendance and recent enrollment and drop out relative to never being enrolled, but does not affect the chance of school continuation. In other words, for girls residing in relatively remote villages the likelihood of never enrolling is greater even than the likelihood of enrolling and then discontinuing.

School outcomes and household factors

Table 4 shows the bivariate relationship between school outcome and household factors of interest. The percent of fathers and mothers with no schooling, the percent of fathers providing financial support and the percent of households facing food shortage is the highest among girls who never enrolled. It is to be noted that the percent of fathers and mothers with no schooling is much higher among girls who enrolled but discontinued due to marriage compared to the other enrolled categories, and least for girls who continue school. The percent of fathers and mothers with more than 6 years of school attendance is highest among girls who continue school. The percent of households with food shortage is least for girls who enroll but dropout for marriage followed by girls who continue school. It seems, therefore, that girls who discontinue school for marriage and girls who continue school are both more likely to come from economically better-off households (if household food availability is taken as a measure of economic status) compared to other school outcomes, suggesting that household income affects schooling behaviour in contradictory ways by increasing the possibility of school continuation and the possibility of school discontinuation for marriage.

Table 4: Distribution of adolescent girls (15-22 years) according to school outcome and selected household factors (percent)

School outcomes	Father never went to school	Mother never went to school	Father 6 or more years of school	Mother 6 or more years of school	Father supports financially*	HH faces food shortage
continuous school attendee	40	59	41	24	84	15
recent school dropout for marriage	71	81	13	5	86	7
recent school dropout for other reasons	51	74	26	9	80	25
past school attendance	58	77	20	6	36	25
Never enrolled	83	95	3	2	21	42

* Girls who attended school in the past, who are older and have a higher propensity to be married, are less likely to report father's financial support since they live with in-laws.

These same relationships are examined through multivariate analysis and the results (odds ratios) on selected household factors are presented in Annex table 3. Girls in households that experience no food shortage during the year are more likely to be enrolled in school, in the past or recently, and to continue school, relative to never being enrolled, compared to girls in households that always face food shortage. The effects are in the same direction but smaller for girls in households that face food shortage only sometimes during the year. Similar effects operate for girls who receive financial support from their fathers compared to girls who do not. The magnitude of the relative risks of school discontinuation for marriage are larger than the magnitude of the relative risks of school continuation, while the magnitude of the relative risks on school discontinuation for other reasons or past discontinuation are smaller. This suggests that household wealth (or non vulnerability) actually increases the possibility of school discontinuation for marriage over and above any positive effect on school enrollment. Thus, household vulnerability depresses the likelihood of school enrollment regardless of discontinuation and the likelihood of continuing school. Girls who have educated fathers and mothers are more likely to be enrolled in school and to continue in school, relative to being never enrolled, compared to girls whose parents have never been to school. The positive effects increase with rising level of parental education and are much larger on the outcome of continued schooling. It is to be noted that the positive effect of mother's education on school enrollment and school continuation are far greater than the positive effect of father's education. Thus, parental education, and particularly mother's education, which reflects parental aspiration for children improves girls' chances of being enrolled and improves to a greater extent their chances of continuing in school.

School outcomes and individual characteristics

Annex table 4 presents multinomial logistic regression results for school outcomes regressed on the explanatory individual characteristics. Girls who engage in any productive work are less likely to be recently enrolled in school and also less likely to continue school but equally likely to have attended school in the past, relative to being never enrolled, compared to girls who do not work.

This is also largely true for girls engaged in paid work compared to girls not doing paid work. However, girls who engage in paid work are just as likely to discontinue school for reasons other than marriage as to never enroll, indicating that . Thus, other work responsibility depresses school enrollment and school continuation more now than in the past.

Girls who aspire to a salaried job are more likely to be enrolled in school both in the past and recently and to continue school, relative to never being enrolled, compared to girls who aspire to self employment. Similarly, preference for girls age at marriage of 18 or more increases the chance of enrolling in school both in the past and recently and to continue school relative to never being enrolled. In both cases the magnitude of the odds ratios show that the effect on school continuation is much greater than the effect on school enrollment. These results indicate that high educational aspirations (since education is necessary for salaried job) and having a relatively modern outlook (think beyond the norm of early marriage for girls) increases the chance of school enrollment and to a greater extent the chance of school continuation. By contrast, girls who declare a lack of interest in school are much less likely to be enrolled and to continue school. Hence, girls own aspirations and interests also influence the decision about their own school enrollment and continuation.

School outcome and girls welfare

Finally, we examine implications on girls' welfare of different school outcomes by looking at daily time allocation. Girls who continue school have to spend the least amount of time in both household chores and in unpaid productive work. Girls who enrolled but discontinued due to marriage spend a lot of time in domestic chores, only less than girls who attended school in the past, and also some time in unpaid productive work. Girls who enrolled but discontinued due to other reasons spend an equal amount of total time working as girls who left school for marriage, but relatively more time in productive work. Girls who attended school in the past spend the most time working, and much more than the others in domestic chores. Time allocation is only one aspect of girls' welfare. It is important to look at the relationship between school outcome and other welfare indicators such as health status, social life, networks and connectedness to have a more complete understanding of girls' welfare. The existing comparison, however limited, indicates that girls who are able to continue school are better-off at least in the short term because of relatively lower work burden.

Table 4 Comparison of situation of adolescent girls according to school outcome

School outcomes	Time spent in productive work (hours)	Time spent in paid work (hours)
continuous school attendee	2.5	0.91
recent school dropout for marriage	5.33	1.39
recent school dropout for other reasons	4.84	2.06
past school attendance	6.86	1.59
never enrolled	7.29	1.56

5 Discussion

The strength of the above analysis lies in the fact that the school outcome variable captures the reality of girls' schooling behaviour more closely than a simple measure of school enrollment. The dependent variable is a composite of two household investment decisions with distinct cost-benefit trade-offs: the decision to enroll in school and the decision to discontinue/continue in school. The interplay of the two decisions results in the observed school outcome for girls. It is important to understand how the different determinants of school outcome (community, household and individual) affect the ultimate school outcome, since the determinants may have opposite influences on the two decisions. What we estimate as an effect (the odds ratio) is in fact the net effect on the observed school outcome. For example, in the case of the outcome 'recent dropout for other reasons' household wealth has a positive effect on school enrollment and a negative effect on school dropout, while in the case of the outcome 'continued school' the effectof household wealth on both outcomes is positive, resulting in a much larger odds ratio.

The findings indicate that the choice of enrolling daughters in school is increasingly coming within the purview of parental decision-making, but the choice of keeping girls in school remains constrained by factors that are more resilient to change. For many of the explanatory variables the effects are much larger, whether positive or negative, on school continuation than on school enrollment. The other observation, which is emerges from comparing effects on past school attendance with the effects on recent enrollment and continuation, is that there is a change over time in the effect of certain factors on school enrollment.

With respect to background factors influencing schooling behaviour, school distance is no longer a barrier to enrollment as it was in the past. This is consistent with the huge increase in the number of schools, which has reduced

the average distance girls have to travel to attend school[15]. On the other hand, the lack of exposure to outside influence and ideas (as indicated by village remoteness) is associated with limited schooling options for girls, even discontinued schooling. The fact that village remoteness does not affect (or depress) the chance of continuing school suggests that other factors may operate in determining school retention. Thus, living in a more connected or accessible village might improve girls' school enrollment but may not necessarily increase school retention. Household wealth and parents educated beyond SSC improves the chances of school continuation to a greater extent than the chances of enrollment, indicating that the money and non money costs of school continuation are far higher than the costs of school enrollment. Reducing the costs of school enrollment was relatively easy; reducing the costs of school continuation appears to be more difficult. Clearly, poor girls are at much greater disadvantage compared to non-poor girls with respect to continuing in school than with respect to enrolling in school. Here, too, stipends that are designed to meet the costs of school continuation may be contributing to this additional disadvantage for the poor by helping girls from better-off households relatively more. In fact, the factors that affect the cost/benefit of school continuation appear to be more difficult to change and less amenable to policy influence than the factors affecting school enrollment.

Forces operating at the individual level also bear important implications for interventions. The negative effect of marriage is observed only for recent enrollment, which may be picking up the fact that stipends are not provided to married girls. Since the propensity to be married has not diminished a great deal (check decline in proportions married) this means that married girls may actually be facing additional disadvantage relative to unmarried girls because of the restrictive criteria of government incentive programmes. Girls' other work burden depresses school enrollment and continuation more now than before, suggesting that over time school attendance has become more demanding in terms of student's time. So performance in school will depend on whether girls are able to invest more time to their school work. Obviously the declining trend in girls' school performance indicates that in reality they are not able to do so. Dropout rates are unlikely to decline if performance does not improve. Finally, supporting girls own educational and career aspirations appears a likely possible strategy to strengthen motivation to enroll and remain in school, as girls own aspirations and interests are an important influence on parental decisions on schooling.
The following case studies illustrate some of the above findings more vividly.

Case one: 20-21 years, never enrolled, married two years ago but separated
Sokhina doesn't have a father or brothers. Her father was an uneducated fisherman. She, her mother and three sisters (and one sister's children) live in one room built upon her maternal uncle's property. Sokhina left her husband after one year because he had a previous wife and children. She can't say how old

[15] The number of secondary schools increased by 50% between 1990 and 2000 from 10, 448 to 15,720 (Banbeis 2002).

she was at the time of marriage but had reached puberty six months before she got married. Her mother ferries vegetables in the village, Sokhina herself collects firewood and dung and has to go quite far to do this, and her sisters all work at the rice paddy mills. Because of an argument in the market there is a pending court case against them and her sister's dead husband. They don't own any poultry or cattle. Sokhina, her mother and eldest sister eat together, the other sisters eat separately. Sokhina cooks for all of them, she cooks only once a day at night. They don't eat lunch. If there is any rice left over they eat it for breakfast, otherwise they go without breakfast too. None of the children in Sokhina's family go to school. Sokhina says children in their village do not study at all. They play and fool around and the boys smoke bidi (local cigarette). Sokhina says "girls here are married off very young because people talk. It's a sin for girls to grow old and stay unmarried. It's been like this from before". Sokhina has never been to Dhaka, she's never even been anywhere outside of Sherpur, she would like to go though.

Case two: 18-20 years, passed class 6, dropped out for other reasons, recently married

Shirin's father works in a brick kiln and earns about Tk 200-250 weekly. Her mother has 3 cows and sells milk everyday, she also makes and sells dung sticks. The money from the milk is used to buy linen and utensils. The family has two rooms made of earth with tin roof, one bedroom with verandah and one kitchen. They have beds and chairs, vessels to store paddy and utensils. Shirin and her mother both are members of associations with whom they save weekly. Both Shirin's parents are illiterate. She had to leave school after class 6 because at the time her father was not earning much as a paddy harvester. She got a job teaching 'baby class' at the Brac non formal school in the village. When she was studying she never repeated a year or missed a year. She had plans to enroll again at the end of the year, she said she grew interested again seeing people around her go to school. Shirin says girls in her village study quite a bit, they go to high school and Brac school but also to madrasah school. She says "The more I can study the more I can climb". She wants to study as far as she can or her parents will allow. Her goal was to pass SSC and stand on her own feet and work. Shirin has learnt that a girl should be married once she turns 18. She says learning all this has helped her. Shirin got married to a boy with whom she had a relationship for two years, the son of her father's cousin, they live two doors away. Shirin's parents have agreed to give Tk 15,000 dowry from the sale of a cow after eid. She is now pregnant, has given up her job and her plans to rejoin school.

Case three: 14-16 years, regular school attendance, dropped out for marriage

Jamila comes from a landed and influential family, and her mother completed her primary school before marriage. Her father is highly educated and is an *Alim* (graduate in the religious line) and teaches in a madrasah, but comes from an ordinary family. They live in a house built on 13 kathas of land, they also own arable land and six mango trees, 2 cows and several chicken. They also have a

bed, tables, a dining table, showcase, and boxes. Jamila was studying in class 9 and her younger sister in class6 in a madrasah, although they had both started out in the Brac school. Her older brothers are also both studying to take the SSC exam. Jamila's life consists of home and school. She goes to school with other girls who study there, she does not go anywhere alone other than school. She says it is because she has grown up. Jomila thinks girls should study at least up to class 10, there's no end to how far boys can study. A girl who has studied a lot can become a teacher. Girls cannot work in the fields, but otherwise can do what boys can but behind a veil. She wants to work after her studies, she said her family will allow her to work, but not in an NGO. Jomila was married before she finished class 10 and the condition was that she would stay in her parents' house until her SSC exam the next year. This did not happen. Jomila is now two months pregnant and looked very happy. Her husband would rent a house in town where he was a madrasah teacher and take her there. Jomila now thinks it is a sin for a man who makes his wife work outside, he might as well take bribes.

6 Conclusions

The tremendous increase in girls' secondary school enrollment in Bangladesh has caught the attention of many both inside and outside the country. Bangladesh is cited as a trend setter with respect to policy favouring girls in a population that is predominantly Muslim, commonly believed to be extremely oppressive on women and girls. In fact, the female secondary school stipend programme, which has triggered this change, has been hailed as a "vanguard programme" of its kind with lessons to be drawn. Notwithstanding the expansion in enrollment, however, this study points to the need to move beyond issues of availability and access to issues of providing better quality education (size of classrooms, teacher pupil ratios, monitoring performance) to increase girls' enrollment and continuation at the secondary level. Getting girls to school was the first step, keeping them there and ensuring that they learn are logical consequences that must follow. This represents the difficulty of 'adapting to success' because programmes and interventions will have to be different and better delivered, raising issues of resources and governance. However, fairly low cost strategies like campaigns and slogans that change norms and perceptions about the value of education can still go a long way and increase enrollment in villages where school practices continue to be unfavourable to girls.

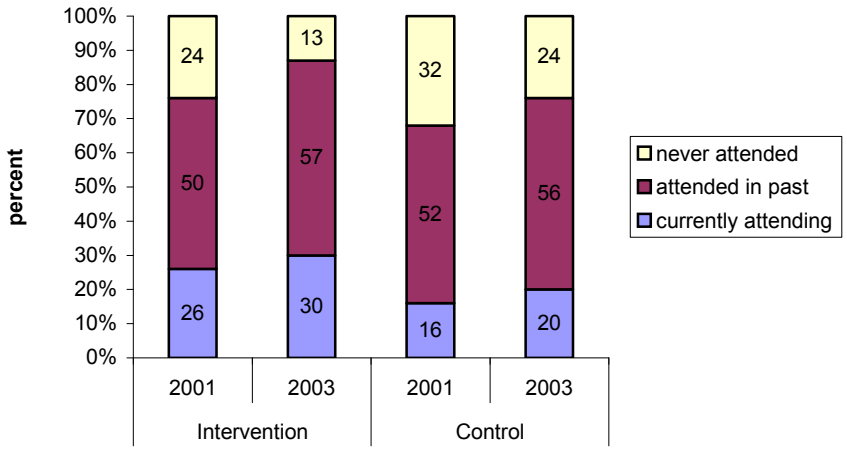
Although aspirations for children's education are now almost universal educational careers of children, particularly of girls, are irregular and repetitive, discontinued and incomplete, poorly monitored and generally not related to performance. These features point to weak conviction about the long term gains from education accompanied by weak motivation for educational investment. If the education imparted is not seen as useful in attaining the livelihood goals of parents and girls, such as reduced dowry, a secure marriage, a good groom, socially valued paid work to 'live nicely' (preferred work in terms of salaried job

and decent pay), then motivation for sustained investment on education will be weak and the demand for girls' education will be limited and fragile. The result will be high enrolment rates, since short term costs of schooling are subsidized, but also high discontinuation and repetition rates and poor performance leading to 'fragmented and fluid' school careers (N Hossain 2005).

Within the rights framework education is seen as a tool for achieving gender equality in situations where girls and boys start from different positions of advantage and are constrained differently. Education is a right in itself, so the first step is to ensure equality of access. But there are rights within education ensuring that the education system reduces gender disparity or promotes gender equality. These rights have to do with providing equality in opportunity for school attendance and completion, performance and learning, and returns from education. These are harder to guarantee since they entail difficult reforms of school systems and school curricula that are bound to be resisted. Finally, there are rights through education, ensuring that education leads to equality of other rights (rights to employment, security, participation). These have to do with bringing about broader social and economic change to transform the initial positions of disadvantage and the structures that constrain boys and girls differently. These rights are the hardest to provide.

Annex

Figure 1. Overall schooling rates among 15-22 year old female respondents, by residence type.



Source: S Amin and L Suran 2004.

Table 1: Odds ratios from multinomial logistic regression of adolescent girls (15-22 years of age) being enrolled in school versus never enrolled on selected background variables, rural Bangladesh 2001-2003

Independent Variables	Enrolled category versus never enrolled			
Background Variables	past school attendance	recent school dropout for marriage	recent school dropout for other reasons	continuous school attendee
Married	.907	.041 **	.032 **	.014 **
Age in years	.880 **	.520 **	.697 **	.552 **
Sherpur	.751	.327 **	.404 **	.469 **
Chittagong	2.606 **	.442 *	1.396	1.323
Wealth q2	1.810 **	1.444	2.594 **	5.047 **
Wealth q3	2.614 **	1.529	4.713 **	12.090 **
Wealth q4	6.297 **	7.561 **	27.128 **	117.194 **
Model chi sq	514.40			
Prob> chi sq	.000			
Pseudo R sq	.30			
N	2182			

Reference category for region is Chapai and for household wealth score the reference category is the first wealth quartile.

Table 2: Odds ratios from multinomial logistic regression of adolescent girls (15-22 years of age) being enrolled in school versus never enrolled on selected community factors, rural Bangladesh 2001-2003

Independent Variables	Enrolled category versus never enrolled			
Community Factors	past school attendance	recent school dropout for marriage	recent school dropout for other reasons	continuous school attendee
Distance to high school	.774 **	.951	.862	.888
Distance to main road	.959 *	.927 *	.895 *	.943
Literate q2	1.527 *	5.029 **	2.623 **	2.776 **
Literate q3	1.372	14.742 **	1.762	2.387 *
Literate q4	3.305 **	114.811 **	5.845 **	8.464 **
Model chi sq	511.72			
Prob> chi sq	.000			
Pseudo R sq	.30			
N	2183			

Reference category for literacy level of villagers is the first quartile for percentage of villagers literate.

Table 3: Odds ratios from multinomial logistic regression of adolescent girls (15-22 years of age) being enrolled in school versus never enrolled on selected household factors, rural Bangladesh 2001-2003

Independent Variables	Enrolled category versus never enrolled			
Household factors	past school attendance	recent school dropout for marriage	recent school dropout for other reasons	continuous school attendee
Never food short	2.284 **	15.868 **	4.145 **	5.829 **
Sometimes food short	1.444 *	6.593 **	1.350	1.888 *
Father supports	1.864 **	3.814 *	2.481 *	2.636 *
Father's edu <=ssc	2.552 **	1.835	4.133 **	5.026 **
Father's edu >ssc	4.470 **	5.257 *	15.986 **	48.892 **
Mother's edu <=ssc	5.466 **	7.906 **	10.980 **	22.552 **
Mother's edu >ssc	7.507	60.503 **	138.183 **	471.565 **
Model chi sq	528.00			
Prob> chi sq	.000			
Pseudo R sq	.31			
N	2183			

Reference category for food shortage is 'always food short'; reference category for parents' education is 'no education'.

Table 4: Odds ratios from multinomial logistic regression of adolescent girls (15-22 years of age) being enrolled in school versus never enrolled on selected individual characteristics, rural Bangladesh 2001-2003

Independent variables	Enrolled category versus never enrolled			
Individual characteristics	past school attendance	recent school dropout for marriage	recent school dropout for other reasons	continuous school attendee
Productive work	.772	.345 **	.296 **	.229 **
Paid work	.791	.015 **	.394	.308 *
Aspires salaried job	4.080 **	81.536 **	17.680 **	28.862 **
Girls should be married >=18 yrs	3.231 **	14.462 **	6.038 **	10.061 **
Not interested in school	.170 **	.039 **	.044 **	.019 **
Model chi sq	514.39			
Prob> chi sq	.000			
Pseudo R sq	.31			
N	2182			

Reference category for 'aspires salaried job' is 'aspires self employment', N=1507.

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