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**Simulating policy alternatives  
for dropouts and girls' scholarship  
program in community primary  
schools: The case of Nepal**

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## Dropouts and Girls' Scholarship in Community Primary Schools

*"Educating a man is educating an individual, while educating a woman is educating a family."*

### 1. GENERAL BACKGROUND

Education is a universally accepted fundamental right of an individual. It is important to all but more important to women, because an educated woman would ensure that her family too receives the necessary education. World Bank Vice-President Lawrence Summers had been a strong advocate of girls' education in the Third World countries. Girls' education not only helps reduce the cycle of female deprivation but yields higher returns than any other investment, both for the family and society at large. Girls' education reduces child mortality, fertility levels, maternal mortality as well as the incidence of violence, disease and unwanted pregnancies.

The process of school education for girls began a century ago in Nepal during the Rana Regime. Girls' schools were opened in Kathmandu, Patan and Bhaktapur. All this in a highly biased, patriarchal society where the birth of a girl in a family dashed the parents' hopes of an insurance cover that the birth of a son would supposedly have provided against the infirmities of old age, and even beyond, for only a son could perform the last rites of his parents and ensure their safe passage to heaven. No wonder then, that according to studies, Nepal ranks second highest on the world index of preference for sons. Clearly, the social system itself is the biggest culprit behind girls dropping out of school and women remaining illiterate. Early marriage is another factor contributing to women's illiteracy and backwardness. Women are discriminated against not only in education, but also in matters related to health and nutrition, among others. Hence, there are reasons aplenty as to why girls and women lag behind men in almost all important development indicators, education included. Among the major challenges in girls' education is low participation of girls in the education process.

However, notwithstanding the challenges in the promotion of girls' education, it is encouraging to note that the growth rate of girls' enrolment in primary schools is higher and faster compared to that of boys. Besides, the national and international agencies, apart from civil societies are more concerned about girls' education than they have ever been in the past. It is for some of these factors that the Education Cell is established at the Ministry of Education and provision made for various scholarships to be granted to girls so that they could make their mark in the education sector. Over the years, the Cell has introduced several activities to promote educational programs among girls, women and the Dalit community, and various scholarships have been provided to boost their participation in education. Under the Primary School Total Girls Scholarship scheme, each girl from level 1 to 5 and between the ages of 6 to 10 is eligible for scholarship to one academic session. Similarly, provision is made to grant scholarships such as the Primary School Girls Scholarship under the Basic and Primary Education Program, and effort is made to enhance the girls' level of education under the scheme Education for the Girls. As a result of some of

these activities, the girls' enrolment rate has increased and their dropout rates have declined. The completion of girls' primary level education, however, remains unsatisfactory. It has been revealed that the completion rate of girl students in community primary schools is alarming. The School Level Educational Statistics of Nepal 2010, consolidated report, flashed that the dropout of girl students in government funded primary schools is 48.3 percent whereas their net enrolment is 93.6 percent. The completion rate of a five-year primary school cycle for girls is 51.7 percent. It is against this backdrop that we have set the following research question:

- Will it be possible to reduce the number of dropouts among girls in primary school?
- What type of policy alternative would be most appropriate and cost effective to address this problem?

Government of Nepal has been striving to increase the enrolment, retention and promotion of girls at the primary school level and to reduce the dropping out of girl students. Among its various categories of programs is the major 100 percent girls' scholarship program, being introduced with its focus on the following objectives:

- a) To improve the enrolment of girls in primary schools.
- b) To reduce the dropout rate of the enrolled girl students in primary schools.
- c) To increase the retention of enrolled girl students in primary schools.

Still, the total number of girls going to community primary schools is increasing by 3.5 percent annually, on an average. The government is granting Rs 400.00 (US\$ 4.8) per girl student as scholarship and has allocated Rs 997,790,000 (US\$ 12,168,000) in the financial year 2011/12. Altogether, there are about 2,494,475 girl students at the primary school level (Department of Education).

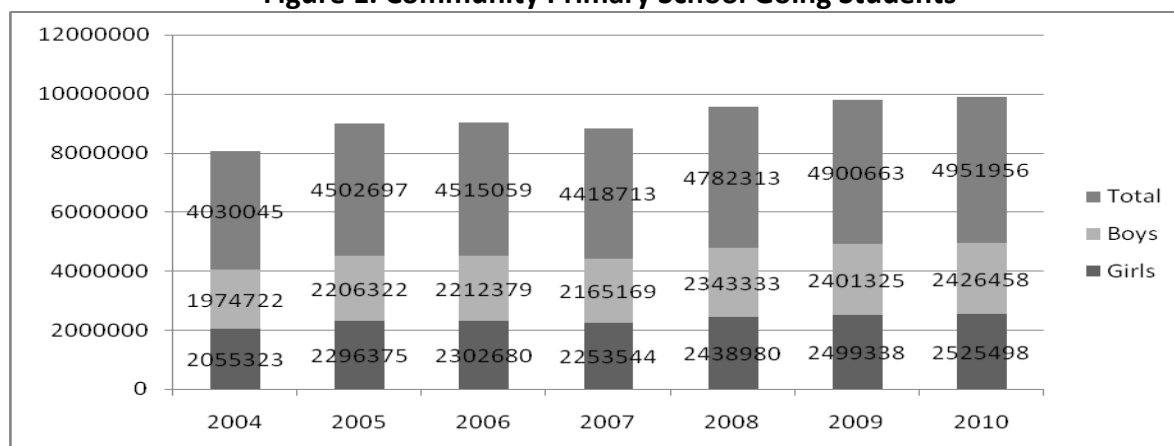
Though the trend of enrolment of girls in primary schools is growing, their retention and promotion to higher grades remains a problem. Dropouts are imminent at each successive grade, with the number being huge in class 2; over 31 percent of girl student's end up discontinuing their studies by the time they are in grade 2. Likewise, there is the dropping out of girl students in grades 3, 4, 5 and 6 — by 12 percent, 9 percent, 7 percent and 16 percent respectively. The difference in the number of girl students between grades 1 and 6 is vast. Among the main reasons attributed to dropouts are: (i) help needed at home, (ii) poor academic progress, and (iii) too expensive to educate girls (NLSS, 2010/11).

Studies have revealed that scholarships for girls are a proven way to stop them from dropping out of school due to poverty-related constraints, which selectively target girls, thus hampering their progress in education. A cost-effectiveness analysis conducted by PRAD/GDN found a positive impact of scholarship on enrolment, which showed an increase of over 16 percent.

To the existing structure of education in Nepal — where grade 1 to 5 is the primary level; grade 6 to 8 the lower secondary level; grades 9 and 10 the secondary level; and grades 11 and 12 higher secondary — there has recently been an indication of change in policy. Accordingly, the government has proposed a two-tier structure of school education. It has

thus attempted to contain the existing ‘fragmented’ structure of schooling within two levels: a) the basic primary level (class 1 to 8), and b) the secondary level (class 8 to 12). Education statistics show that the total number of school-going students in community primary schools is increasing; girl students’ enrolment is slightly higher than that of boys, and the average annual growth rate is around 3.5 percent. Also, there is a growing tendency of parents to send girls for primary education.

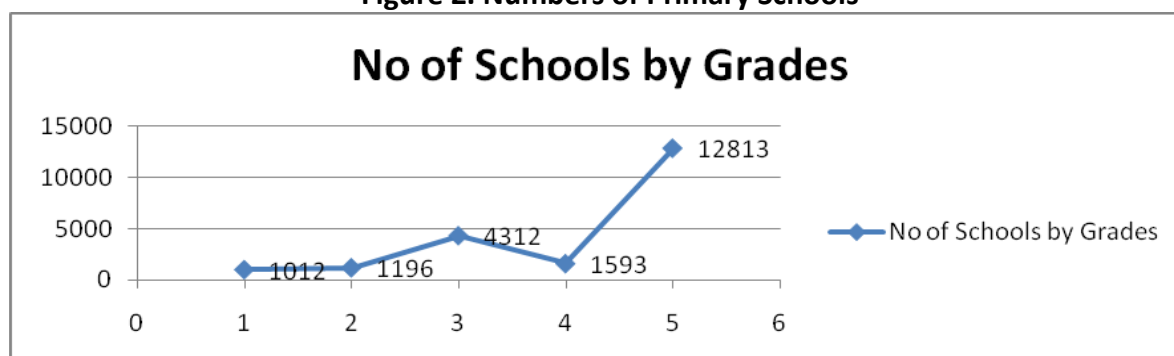
**Figure 1. Community Primary School Going Students**



Source: Flash Report 2010/11, Department of Education, Government of Nepal

There are different categories of primary schools: 1012 are running just grade 1; 1196 grades 1 to 2; 4312 grades 1 to 3; 1593 grades 1 to 4, and 12813 grades 1 to 5.

**Figure 2. Numbers of Primary Schools**



Source: Flash Report 2010/11, Department of Education, Government of Nepal

## 2. LITERATURE REVIEWS

Investment in education of girls is increasing. It yields many returns, including the health and economic well-being of women, their families and nations (Herz, 2004). Despite the recent progress in girls' enrolment levels, statistics from 157 countries indicate that only one out of three countries had attained gender parity in both primary and secondary education in 2008 (UNESCO, 2010). According to UNESCO estimates, almost 50 percent of the 157 countries are unlikely to meet the Millennium Development Goal target, which is “to

eliminate gender disparity in primary and secondary education no later than 2015” (MDG-Goal 3, Target 4). Thus there is much interest in identifying the most effective ways of increasing girls’ completion rates in education.

The UNESCO report identifies successes through scholarship schemes that provide access to secondary education in Malawi and Bangladesh. It talks about the Female Secondary School Assistance Program in Bangladesh, which requires parents to ensure that their daughter’s attendance for each school year is at least 75 percent, that she achieves at least 45 percent marks, and remains unmarried throughout secondary school in order to get the scholarship. In other countries, additional support by way of safe board and lodging for girls is included (for example, in Cambodia there is a program to house girls with local female teachers).

Deon Filmer, and Norbert Schady, “Getting Girls into School: Evidence from a Scholarship Program in Cambodia,” 15 March, 2006, state that increasing the schooling attainment of girls is a challenge in much of the developing world. In this paper we evaluate the impact of a program that gives scholarships to girls making the transition from primary to secondary school in Cambodia. We know that the program had a significant, positive effect on girls’ enrolment and attendance in school. Our preferred set of estimates suggest program effects of 30 to 43 percentage points on enrolment and attendance at program schools; scholarship recipients were also more likely to be enrolled at any school (not just program schools) by a margin of 22 to 33 percentage points. The impact of the Japan Fund for Poverty Reduction (JFPR) program appears to have been the maximum among girls from the lowest socioeconomic status at baseline. The results we present are robust to a variety of controls for observable differences between scholarship recipients and non-recipients, to unobserved heterogeneity across girls, and to selective attrition out of the sample.

A study in Gambia estimates the impact of a nation-wide scholarship program on school enrolment of female secondary students, implemented in the country to reduce gender disparity in education. In the regions where the scholarship program was implemented, all the girls attending public middle and high schools were exempted from paying school fees, which were earlier mandatory. The gradual implementation of the project provided a unique opportunity for a rigorous assessment of the impact of the scholarship program on enrolment. Two nationally representative household surveys carried out in 1998 and 2002/03 were used. By 2002/03, about half of the districts in the country had benefited from the project. It was found that the program increased the enrolment of middle and high school female students by 9 percentage points, and increased the years of schooling attained by 0.3 to 0.4. The program had no significant impact on enrolment or years of schooling attained for male students at any level. However, it was felt that the quality of education may possibly have declined as the regions experienced increases in student-teacher ratios.

A USAID project — Improving the Efficiency of Education Systems (IEES) — had found that sending girls to school is a secondary consideration among many families because of societal attitudes towards girls and family financial constraints. To bring girls’ enrolment and attendance in line with that of boys’, the Focus Group participants suggested increasing the number of scholarships to cover a larger number of female students. This would ease the financial burden of parents in sending their daughters to school. Although this suggestion is

costly to implement, it nonetheless appears desirable, at least for a given period of time, and could potentially change attitudes and behaviors towards girls.

### 3. POLICY GOAL AND ALTERNATIVES

#### A. Policy Goal

Table 1 provides a brief overview of the positive impact of scholarship on enrolment and dropout of girl students at the primary level of education:

**Table 1. Dropout and enrolment rates before and after the implementation of girls' scholarship program**

Grade	Before (2009/10)		After (2010/11)			
	No.	Dropout %	No.	Dropout %	Increase in enrolment	%
1	620526	0	738722	0	118196	16.00
2	420151	32.29	512085	30.68	91934	17.95
3	359670	14.40	451988	11.74	92318	20.42
4	323816	9.97	409305	9.44	85489	20.89
5	301195	6.99	382375	6.58	81180	21.23
Total	2025359		2494475		469116	

Source: Flash Report 2010/11, Department of Education, Government of Nepal

Though in recent years there has been a significant increase in girls' enrolment rate, the problem of high dropout rate still remains a serious issue. The pace at which improvement takes place is very slow. It has been estimated that the dropout rate of girl students at the community primary schools is as high as 48 percent. This has raised concerns among all sections of society regarding the utilization of scarce resources.

Primary level education, including the provision of text books, is free in all government-managed schools in Nepal. Nonetheless, the dropout rate of girl students remains alarmingly high. This has been attributed to rampant poverty, to social norms that encourage gender discrimination, and to lower socioeconomic status of people living in rural areas; 25 percent of the population is still below the poverty line. Hence, although the ultimate policy goal is to increase the primary level cycle completion rate, the immediate goal of this simulation exercise would be: To reduce the girls' dropout rate in government-managed primary schools in Nepal.

## Physical Targets

The following targets (Table 2) have been set to help achieve the immediate policy goal.

**Table 2. Targets**

	<b>2012*</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Reduce girls' dropout rate	48.3%	43%	35%	23%	7%
Increase primary cycle completion rate	52.7%	57%	65%	77%	93%

\* Current estimate

## B. Policy Alternatives

The policy alternative proposed for the achievement of the policy goals as well as the physical target is: Make provision of scholarship to all girl students mandatory in government-managed primary schools.

### The Ongoing Girls' Scholarship Program

The scholarship scheme has proved to be very effective in enhancing student enrolment and retention levels as well as in reducing dropout rates in developing countries. At present, girls' scholarship program in community primary schools is a popular project of the Government of Nepal.

The scholarship program is among the government initiatives aimed at getting the school-going age children to not only join school but to continue their studies till the time of completion. Now, the 100 percent Girls' Scholarship Program (GSP) — part of the Nepal government's commitment to translating many international and national instruments to ensure marginalized and disadvantaged girls' access to education — is launched. In 2010/2011 the Ministry of Education (MOE) expanded the 50 percent GSP to 100 percent GSP throughout the country. Past studies have shown positive correlation between the scholarship incentives and educational indicators. This program, therefore, has an impact on girls' enrolment, retention, class promotion and their overall performance in education, and hence has been taken as one of measures to reduce dropouts among girls at the primary school level.

The dropout of girl students between grades 1 and 2 is particularly significant. Hence there is an urgent need to channel funds and attention at the very point where the problem starts. The gap between the other grades is comparatively small.

Currently, under the Primary School Total Girls' Scholarship scheme, each girl student from grades 1 to 5 and between the ages of 6 to 10 in government-funded community schools is entitled to scholarship for one academic session and receives Rs 400 (US\$ 4.7) annually. It has, however, been argued that the current scholarship amount is inadequate to meet the



minimum educational requirements of girl students; hence an increase in this amount is recommended to enable them to continue with their schooling.

#### **4. THE SIMULATION SCENARIO**

Based on the feedback received from a workshop held in Delhi, two possible scenarios have been envisaged for policy simulation:

- Status quo scenario, i.e. continue with the current scholarship amount of Rs 400 per annum per girl student.
- Double this scholarship amount to Rs 800 per annum per girl student.

#### **5. METHODOLOGY**

- Desk Study - flash reports, educational statistics, literature reviews
- Data collection - Ministry and Department of Education, Government of Nepal
- Cost of scholarship has been taken on the basis of cost per girl student. Simulation has been done on constant price basis.
- Cost data to determine the budgetary requirements is derived from fixed growth rate and estimated.
- For conducting the simulation as an exercise we have adopted the cohort analysis approach where we have considered the primary level girls' enrolment for 2012 as the cohort and carried forward the same number taking into consideration the current and projected dropout rate by levels. For the sake of simplicity the exercise does not include the new enrolment rate of girl students in 2013 and onward.

#### **Assumptions**

We plan to simulate the funds required for scholarships for girl students at the primary school level on short, medium and long-term basis to mitigate the problem of dropout to aid the completion of primary school cycle. The following are the assumptions made for the simulation:

- The simulation is conducted on government expenditure in public schools
- Scholarship cost is Rs 400 per girl student
- The dropout is specific to the primary level (grades 1 to 5) only
- The dropout rate in grade 2 is 31 percent and in grades 3, 4, and 5 it is 12, 9, and 7 percent respectively
- The annual average enrolment growth rate is 3.5 percent
- The dropout rate will be reduced by 10 percent each year
- Contribution of scholarship for increasing enrolment is 16 percent.

## 6. RESULTS

### Estimating the Basic Parameters

**Table 3. Enrolment at primary level by gender, share of girl students, scholarship amount and dropout rate**

Level	Girls	Boys	Total	Girls by grades and levels (%)	Girl Scholarship (Rs.)	Dropout Rate
1	738,722	734,022	1472744	50.2	400	0
1-2	512,085	501,420	1013505	50.5	400	0.31
1-3	451,988	443,165	895153	50.5	400	0.12
1-4	409,305	402,743	812048	50.4	400	0.09
1-5	382,375	376,134	758506	50.4	400	0.07

- The dropout between grades 1 and 2 is highest: 31 percent.
- The dropout ratio gradually decreases as higher grades are reached.

### Estimating Dropout Rate and Cost of Scholarship in Status Quo Situation

#### Assumptions

- The growth in girls' enrolment is calculated based on past records. The available data shows that enrolment grew by 3.5 percent annually during the period 2004 – 2010 and it is assumed that the same trend will continue.
- The dropout ratio is calculated for a primary education completion cycle. The dropout from complete primary cycle is calculated as the cumulative dropout ratio at various grade levels. The dropout before completing the primary level is 48 percent.
- The girls' scholarship amount will be Rs 400 per student per annum.

**Table 4. Estimation of total enrolment of girls in school, by year, with assumed dropout rate: Status quo**

Grade	Girls' Enrolment in 2012	2013	2014	2015	2016	Total
1	738722					
2	512085	509718	0			
3	451988	450635	448552	0		
4	409305	411309	410078	408182	0	
5	382375	380654	382517	381372	379610	
Total	2494475	1752316	1241147	789555	379610	
Scholarship (Rs.)/Annum	400	400	400	400	400	
Cycle completion rate					0.51	
Dropout						359112*
Total cost of scholarship	997790000	700926284	496458844	315821820	151843822	2662840771

\* Total number of girl students who dropped out during the completion cycle.

## Estimation of Cost under Policy Alternative

- Average annual growth rate in enrolment is assumed to be 3.5 percent.
- Each year the dropout rate falls by 10 percent at each level.

**Table 5. Estimation of total enrolment of girls in school, by year, with assumed dropout rate: Alternative Scenario**

Grade	Girls' Enrolment in 2012	2013	2014	2015	2016	Total
1	738722					
2	512085	583590				
3	451988	501843	571919			
4	409305	451988	501843	571919		
5	382375	409305	451988	501843	571919	
Total	2494475	1946727	1525750	1073762	571919	
Scholarship (Rs.)/Annum	800	800	800	800	800	
Cycle completion rate					0.77	
Dropout						166803*
Total cost of scholarship	1995580000	1557381344	1220599898	859009498	457534858	6090105598

\* Total number of girl students who dropped out during the cycle

Under the status quo scenario the expected expenditure for girls' scholarship has been estimated based on the present amount of Rs 400 per girl student per annum. It is estimated that a total cost of Rs 2662 million will be incurred during the 5-year period 2012 – 2016.

We argued that the current dropout level could be reduced if we increase the scholarship amount, though the adequacy of the amount needed to be reviewed. We tried to obtain information on out-of-pocket expenditure on education by parents; no such information was available. We proposed to simulate this by doubling the scholarship amount from the current Rs 400 (US\$ 4.7) to Rs 800 (US\$ 9.3) to discourage the dropout of girl students. Under this alternative scenario a total expenditure of Rs 6090 million is estimated.

Results have shown that doubling the scholarship amount could reduce the dropout during the primary grade cycle to 166803. In the status quo scenario it is estimated to be around 359112 resulting in a net gain of 192309. Under the alternative scenario 192309 girl students were prevented from dropping out during the primary cycle.

The analysis is limited in the sense that the estimation does not include the newly enrolled girl students in 1 to 5 grades every year during the simulated period.

By doubling the scholarship amount, the dropout ratio will fall by 10 percent at each level. While an increase in scholarship amount may boost enrolment, we have assumed the same enrolment growth rate.

It can be anticipated that the dropout ratio may fall over the years due to other interventions or changes in other parameters like increase in parents' income or education level; however, we have assumed the same dropout rate over the years to make the simulation simple.

## 7. COST EFFECTIVENESS AND EQUITY ANALYSIS

How cost effective is the policy alternative? The question is difficult to answer. However, the results indicate that per unit cost of averting the chances of dropout is Rs 17821 (US\$ 207) which appears to be on the higher side. In the absence of any supporting evidence it is difficult to arrive at any rational conclusion.

Different studies show that girls from the lower wealth quintiles study at the government and community schools where girls' scholarships are given to people from poorer sections of the population. Hence, we can argue that the benefits of the increased scholarship amount will be enjoyed more by groups of girl children from the lowest wealth quintile

Benefit incident analysis provides a glimpse of the effectiveness of scholarship in terms of equity. It shows the beneficiaries of five different quintiles. We have attempted to address the effectiveness and equity issue. Recently the Central Bureau of Statistics (CBS) published the National Living Standard Survey (NLSS, 2010/11). Based on this, primary school student's numbers are being calculated and distribution patterns arrived at. Since girl to boy students' ratio is roughly 1:1, it has been fitted in girls' enrolment. Distribution in percentage is shown in Table 6.

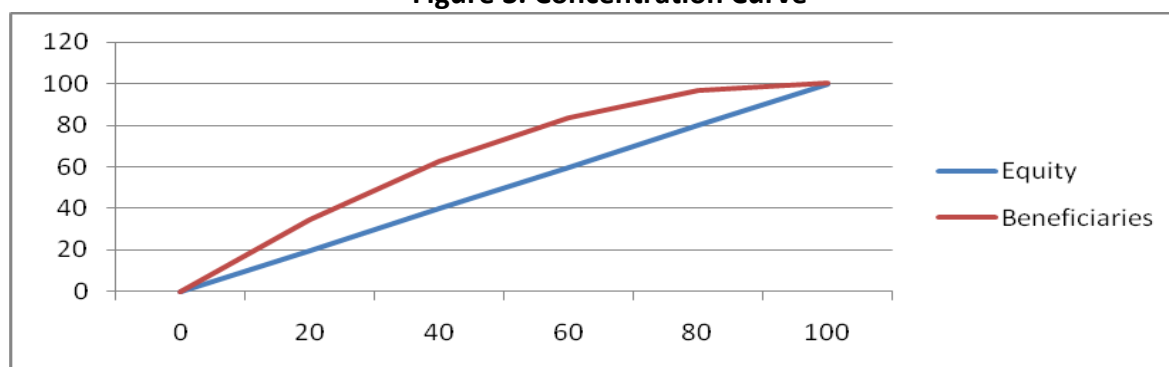
**Table 6. Distribution of primary students and scholarship amount based on NLSS 2010/11 (%)**

Quintiles	1	2	3	4	5	Total
Percentage	34.6	27.8	21	12.8	3.9	100
Total Amount (in millions)	2107.18	1693.05	1278.92	779.53	237.51	6090.11

Source: NLSS 2010/11 and Simulation

The distribution of benefits is progressive; the lowest quintile is highly benefitted and the benefit decreases in each subsequent quintile (in ascending order), indicating that the distribution pattern is progressive and pro-poor. A simple line of equity depicts the progressiveness.

**Figure 3. Concentration Curve**



Source: NLSS 2010/11 and Simulation

## 8. DISCUSSIONS

In terms of coverage, the scholarship program has a much wider reach than any other program aimed at reducing the number of girl students dropping out of school at the primary level. It certainly yields better results. Since the present scholarship provided to girl students at this level, despite being universal, is unable to retain them in school, it would be appropriate to increase the current scholarship amount in order to overcome the problem of dropouts as well as to attract more enrolments at all the five levels of schooling, from class 1 to class 5. Parents' attitude towards girls and their economic situation are the main reasons why girls drop out of school. Parents think that their responsibility towards their daughters ends when they get married; thereafter it passes on to the husbands so they feel that investing in a girl's education is waste of money and time. Girls are, therefore, under immense pressure to involve themselves in household chores. Hence, doubling the scholarship amount and linking it with compulsory attendance and satisfactory results will not only motivate parents to send their daughters to school but will also reduce the dropout rates among girl students and help enhance the quality of education.

The equity analysis reveals that benefit is being concentrated among the lower quintiles. The poor are more benefitted by this investment in girls' scholarship. It has been suggested that a target must be set in a phased manner, from the short, medium and long-term perspective. This will reduce the pressure vis a vis the expenditures involved in the implementation of the program, which is the government's responsibility. The target could thus be achieved comfortably in a timely manner. Dropout from grade 1 to grade 2 is very high — about 31 percent. Social and economic reasons dominate the parents' decision to stop their girls from going to school. Girls are kept at home to help their parents with household work; poorer families send their wards to labor market to supplement the family income. The scholarship amount in grade 2 can be increased, and cash transfer program be introduced so that parents have an incentive to send their wards back to school.

Release of the scholarship amount is often delayed; it reaches at the end of the academic year which discourages the students and parents alike, thus jeopardizing the completion of primary education. Timely release of the amount in installments, together with necessary attendance level would make the program more effective.

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