Evaluation of the Balochistan Rural Girls' Fellowship Program

Will Rural Families Pay to Send Girls to School?

Jooseop Kim, Harold Alderman, Peter F. Orazem

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Abstract

Female literacy is very low in Pakistan, especially in rural areas. Only 15 percent of adult women in Balochistan, the largest but least populated province of Pakistan, have even attended school. The Community Support Program (CSP), which created community girls' schools and trained educated local women to serve as teachers, has been shown to have succeeded in increasing enrollment of girls. The CSP program also modestly increased enrollment of boys. This paper evaluates the success of a program which attempts to subsidize the creation of private girls' schools in rural villages where there are no educated adult women who could serve as teachers. The Rural Girls' Fellowship Program did succeed in increasing the proportion of girls in school. However, the program did not increase enrollment of boys, and may have even led to a reduction of boys' schooling in some villages.

Introduction

Illiteracy is a serious barrier to Pakistan's economic development. Statistics based on the 1995–96 wave of the Pakistan Integrated Household Survey show that 52 percent of males, and only 26 percent of females aged 10 and over, had attained literacy. Illiteracy is an even more serious problem in rural areas with only 45 percent of men and 16 percent of women able to read and write. Women in rural Balochistan, the largest but most sparsely populated province of Pakistan, have the lowest literacy rates at only 8 percent.

A long-established link exists between literacy and economic growth, and so Pakistan's growth is retarded by these low levels of schooling attainment. King and Hill (1993) demonstrate that economic development is further slowed when there is a gap in attained years of education between men and women. Therefore, policies which favor boys' education over girls' education on the presumption that boys are more likely to use the training in the labor market have proven counterproductive. Nonmarket returns to women's education, in the form of improved family health, reduced fertility rates, or other external benefits, can equal or exceed the market return to education in developing countries.

As part of its effort to attain universal primary education by 2006, Pakistan has begun several pilot projects targeted at raising girls' enrollment in Balochistan. Because the government faces serious budgetary constraints, it cannot build enough government schools to insure universal access to primary education. Therefore, these projects have been designed to use partnerships with local neighborhoods or communities to leverage public support with private in-kind or monetary support.

One pilot project used a promise of a three-year subsidy per enrolled female student to induce entry of private schools into urban slum areas of Quetta, Balochistan's capital. The urban neighborhood had to select a school operator; approve fee structure, site, and management policies of the school; and assist in insuring that the school had sufficient enrollment to be viable. An evaluation by Kim and others (1998a) showed that the opening of these schools sharply increased neighborhood enrollments of both girls and of boys.

A second project, now implemented in over 500 villages, is the Community Support Program (CSP). This project helps to establish girls' schools in rural villages in which there is at least one educated woman who can serve as teacher. The government pays for the teacher, training, and supplies, which the village supplies the school facility, and monitors teacher and student attendance. Kim and others (1998b) found that the establishment of a CSP school also increased enrollments of both boys and girls in rural villages.

The finding that boys' enrollments respond positively to the establishment of girls' schools in both these programs has important implications for policy. If girls' and boys' schooling are viewed as complementary goods by parents, then a policy which encourages girls' schooling will have a collateral benefit of raising boys' schooling as well.

One hindrance to the general adoption of the CSP as a strategy for expanding girls' schooling opportunities in rural areas is the requirement that there be an educated woman that can serve as a teacher. With only an 8 percent literacy rate, the supply of rural-educated women who might meet teaching qualifications is very small. These few educated women are not uniformly distributed across villages. Consequently, only a small proportion of rural villages have a qualified potential female teacher and therefore qualify for the CSP. To address this problem, the

Government of Balochistan instituted a new pilot project which attempts to extend the Quetta urban girls' fellowship program to these rural areas.

This paper evaluates the initial progress of these rural girls' fellowship schools, using a randomized selection of thirty villages that had no educated women. Unlike the urban fellowship program, these schools have not been universally successful. Although girls' enrollments rose, boys' enrollments were unaffected on average and even fell in some villages. However, as in the urban fellowship program, the most successful girls' schools were in villages where boys' enrollments also increased or remained stable. This finding once again points to an underlying complementariness between boys' and girls' schooling as critical to the success of programs aimed at raising girls' schooling. It also appears that efforts to raise schooling opportunities for girls are more likely to have collateral benefits of increasing schooling opportunities for boys when existing boys' schools are also inadequate to meet demand for boys' schooling.

I. The Rural Girls' Fellowship Program

The rural girls' fellowship program was to be installed in 10 villages in each of three divisions, Chagai, Mastung/Kalat, and Gwadar. Promoters from the Society for Community Support for Primary Education in Balochistan (SCSPEB), a nongovernmental organization which supports educational initiatives, conducted preliminary surveys of these villages in 1994. A baseline census was conducted to establish the number of girls in the village. Data on the socioeconomic status of the village was collected at the same time. The purpose of the census was to establish that there was a sufficient number of girls aged 5 to 10 to support a school. In the pilot design, this number was set at 25.

If the village met the criteria, the SCSPEB tried to organize the parents in the village into a Village Education Committee which would be tasked with opening a school, hiring a teacher, monitoring school progress, and setting school policies. Because there were no educated women in the village, the parents had to decide whether to hire a local educated male to teach or to hire someone from outside the village to serve as teacher. In the end, 27 schools were opened, with three villages in Chagai failing to excite sufficient interest to open a school.

Village Education Committees (VEC) were offered a subsidy of 100 rupees per month per enrolled girl aged 5 to 10. The total amount could not exceed 2400 rupees per month. Schools were also offered start-up packages of textbooks and supplies. Funds could be used for teachers' salaries and other recurring expenses. The VECs were also responsible for locating a suitable school facility, for hiring teachers, and for monitoring teacher and student attendance.

The challenge for these schools to succeed was substantial. Most parents were illiterate, and no more than one-quarter of the male household heads were literate or numerate. Thus, the task of running the school fell to an educated elite that might include only a few who had more than a primary education. Without educated women in the village (the average female literacy rate was 2.8 percent in 1994), just finding a suitable teacher was a challenge. Each village had to decide between two options: (i) hire a local male teacher and fail to attract girls from families who do not want to expose their girls to a male; or (ii) hire a women from outside who might have unreliable attendance.

Selection of the villages was made by the Balochistan Education Management Information System (BEMIS). For each division, the SCSPEB identified 13 potential villages. BEMIS randomly withdrew three villages per division to serve as control villages, and the remainders were targeted for the rural fellowship school promotion. The enrollment experience in

the control villages provide a baseline against which we can evaluate any enrollment changes in the rural girls' fellowship villages.

II. Theory of Enrollment Response to the RGF Program

Before conducting the statistical comparison of the treatment and control neighborhoods, it is important to identify the possible endogenous responses to the program. It is also important to identify the exogenous variables that might condition the magnitude of those responses. Following Kim and others (1998a), households are assumed to have parents, are assumed to derive utility from their own consumption of goods (Z_h) and from the human capital of their daughters (H_f) and sons (H_m). The utility function has the form $U = U(Z_h, d_f, H_f, H_m, T)$, where T is a vector of taste indicators that are not subject to choice. Social prohibitions against exposing their daughters to the outside world will cause them to discount the utility they get from their daughter's education by some factor $d_f<1$.

Parents maximize utility subject to a budget constraint. $Y = P_z Z_h + P_f H_f + P_m H_m$, where Y is household income, and P_z, P_f, and P_m are the prices of goods, girls' schooling and boys' schooling, respectively.

The first order conditions yield the following relation:

$$(1) \qquad \frac{U_{Hf}}{U_{Hm}} = \frac{d_f U_H(Z_h, H_f, H_m, T)}{U_H(Z_h, H_f, H_m, T)} = \frac{P_f}{P_m}$$

where U_{Hf} and U_{Hm} represent the marginal utility of girls schooling and boys schooling, respectively. To get parents to equalize schooling for their boys and girls so that $H_f = H_m = H$, the cost of girls schooling must be discounted by $P_f = d_f P_m < P_m$. Alternatively, if the pecuniary costs of schooling are the same for boys and girls so that $P_f = P_m$, then the righ-thand side of (1) will equal one. Then, $d_f U_H(H_f) = U_H(H_m)$, which implies that $U_H(H_f) > U_H(H_m)$. Diminishing marginal utility would then imply that $H_m > H_f$ at the optimum.

Reduced form equations for boy's and girl's schooling have the following functional forms:

$$(2) \qquad H_f = H_f(P_f, P_m, d_f, Y, P_z T)$$

$$(3) \qquad H_m = H_m(P_m, P_f, d_f, Y, P_z T)$$

The reduced form equations suggest that enrollment will depend on school fees, the rate at which parents discount girls' education relative to boys, income, the price level, and tastes. Numerous studies suggest that education is a normal good so that $\partial H_m/\partial Y > 0$ and $\partial H_f/\partial Y > 0$. Those conditions are sufficient to insure that $\partial H_m/\partial P_m < 0$ and $\partial H_f/\partial P_f < 0$. The discount factor d_f acts as an additional price on girls' schooling, so $\partial H_f/\partial d_f < 0$.

The girls' fellowship program should lower P_f, raising girls' schooling. It will certainly lower the distance to girls' schools, lowering the transportation costs. However, the schools needed to raise revenues beyond the subsidy, necessitating that modest fees be charged. Because girls' schools were effectively nonexistent, tuition of a few rupees a month was less than the cost of sending a girl to another village for schooling. The impact of the fellowship program on boys'

enrollment is ambiguous. Because all these villages had a free government boys' school nearby, the cost of boys' schooling was not changed.[1] Boys' education may increase as their sisters go to school for a very practical reason—parents may want their boys to escort their sisters to and from school. This implies that boys' education and girls' education may be complementary goods so that $\partial H_m/\partial P_f < 0$. On the other hand, if girls' and boys' education are substitutes, $\frac{\partial H_m}{\partial P_f} > 0$, so boys' schooling will decrease as the cost of the girls' education falls. Consequently, it is important to monitor both boys' and girls' enrollments in response to the program.[2]

Equations (2) and (3) suggest that income, the cost of schooling, and the disamenity of sending girls to school may condition the enrollment response to the rural fellowship program. Schooling costs are assumed to be mainly composed of the opportunity cost of the child's time (measured by the child's age and its square). The parents' disamenity for sending girls to school is assumed to be inversely related to fathers' education. There was insufficient variation in mothers' education to include in the schooling demand equation. Parents' taste for education is also assumed to depend on the child's birth order. There may be a preference for educating the eldest child, particularly the eldest boy. Household income is predicted using observed household demographic composition and assets.[3] These variables comprise the vector of exogenous variables we will use in the analysis below.

III. Survey Design and Data Strategies

Three years after the first CSP schools opened, the Rural Girls' Fellowship Program was launched as a pilot project. The pilot project was designed to establish whether private schools could open and successfully provide educational opportunities for rural girls, using government funded subsidized fellowships. In contrast, the CSP program was oriented toward opening government girls' schools. The program targeted villages which did not already have a girls' school of any sort, had at least 24 girls in the ages 5 to 10, and had no adult women with at least eight years of schooling.

A random sample of potential qualifying villages was drawn from the 1990 Balochistan Human Resource Survey. This survey contained information on useful village attributes including the number of schools by gender in the village, the demographic attributes, and other village characteristics. Approximately 20 qualifying villages in each division were selected. Three villages from each division were withheld by BEMIS as controls. A promotion team went to the other villages to find 10 per division that would agree to set up a school. The nongovernmental organization hired to handle school promotions in three of the divisions never began the canvassing process, so three divisions were dropped from the initial design. As a result, 30 rural schools in three divisions were established.

For each treatment and comparison village, household information was collected by BEMIS in the same manner to insure comparability. First, an initial census of the village was conducted to insure that the village qualified for the program. Villages that had a woman who could serve as a teacher were turned over to the CSP program. For the remaining qualifying villages, a second survey elicited household survey information on socioeconomic attributes of

1. Boys could go to the new girls' schools also, but the existing government boys' schools were free.
2. The urban girls' fellowship and rural CSP implementations both resulted in increased boys' enrollment as well as increased girls' enrollments. However, these programs were implemented in communities with more educated parents who might be more predisposed to send all children to school, whether girls or boys.
3. The method is described in Kim, Alderman, and Orazem (1998b), Appendix 3.

the household. This information was collected before the fellowship schools were opened, so it forms a baseline against which enrollment growth can be assessed.

IV. Differences and Similarities between Treatment and Control Villages

A. Sample Statistics

Table 1 reports the sample statistics of the baseline dataset for both groups of villages. The treatment sample included 1,023 children—595 girls and 428 boys—and the control sample contained 634 children—290 girls and 344 boys. Enrollments differed greatly across districts, across villages within districts, and across genders within villages. In all villages, boy enrollments exceeded girl enrollments. Overall, girl enrollments averaged 40 percent, and boy enrollments averaged 68 percent. Enrollments for both boys and girls were higher in districts Chagai and Mastung than in Gwadar.

Table 1. Summary Statistics of Datasets and Tests of the Equality of Means between the Treatment and Control Villages

	Girls			*Boys*		
Variable	*Treatment*	*Comparison*	*t-value*[a]	*Treatment*	*Comparison*	*t-value*[a]
Enrollment rate	0.415	0.348	1.91	0.666	0.695	1.43
	(0.493)	(0.477)		(0.472)	(0.443)	
Household income	5,143	4,012	1.89	6,871	3,962	3.30
	(8,323)	(8,477)		(14,178)	(9,053)	
Age	7.401	7.186	1.76	7.437	7.491	0.43
	(1.725)	(1.676)		(1.717)	(1.763)	
Father's education	1.404	1.686	1.20	1.595	1.872	1.07
	(3.235)	(3.264)		(3.502)	(3.611)	
Birth order	2.417	2.752	3.52	2.626	2.672	0.49
	(1.273)	(1.434		(1.245)	(1.320)	
Joint test[b]	4.02			4.21		
Number of observations	595	290		428	344	

Notes: Standard deviations are reported in parentheses. t-values are from tests of the hypothesis that a variable has equal means across the treatment and control villages.
a. Critical value is 1.96 at the 0.05 significance level.
b. Critical value is 13.5 at the 0.05 significance level.

The third and sixth columns of Table 1 report tests of whether variable means are equal across treatment and comparison villages. The objective of the tests is to establish the comparability of the comparison group with the treatment group. Because observations within a village are not independent, sample means were corrected for cluster effects. The enrollment rate for girls in the treatment group was higher than in the control group, but the difference was not statistically significant. The enrollment rate for boys in the treatment group was lower than in the control group, but the difference was also statistically insignificant. The samples were comparable in income, father's education and age. The only variable that differed significantly between the two samples of girls was birth order, although the difference was numerically small. The joint test of the hypothesis that all variable means were equal across village groups failed to reject the hypothesis. These tests indicate that the comparison and treatment villages were statistically comparable before the rural fellowship program was begun.

B. Baseline Behavioral Model

Table 2 presents the results of the baseline probit analysis of the probability of enrollment choice for boys and girls in the treatment and the comparison villages. The first two columns

report the results of the estimates using pooled data of girls and boys, and the other columns report separate results of estimates by gender. The results are in accord with the theoretical representation of schooling demand.

Table 2. Baseline Probit Analysis of the Probability of Enrollment[a]

	Girls and Boys		*Girls*		*Boys*	
	Treatment	*Comparison*	*Treatment*	*Comparison*	*Treatment*	*Comparison*
Income/10,000	0.111	0.061	0.115	0.037	0.146	0.100
	(2.70)	(1.03)	(1.11)	(0.51)	(2.77)	(1.13)
Age	1.471	0.875	1.296	0.749	1.724	1.002
	(5.65)	(2.82)	(6.13)	(7.57)	(3.83)	(2.36)
Age Square	-0.087	-0.048	-0.082	-0.048	-0.091	-0.050
	(5.10)	(2.36)	(7.48)	(6.38)	(3.09)	(1.76)
Father's education	0.058	0.093	0.045	0.119	0.091	0.081
	(4.16)	(4.78)	(1.34)	(8.05)	(3.41)	(2.75)
Birth order	-0.036	-0.083	0.007	-0.076	-0.080	-0.076
	(0.66)	(1.97)	(0.11)	(0.88)	(1.25)	(1.28)
Girl	-0.663	-2.979	—	—	—	—
	(7.71)	(9.49)				
Constant	-5.536	-2.979	-5.204	-3.175	-7.018	-3.809
	(5.68)	(2.59)	(3.88)	(5.65)	(4.14)	(2.47)
Number of observations	972	175	562	290	410	344
Pseudo R^2	0.12	0.07	0.04	0.09	0.21	0.13

Note: a. t-statistics are in parentheses.

Table 3. Test of Coefficient Equality between Treatment and Comparison Villages

	Girls and Boys		*Girls*		*Boys*	
	χ^2	*result*[a]	χ^2	*result*[a]	χ^2	*result*[a]
Income	0.56	not reject	0.53	not reject	0.17	not reject
Age	1.29	not reject	0.00	not reject	1.44	not reject
Age square	0.64	not reject	0.02	not reject	1.64	not reject
Father's education	2.57	not reject	6.10	not reject	0.01	not reject
Birth order	0.49	not reject	0.93	not reject	0.09	not reject
Girl	7.78	not reject		not reject		not reject
joint test	10.42	not reject	11.26	not reject	7.18	not reject

Note: a. Significance level set at 0.05. Critical values are 3.8 for $\chi^2(1)$, 11.1 for $\chi^2(5)$, and 12.6 for $\chi^2(6)$.

The coefficients on household income are always positive, indicating that education is a normal good for boys and girls. Income elasticities (evaluated at the sample means reported in Table 1) are 0.142 and 0.151 for girls and boys, respectively. Therefore, schooling is characterized as a necessity for both boys and girls.

Enrollment probability rises at a decreasing rate with age. From the coefficients of age and age square, peak probability of enrollment occurs at 8 years of age for girls and 10 years of age for boys. Thus, rural girls who do enroll have a higher probability of dropout and a lower expected length of time in school than boys. Father's education increases the probability of enrollment for both boys and girls. There was insufficient variation in mother's education to allow us to estimate how mother's education influenced enrollments. Generally, firstborn children have a higher probability of enrollment than their younger siblings, although the coefficient is not precisely estimated. None of the individual coefficients differ significantly across the treatment and comparison regressions, so parent's enrollment decisions respond similarly to socioeconomic influences in both village groups. The only exception is that the joint test of equality of coefficients for the girls' regression is narrowly rejected at the 0.05 significance level. Nevertheless, the behavioral equations are statistically indistinct for boys and girls together. We

conclude, therefore, that the parental decision-making process in the comparison villages serves as a good control for parental choices in the rural fellowship villages.

V. Evaluation Strategies and Results

A. Cross-sectional Control

Given the statistical comparability of the treatment and control villages, we can use the comparison of the enrollments in the two groups of villages to see how the rural girls' fellowship program changed enrollments. The cross-sectional comparison is:

$$(4) \qquad R_i = \alpha D_i + X_i\beta + e_i, i = 1,2,.....,T,T+1,.....,T+C$$

where D_i is a dummy variable which takes the value of one if village i has a rural fellowship school, α is the estimate of the rural fellowship school effect conditional on control of other factors that might influence schooling choice and X_i is a vector of those factors. R_i is enrollment in village in the year after the rural fellowship schools were opened. The equation is estimated over T treatment and C comparison villages.

Table 4 reports the results from estimates of equation (4). The first column reports the coefficients without division dummies, and the second column reports results when the division dummies are included. The results are nearly identical. Girls' enrollment rose 11 to 15 percent due to the program, but boys' enrollment fell 10 to 12 percent. Consequently, total village enrollment across boys and girls remained unchanged. The reduction in boys' enrollments from the opening of the rural girls' fellowship school contrasts with the rising boys' enrollments found in the evaluations of the urban girls' fellowship schools and the rural CSP schools.

Table 4. Post-test Probit Analysis of Probability of Enrollment using Cross-sectional Data

	Girls			*Boys*		
	(1)	*(2)*	*(3)*	*(1)*	*(2)*	*(3)*
Treatment	0.114	0.151	0.168	-0.120	-0.101	-0.087
	(5.05)	(6.49)	(6.20)	(5.15)	(4.23)	(2.98)
Income	0.026	0.023	0.041	0.022	0.022	0.034
	(3.00)	(2.84)	(2.94)	(2.72)	(2.65)	(2.98)
Age	0.426	0.452	0.354	0.407	0.414	0.410
	(6.58)	(6.90)	(4.51)	(6.05)	(6.12)	(4.90)
Age square	-0.026	-0.028	-0.022	-0.022	-0.022	-0.022
	(6.08)	(6.41)	(4.18)	(4.82)	(4.91)	(4.03)
Father's education	0.020	0.016	0.029	0.022	0.020	0.033
	(6.56)	(4.93)	(6.05)	(6.46)	(5.85)	(5.89)
Birth order	-0.018	-0.030	-0.014	-0.022	-0.024	-0.031
	(1.96)	(3.25)	(1.05)	(2.33)	(2.60)	(2.67)
District dummy		√			√	
Number of observations	2,159	2,159	1,465	1,916	1,916	1,260
Pseudo R^2	0.058	0.082	0.067	0.110	0.121	0.099

Note: t-statistics are in parentheses. In equation (3), observations in Mastung/Kalat are excluded.

B. Longitudinal Control

It is possible that the measured reduction in boys' enrollment following the opening of the rural girls' schools is due to some unmeasured factor that is raising boys' enrollment in the control villages and not to a response to the opening of the girls' schools. To check this, we

applied an alternative method to estimate the impact of the rural girls' fellowship program. Enrollment in the base period is used as control for enrollment after the rural girls' fellowship schools were opened. This involves estimating equations of the form

$$(5) \qquad R_{it} = \gamma D_{it} + X_{it}\beta + e_{it}, i = 1,2,.....,T, t = 0,1$$

where γ is the conditional estimate of the treatment effect using longitudinal observations of the T treatment villages from before (t = 0) to after (t = 1) the rural girls' fellowship program was instituted. This is known as the "reflexive" or "before-and-after" estimate of the treatment effect.

Table 5 presents the measured effect of the Rural Girls' Fellowship program using longitudinal data. The top section of Table 5 reports the unconditional mean enrollments for boys and girls aged 5 to 10 in the pre- and post-implementation years. The difference between these enrollment rates is equivalent to the estimate of γ in equation (5) with β restricted to equal zero. Overall, girl enrollments rose 10.3 percent, and boy enrollments fell 6.8 percent. These results are similar to those reported in Table 4, so the finding that boy enrollments fell is not a result of unexplained enrollment growth of boys in the control villages. Instead, we find that there was a large reduction of boys' enrollment concentrated in the Mastung/Kalat district, and that girls' enrollments fell there as well.

Table 5. Enrollment Effects Using Longitudinal Observations of Rural Girls' Fellowship Villages, by District, Age, and Time Period

	Before Implementation		*After Implementation*		*Effect*	
	Girls	*Boys*	*Girls*	*Boys*	*Girls*	*Boys*
District						
Chagai	50.3	73.3	64.9	72.7	14.6	-0.6
Mastung/Kalat	61.3	81.0	56.0	60.8	-5.4	-20.2
Gwadar	21.8	49.1	43.9	53.7	22.1	4.6
Average	41.5	66.6	51.8	59.8	10.3	-6.8
Reflexive with Covariates (Equation (5))						
Chagai					24.6	-0.1
Mastung/Kalat					4.5	-9.8
Gwadar					28.8	3.2
Average					19.3	-2.2

This finding suggested that our earlier conclusion that boys' enrollment fell may be due only to an isolated failure in Mastung/Kalat district. We reestimated our cross-sectional specification using only data from Chagai and Gwadar. These results are reported in column (3) in Table 4. Surprisingly, the negative enrollment effect for boys remains, albeit somewhat smaller than before. This suggests that the enrollment reduction in Mastung/Kalat was due in part to other measured factors and not to the program itself.

We see this when we reestimate the reflexive effect controlling for the other factors which affect attendance. The measured reduction in boys' enrollment Mastung/Kalat is only half as large when these factors are held fixed, and girls' enrollment now increases. We can also see that the program was a success in Chagai and Gwadar, with large increases in girls' enrollments without any adverse effect on boys.

VI. Discussion and Conclusions

The results in Table 5 reinforce a finding in both the Urban Girls' Fellowship and CSP programs: the largest increases in girls enrollments from the opening of a new girls' school occur in villages or neighborhoods where boys' enrollments also increase. However, the Rural Girls' Fellowship results differ in two important ways from the earlier pilot programs. First, the Mastung/Kalat experience shows that these programs can fail—they can result in a substitution of girls' enrollment for boys' enrollment. Second, even where this program raised girls' enrollment substantially, boys' enrollment remained constant or grew only modestly. Therefore, we did not get the same collateral benefit of increased boys' enrollment in this pilot that was such a strong outcome of the Urban Girls' Fellowship program.

It is hard to pinpoint the source of the difference, but a likely factor is that the urban neighborhoods were characterized by insufficient supply of schools for both girls and boys. While girls' education was rationed more severely due to the absence of a girls' school, boys' schools were also overcrowded. The creation of a new girls' school relaxed the space constraint on boys' schools, both because there were fewer girls taking slots in boys' schools and because boys were allowed to enroll in the Girls' Fellowship schools. Relaxing the rationing constraint led to sharp increases in boys' enrollment as well as girls.

In most rural villages that have a boys' school, boys' enrollment is not subject to a lack of space. These villages typically are not large enough to require two schools, so there is sufficient space available for any boy in the village who wanted to be in school. Therefore, the opening of a rural girls' school does not alter the probability that a boy will find space in a boys' school. The only way the opening of a girls' school can increase boy's enrollment is by lowering the cost of sending a boy to school, improving the quality of boys' education (if boys are allowed to enroll in the girls' school), or through the underlying complementariness in consumption between boys' and girls' schooling. In the CSP program, these effects were sufficient to raise boys enrollment, albeit by much less than boys' enrollment rose in the urban program. However, the CSP schools were free to the parents, whereas the Rural Girls' Fellowship Schools charged modest fees. Therefore, the boys' enrollment gains in Rural Girls' Fellowship villages were even smaller than those in CSP villages. We conclude that the lack of positive boys' enrollment response to the opening of the Rural Girls' Fellowship schools can be explained by the lack of preexisting constraints on boys' enrollment and the higher price of enrolling boys in the Girls' Fellowship School than in the Government Boys' school.

The poorer performance in Mastung/Kalat also requires some comment. Recall that Parents' Education Committees in each village were responsible for providing buildings, hiring teachers, supervising teacher performance, and mobilizing the community for girls' education. In Mastung, only 17 percent of the teachers hired were male, whereas all the teachers in Chagai and 54 percent in Gwadar were male. Because the program was directed to villages that did not have potential female teachers, most of the teachers hired in Mastung were from outside the village. Consequently, teachers in Mastung had more problems with absenteeism, and teachers also tended to have lesser academic qualifications than in Chagai or Gwadar.

Poor parents who are being asked to pay even the most modest fees to educate girls will be unlikely to pay if the school quality is perceived to be poor.[4] The difficulties in getting

4. One might expect that illiterate parents would be unable to discern whether a school is of high quality or not. In fact, a study by Alderman, Orazem, and Paterno (1996) of the demand for primary school in a sample of poor parents in Lahore, Pakistan, showed that even illiterate parents were quite responsive to measures of school quality as well as

qualified female teachers into rural villages that do not have any educated women residents suggest that these Rural Girls' Fellowship schools may do better in villages that will accept a male teacher.

price. In this case, even illiterate parents could observe whether the teacher was present, and may also be able to ascertain whether their girls are learning to read and write.

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