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Abstract

This paper studies the determinants of school choice, focusing on the role of information. We consider how parents' search efforts and their capacity to process information (i.e., to correctly assess schools) affect the quality of the schools they choose for their children. Using a novel dataset, we are able to identify parents' awareness of schools in their neighborhood and measure their capacity to rank the quality of the school with respect to the official rankings. We find that parents' education and wealth are important factors in determining their level of school awareness and information gathering. Moreover, these search efforts have important consequences in terms of the quality of school choice.

Keywords: school choice, education in developing country, information gathering, household behavior.
JEL classification: I21, O12, D1.

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1. Introduction

Can parents choose the best schools for their children? How much do parents know about their children's schools? How well do parental assessments compare with expert assessments? Research on parental knowledge of schools has been framed largely in the context of the debate on school choice. The rationale is that if parents have appropriate incentives, then they will engage in more-extensive information gathering, which will lead to better decisions about schooling. Therefore, the reasoning goes, to improve the delivery of public educational services, governments should imitate private markets and let families choose a school for their children, generating the incentives needed to increase the efficiency of the system. While such ideas have been employed in making the case for vouchers, magnet schools, charter schools and the like, there has been little consensus among researchers as to what parents do, in fact, know and how they use the information they have. This debate is premised on theories linking information and choice. Yet, most researchers on the issue gather data only on what parents know about the schools that their children attend. This effectively ignores any information that parents may have on other schools in the area, and any subsequent analysis presents only a partial view of the dynamics underlying parent knowledge and school choice.

It is important to determine whether the empirical evidence supports the assumptions justifying an increase in school choice. Even if it does not, it might still be possible to establish reasonable conditions for school choice to be a good idea. For instance, if there is a problem of asymmetric information (schools have more information on their quality than parents have), governments can mandate a program to make that information publicly available. One possibility is to make available to the public some kind of school report card comparing the academic results of students in each school. The No Child Left Behind act in the U.S. has generated an increase in school rankings based on the intensification of standardized testing in schools.

In this paper, we analyze parents' preferences and choices of schools. Unlike the previous literature, we have information on parents' rankings of all the schools that they have heard of and not only their evaluation of the schools that they have chosen for their children. This wealth of information allows us to analyze in detail the process of gathering information and its impact on choice. Using information on actual school rankings, based on test scores and school characteristics, we relate this to parents' assessment of schools to understand how information gathering can affect the quality of parental school choice.

Our study is in the context of a less-developed country, Pakistan. Studying the issue of school choice in Pakistan is particularly interesting for several reasons. First, most of the studies on the effect of school choice consider developed countries, but our study of Pakistan can provide insights into the workings of school choice in less-developed countries. Second, private schools have become widespread Pakistan. Andrabi et al. (2007) describe the situation in Pakistan as an active education marketplace: The number of private schools increased from 32,000 to 47,000 between 2000 and 2005, and parents usually have seven or eight schools to choose from. Alderman et al. (2001) show that the poorest households use private schools extensively, and, therefore, there is a high degree of school choice in Pakistan even for low-income families. Third, once enrollment increases significantly, attention usually turns to the quality of education. This is the situation in Pakistan. Alderman et al. (2001) claim that the strong demand for private schools in Pakistan is consistent with the evidence that the quality of education is higher in private schools than in public schools. Finally, there is an increasing interest in evaluating reforms in Pakistan's educational system.[1]

We find a strong relationship between parents' search efforts and the quality of their school choice. In particular, we find that knowing about and/or visiting more schools is related to more accurately assessing local schools. Moreover, parents—in particular, mothers—with more education are more likely to higher-quality schools. Across parents, we see that the more boys in the household, the more likely it is that fathers (but not mothers) will visit schools. However, the more girls in the household, the more likely it is that fathers *and* mothers will visit schools.

Most of the arguments in favor of families having an expanded school-choice set have been based on critical assumptions that often go unstated: Parents search for information about schools and evaluate them on the basis of academic quality. Bast and Walberg (2004) review the literature and show that, in general, parents would do a better job choosing schools for their children than do experts in government agencies. Hoxby (2001) shows that parents' satisfaction with public schools is strongly correlated with test scores in reading and math. Coulson (1999) presents evidence that parents choose private schools based on schools' achievement and not on proximity or convenience. Moreover, students' academic achievements are higher in the private schools chosen than in traditional public schools. Solmon (2003) shows that parents and experts rank charter schools in a similar way. Most of this research is based on surveys.

[1] See Naseer et al. (2010).

Another approach to evaluating parents' valuation of schools has been to analyze their willingness to pay higher housing prices in order to live close to a particular school. Black (1999) uses a regression discontinuity design to study this question in Massachusetts. She finds that a five-percent increase in elementary school test scores led to an increase of 2.1 percent in the marginal willingness to pay for a house.

However, as is often the case in economics, there is no consensus on the ability of parents to gather information or on their use of academic quality as the basic criterion for choice. Denessen et al. (2001) claim, using data from the Netherlands and Finland, that these implicit assumptions—that parents search for information and evaluate schools on their academic quality—may not always be correct. In their data, parents rank academic factors lowest on their list of desired characteristics of a school, choosing social education instead. Henig (1996) and Schneider et al. (1998) find that low-income parents are less aware of school options than better-educated or higher-income parents are.[2] Teske and Schneider (2001) accept a certain consensus on the fact that parents are more involved in their children's education when they have more choice and that they use academic preferences to choose among schools. However, Teske and Schneider (2001) argue that the gathering of information and actual choice show evidence of stratification in the parents' motivation function and not in income.

The results found in the paper have important policy implications. In particular, they show that as well as parents' education, information gathering and information processing are important determinants for the quality of school choice. Our results suggest that encouraging information gathering, or providing more information about schools, can improve the quality of school choice. We find that importance of these factors differ across parents in the same household, suggesting that mothers and fathers search efforts may be targeted differently.

2. Data and Descriptive Statistics

2.1. Data

The data employed are from the 2003 Learning and Education Achievement in Punjab Schools (LEAPS), a study consisting of school, teacher, child, and parent surveys. The LEAP project was conceived as a multi-year pilot study of potential interventions in schools, intended to document the efficacy of various policies undertaken by Pakistan's government in recent years[3].

[2] See (Teske and Schneider 609-31) for a fully nuanced discussion. (Schneider et al. 769-93)
[3] For a complete description of the statistical operation and the data, see Andrabi et al. (2007).

The data set is collected from 112 villages in the Punjab province, the largest state in Pakistan, located in the three districts of Attock in the North, Faisalabad in the center and Rahim Yar Khan in the south. The three districts were chosen randomly on the basis of an accepted stratification of the province. The LEAPS project worked with every private and public school in these villages, 823 in total. There was an average of eight schools in every village. Within each village, 16 randomly selected households were also interviewed, giving a total of 1,807 households.

The project administered school, teacher, student, and household surveys. The school survey collected information on the infrastructure, prices, costs and other facilities for all 823 schools. There were two surveys for teachers. The first provided basic information on salary, education, training, experience and demographic information of every one of the 4,878 teachers in the sample of schools. The second was a teacher questionnaire and performance test with more-detailed information asked of a smaller sample of teachers—typically one per school.

As part of the project, over 12,000 children enrolled in grade three were tracked. These children were administered tests in English, Urdu and Mathematics. A sub-sample of ten randomly selected students in each school completed a child questionnaire with basic information about the child's parents, ownership of certain assets, the distance to school, and the number of siblings. The household surveys were administered by visiting a sub-sample of village households.

2.2. Variables of Interest

To understand parents' awareness of a given school, we use the information on whether or not a household has heard of a school and on whether or not parents have visited a given school in their village.

We measure parents' perception of a given school that they have heard of (visited), using information on their assessment of the schools. As part of the LEAPS household survey, respondents were asked to rate the overall quality of each of the schools in their village on a scale ranging from 1 (Very poor) to 5 (Excellent). To understand if parents correctly assess schools, we use information about the (scaled) test scores in each school for Urdu, Math and English.

In addition, most questions were posed to each parent within the household individually, allowing us to examine gender differences in responses within the same

household. Our analysis is done at the household level, as well as separately for each parent within the household.

Finally, as well as a full set of school, household, and village characteristics, we have information on the parents' actual school choice.

Table 1 presents summary statistics for some of the variables of interest. We look at important variables by household, school, and district. On average, parents have heard of more than half of the schools in their village (around six schools) but visit fewer than 20 percent (around 1.5 schools). Mothers tend to have heard of fewer schools than fathers (58 percent versus 69 percent). Mothers also tend to visit fewer (13 percent versus 17 percent). Fathers have, on average, 5.32 years of education, compared with mothers, who have, on average, only 2.45 years. With regard to school characteristics, the average distance to schools is around 1.07km; 60 percent of schools are public/government run, while the other 40 percent are private, NGO/Trust schools, or Islamic Madrasa. There are, on average, 8.87 schools in a district. The average literacy rate in the district is around 37 percent.

3. Empirical Analysis

In this section, we start by studying the determinants of school awareness. We question: What is the likelihood that parents have heard of a given school in their district? What determines the number of schools that parents have heard of? What determines the number of schools that parents visit? Why do parents visit some schools that they have heard of but not all of them?

We then investigate whether the accumulation of information affects parents' ranking of schools, and, more importantly, we see if these rankings are close to the official rankings. Finally, we end this section by analyzing whether there are *real* consequences of information accumulation. In other words, we investigate the effect of information gathering and school ranking on parents' actual school choice.

3.1. Gathering Information

To understand the factors that determine the likelihood that parents have heard of a given school in their district, we estimate:

$$y_{ijk} = \beta X_{ij} + \chi Z_k + \delta_d + \varepsilon_{ijk} \ , \qquad (1)$$

where y is the probability that household i in village j has heard of school k. X is a vector of household and village characteristics that include: the household expenditure per capita (log);

household wealth; mother's years of schooling; father's years of schooling; the number of school-aged boys in the household; the number of school-aged girls in the household; the number of schools in the village; the median monthly expenditures in the village (wealth); and the percentage of literate adults in the village. Z is a vector of school characteristics that include: the distance of the school from the household; whether the school is public or private; the proportion of male teachers; and the school's scaled test scores in Urdu, Mathematics and English. In addition, we include district fixed effects (δ_d).

Table 2 presents the regressions for the probability that the household has heard of a school, first for households and then separately by fathers and mothers, respectively. For each case, we report the OLS specification and the village fixed-effect specification.

From Table 2, we see that a household is likely to have heard of more schools if both parents have high education and if household income is high. As the number of boys in the household increases, the awareness of schools also increases. A larger number of schools in the district and a greater the distance to school will have a negative effect.

When we look separately by parent, we see that there are some important gender differences. In particular, household income and wealth are relatively more important in determining whether fathers have heard of a school. Mothers and fathers are both positively affected by their own education in a similar way, but both are also affected positively by their spouse's education level, although to a lesser extent. Interestingly, there are strong gender differences in school awareness, depending on the number of boys or girls in the household. In particular, while the number of boys in the household affects the father's likelihood of having heard of a school more than it does the mother's, the number of girls in the household affects the mother's likelihood more than father's. School characteristics, such as the distance to school, affect both parents similarly. The number of male teachers at a school increases the likelihood that fathers have heard of the school but has no effect on mothers. The school's test scores influence the mother's likelihood of having heard of a school but have no effect on the father.

In Table 3, we repeat the analysis for schools visited and see similar patterns to those observed for hearing about a school.

Next, to understand what factors influence the total number of schools that a household has heard of and visited, respectively, we estimate the following:

$$Y_{ij} = \beta X_{ij} + \delta_d + \varepsilon_{ij}, \qquad (2)$$

where Y is the number of schools that household i in village j has heard of (visited). X is a vector of household and village characteristics that include: the household expenditure per capita (log); household wealth; mother's years of schooling; father's years of schooling; the number of school-aged boys in the household; the number of school-aged girls in the household; the number of schools in the village; the median monthly expenditures in the village (wealth); and the percentage of literate adults in the village. In addition, we include district fixed effects (δ_d).

Columns (1), (2) and (3) in Table 4 report the determinants of the number of schools in the village that parents have heard of. These are presented separately for questionnaires completed for the male head of household, the female head of household and for the household as a whole.

From the table, we see that the main factors determining the number of schools that parents have heard about are household income and education levels, as well as the total number of schools in the district. As we saw in Table 2, parents are strongly affected by their own education levels and are somewhat less affected by their partner's education level. Household income influences the number of schools that fathers have heard of twice as much as it influences the number that mothers have heard of (26 percent versus 14 percent).

Table 4, columns (4), (5) and (6) report the results for the number of schools visited. These are presented separately for questionnaires completed for the male head of household, the female head of household and for the household as a whole.

From the table, we see that parents visit a larger number of schools, the higher their education and household income. The more children there are in the household (of either gender), the more schools the parents will visit. Also, the more schools there are in the village, the more schools the parents will visit. When looking at each parent separately, we see that fathers will visit more schools the higher the household income, whereas income has no effect on mothers. Recall from Table 1 that, on average, mothers visit far fewer schools than fathers. Interestingly, while household income does not increase the number of schools that mothers visit, their education level does. However, their spouses' education level has no effect on the number of schools they visit. The number of girls in the household increases the number of schools that mothers visit by 12 percent, compared with five percent for fathers. However, the higher the number of boys in the household, the more schools the father will visit (nine percent). This has no effect on mothers. The higher the percentage of literate adults

in the village, the more schools the mother will visit. The higher the village wealth, the fewer schools the father will visit. The reverse is true for mothers.

Finally, to understand if there are differences between the schools that parents visit and those that they do not, conditional on having heard of them, in Table 5, we report the mean differences in the characteristics of the schools. We find that parents are more likely to visit a school if it is a public school and if it is performing poorly—i.e., the test scores are low. In addition, they are more likely to visit schools that are close to home. The findings from this table suggest that if a local school does not have a good reputation, parents will visit it to gather other information about the school before making their decision.

Another interpretation is that, since the cost of visiting a school that is close to home is low, families will have a higher propensity to visit that school. However, since schools are selected mainly by proximity rather than by quality, this school could be performing below average. In any case, the difference in average distance, even though it is statistically significant, it is economically not very important (around 300 meters).

3.2. Evaluating "Ranking" Schools

To measure how well parents process information, we measure the gap between parents' ranking of a school and its official ranking, which is based on the school's test scores. A school's test scores can be considered the school's correct assessment, as its quality is reflected in the test scores. We measure the gap in two steps. In the first step, we predict the number of schools that a given household will visit, and in the second step, we use the prediction to estimate the gap between the correct assessment and parents' assessment of a given school.

First, to measure the gap, we estimate:

$$GAP = \sqrt{(Correct - Parents')^2}\ , \qquad (3)$$

where *GAP* is the squared difference between the average (scaled) test scores in Math, Urdu and English for a given school *k* and parents' assessment of that given school (everything is standardized for comparison).

Second, we regress the (predicted) total number of schools heard of (visited), $\hat{Y}$, on this gap. The prediction is based on the variable used to estimate equation (2) (household expenditures; household's relative wealth; mother's education; father's education; the number of boys in the household; the number of girls in the household; the number of schools in the district; and the district's literacy level.)

$$GAP_{ijk} = \gamma \hat{Y}_{ij} + \varepsilon_{ijk} \qquad (4)$$

Table 6 shows the results for the estimation of the equation above for the number of schools heard of and visited, respectively. This is done separately for the male and female heads of household. In Panel A, we report the effect on the gap of the predicted number of schools that a parent has heard of. Interestingly, we find that for both female and male heads of household, an increase in the number of (predicted) schools heard of reduces the gap between the correct assessment and parents' assessment. The strongest effect is for Math and Urdu. The effect is very similar across parents. The results suggest that as the number of schools heard of increase by one, the household is two-percent closer to the true assessment of schools.

In Panel B, we report the effect on the gap of the predicted number of schools that a parent has visited. Here, we find an effect only for the male heads of households—a very strong effect of the number of schools visited on the gap between the assessments. This effect is twice as large as when the father has merely heard about a school but has not visited it. Thus, we find that visiting one additional school improves the father's assessment of the school by as much as four percent. Interestingly, we find that the effect is insignificant for female heads of household. One important reason may be that female heads are less likely to visit schools, irrespective of their household type.

3.3. School Choice

We have shown that school awareness makes parents' evaluation of a school more accurate. We now want to understand if this improved evaluation has any effect on *real* outcome variables—in particular, the *quality* of parents' actual school choice. We can do this by looking at how strongly parents' ranking of schools and their actual school choice are related.

First, to estimate how parents' evaluation of a school is related to the quality of their choice, we estimate the following:

$$SC_{ijk} = \lambda GAP_{ijk} + u_{ijk} \quad , \qquad (5)$$

where SC is the percentile rank of the school k that is chosen by family i in village j. Schools within a village are ranked according to their test scores. We use the average test score in Math, English and Urdu, but we also look at each subject separately. In addition, we look at a restricted sample of public schools only since private schools may be out of reach to the financially constrained.

Panel A of Table 7 shows that as the gap closes (i.e., as parents correctly assess the quality of the school), parents' are more likely to choose a "good" school. As noted above, a school's quality is based on scores in Math, English and Urdu (or the average over them). In Panel B, when we restrict the sample to public schools only, the magnitudes are smaller but still strong and significant. Overall, we can conclude that awareness of schools and visiting schools improves parents' assessment of schools and that this translates into them picking a good school.

Second, to understand if other factors play a role, we correlate parents' ranking of a school with their actual choice. The results are shown in Table 8. We see that the relationship is positive and strong, with a coefficient as large as 50 percent, suggesting that the parents' assessments of schools play a crucial role in their school choice. This is likely to be as large as, if not larger than, other important factors such as distance or preferences for single-sex education.

4. Policy Implications (decomposition)

The analysis in Section 3 highlighted that parents' education and wealth are important factors in determining their level of school awareness and efforts to visit schools. This search behavior has important implications for their ability to correctly assess schools, which, in turn, has consequences with regard to choosing "better" schools. We now want to understand the policy implications of this analysis. There are three important components in our study, each with different policy implications: (1) the education level (or wealth) of parents; (2) the search efforts of parents; and (3) the ability of parents to process information (i.e., to correctly assess schools). The implications of these components are: (1) School choice should be given to parents on the basis of their education (wealth) level; (2) parents should be encouraged/incentivized to visit schools; and (3) parents should be provided with more information about school quality, so that they can process information more easily.

In order to see which of these factors matters the most, we estimate the following:

$$SC_{ijk} = \mu EDU_{ij} + \psi Y_{ij} + \lambda GAP_{ijk} + u_{ijk} \ , \qquad (6)$$

where SC measures the quality of the school choice; EDU measures parents' education level; Y measures the number of schools visited; and GAP is the squared difference between the average (scaled) test scores in Math, Urdu and English for a given school k and parents' assessment for that given school. We estimate the above equation for mothers and fathers separately.

The results are shown in Table 9. We see that all components are important for mothers. In particular, if the gap between the official assessment and their assessment falls by ten percent, the quality of school choice improves by eight percent. An additional year of schooling would improve school choice by one percent and for each additional school visited; the choice would improve by six percent. The ability to process information is more important for fathers than for mothers, while the fathers' education level is less important. Moreover, while the number of schools fathers visit is positive, it is not statistically significant.

5. Conclusion

In this paper, we have shown the determinants of gathering information about schools and the consequences of that information gathering. Parents who are aware of, and have visited, schools in their neighborhood tend to form more-accurate assessments of those schools. This has important consequences for choosing a better-quality school (from among those available to parents). Across parents, we see that there exist important differences. In the context of a less-developed country, where there are some gender imbalances within the household, it is interesting to see that mothers' education, as well as their assessment of schools, plays an important role in school choice—to some extent, more so than the fathers.' Even though mothers typically visit fewer schools than fathers, their visits have an important effect on the quality of the school they choose.

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Tables and Figures

Table 1: Summary Statistics

Variable	N	Mean	SD	Min	Max
Prop. Schools Heard of (Mother)	1776	0.58	0.27	0.00	1.00
Prop. Schools Heard of (Father)	1776	0.69	0.25	0.00	1.00
Prop. Schools Visited (Mother)	1776	0.13	0.16	0.00	1.00
Prop. Schools Visited (Father)	1776	0.17	0.17	0.00	1.00
Household Expenditure (log)	1776	8.53	0.72	5.10	12.24
Household Relative Wealth	1775	87.24	38.14	10.00	960.00
Mother's Education (years)	1736	2.45	3.85	0.00	20.00
Father's Education (years)	1637	5.32	4.71	0.00	20.00
No. of Boys in Household	1776	1.71	1.14	0.00	11.00
No. of Girls in Household	1776	1.56	1.15	0.00	7.00
Distance to School (km)	1638	1.07	1.36	0.00	14.27
School's (Scaled) Score: Urdu	804	510.42	109.55	205.10	806.14
School's (Scaled) Score: Maths	804	505.18	112.52	65.94	860.63
School's (Scaled) Score: English	804	506.27	123.02	173.61	836.41
Public School	823	0.60	0.49	0.00	1.00
No. of Male Teachers	823	2.51	4.28	0.00	47.00
No. Schools in District	1776	8.87	4.44	3.00	24.00
District Literacy Level (%)	1776	37.19	11.76	14.29	66.43
Wealth in District	1776	4625.65	1546.19	1224.83	9126.00
District: Attock	1776	0.34	0.47	0.00	1.00
District: Faisalabad	1776	0.37	0.48	0.00	1.00
District: Rahim Yar Khan	1776	0.28	0.45	0.00	1.00

Notes: The *Prop. Schools Heard (Visited) of* are the fraction of schools in the village that the parents have heard of (visited). *(log) Household Expenditure* is the (log) total monthly expenditures of the household. Household Relative Wealth is the household's wealth compared to other households in village. Mother's (Father's) Education is the maximum education of the adult female (male) in the household. *No. of Boys (Girls) in Household* is the total number of boys (girls) of school age (between five and 15 years) in the household. *Distance to school (km)* is the distance from the household to school (km). *School's (Scaled) Score: Urdu* is the scaled test-score in Urdu in the school (same for Math and English). *Public School* is a dummy variable that takes the value 1 if the school is a public/government school and 0 if the school is private, NGO/Trust school, or Islamic Madrasa. No. of Male Teachers is the number of male teachers in the school. *No. Schools in District* is the number of schools in the district. *District Literacy Level (%)* is the percentage of adults (over age 24) who are literate. Wealth in District is the median monthly expenditures in the district (in rupees).

Table 2: Have You Heard of this School?

	1	2	3	4	5	6
	Heard	Heard	Heard (father)	Heard (father)	Heard (mother)	Heard (mother)
HH Characteristics						
Household Expenditure (log)	0.0238***	0.0302***	0.0243***	0.0285***	0.0094	0.0130*
	[0.007]	[0.007]	[0.007]	[0.007]	[0.008]	[0.008]
Wealth	0.0076***	0.0085***	0.0083***	0.0091***	0.0058**	0.0058**
	[0.002]	[0.002]	[0.002]	[0.002]	[0.002]	[0.003]
Mother's Education (years)	0.0030***	0.0045***	0.0024**	0.0037***	0.0081***	0.0101***
	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Father's Education (years)	0.0083***	0.0068***	0.0091***	0.0078***	0.0052***	0.0040***
	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
No. Boys in Household	0.0080**	0.0100***	0.0071**	0.0100***	0.0055	0.0089**
	[0.003]	[0.003]	[0.004]	[0.004]	[0.004]	[0.004]
No. Girls in Household	0.0002	0.0046	0.0037	0.0080**	0.0018	0.0089**
	[0.003]	[0.004]	[0.004]	[0.004]	[0.004]	[0.004]
School Characteristics						
Distance to School	-0.0703***	-0.0858***	-0.0701***	-0.0862***	-0.0888***	-0.0997***
	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.004]
Public School	0.1977***	0.1875***	0.2191***	0.2116***	0.2377***	0.2314***
	[0.010]	[0.010]	[0.011]	[0.011]	[0.011]	[0.011]
No. Male Teachers in school	0.0236**	0.0103	0.0307***	0.0212**	0.0141	0.0022
	[0.009]	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]
School's (Scaled) Score: Urdu	0	0.0001	0	0.0001	0.0001	0.0002**
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
School's (Scaled) Score: Maths	-0.0001	-0.0001	-0.0001	-0.0001	-0.0004***	-0.0004***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
School's (Scaled) Score: English	0.0001***	0	0.0001**	0.0001	0.0003***	0.0002***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
District Characteristics						
No. Schools in District	-0.0167***		-0.0186***		-0.0170***	
	[0.001]		[0.001]		[0.001]	
District Literacy Level	-0.0017***		-0.0017***		-0.0003	
	[0.000]		[0.000]		[0.000]	
Wealth in District	0.0000***		0.0000**		0.0000***	
	[0.000]		[0.000]		[0.000]	
Constant	0.5820***	0.3582***	0.5242***	0.2771***	0.4453***	0.3335***
	[0.064]	[0.064]	[0.066]	[0.067]	[0.069]	[0.069]
Observations	11,599	11,599	11,599	11,599	11,599	11,599
Village FE		112		112		112

Note: Columns (1) and (2) are the schools heard of by the household. Columns (3) and (4) are the schools heard of by the father. Columns (5) and (6) are the schools heard of by the mother. Columns (1), (3), (5) include district dummy variables. * denotes significance at the 10% level,** denotes significance at the 5% and *** denotes significance at the 1% level. See notes of Table 1 for description of variables.

Table 3: Have You Visited this School?

	1	2	3	4	5	6
	Visit	Visit	Visit (father)	Visit (father)	Visit (mother)	Visit (mother)
HH Characteristics						
Household Expenditure (log)	0.0183***	0.0202***	0.0166***	0.0175***	-0.0009	-0.0002
	[0.007]	[0.007]	[0.006]	[0.006]	[0.005]	[0.005]
Wealth	0.0077***	0.0080***	0.0054***	0.0061***	0.002	0.0014
	[0.002]	[0.002]	[0.002]	[0.002]	[0.002]	[0.002]
Mother's Education (years)	0.0045***	0.0050***	0.0023**	0.0029***	0.0052***	0.0049***
	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Father's Education (years)	0.0048***	0.0043***	0.0045***	0.0040***	0.0006	0.0004
	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
No. Boys in Household	0.0099***	0.0099***	0.0110***	0.0108***	0.0024	0.0029
	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]
No. Girls in Household	0.0165***	0.0159***	0.0069**	0.0053*	0.0156***	0.0159***
	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]
School Characteristics						
Distance to School	-0.0553***	-0.0633***	-0.0381***	-0.0433***	-0.0313***	-0.0366***
	[0.003]	[0.003]	[0.003]	[0.003]	[0.002]	[0.002]
Public School	0.1137***	0.1129***	0.0542***	0.0523***	0.0766***	0.0766***
	[0.010]	[0.010]	[0.009]	[0.009]	[0.007]	[0.008]
No. Male Teachers in school	0.0868***	0.0905***	0.1736***	0.1794***	-0.1031***	-0.1028***
	[0.009]	[0.009]	[0.008]	[0.008]	[0.007]	[0.007]
School's (Scaled) Score: Urdu	0.0002**	0.0002**	0.0001**	0.0001	0.0001	0.0001
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
School's (Scaled) Score: Maths	-0.0002***	-0.0002***	-0.0002***	-0.0001**	-0.0001***	-0.0001**
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
School's (Scaled) Score: English	0.0001*	0.0001*	0.0001	0.0001*	0.0001**	0.0001*
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
District Characteristics						
No. Schools in District	-0.0114***		-0.0087***		-0.0058***	
	[0.001]		[0.001]		[0.001]	
District Literacy Level	-0.0011***		-0.0006*		-0.0006**	
	[0.000]		[0.000]		[0.000]	
Wealth in District	0		0		0.0000***	
	[0.000]		[0.000]		[0.000]	
Constant	0.1229**	-0.0935	0.036	-0.1278**	0.1744***	0.0947**
	[0.061]	[0.063]	[0.055]	[0.057]	[0.047]	[0.048]
Observations	11599	11599	11599	11599	11599	11599
Number of villages		112		112		112

Note: Columns (1) and (2) are schools visited by the household. Columns (3) and (4) are the schools visited by the father. Columns (5) and (6) are the schools visited by the mother. Columns (1), (3), (5) include district dummy variables. * denotes significance at the 10% level,** denotes significance at the 5% and *** denotes significance at the 1% level. See notes of Table 1 for description of variables.

Table 4: Total Number of Schools Heard of and Visited

	1 Heard	2 Heard (Father)	3 Heard (Mother)	4 Visit	5 Visit (Father)	6 Visit (Mother)
HH Characteristics						
Household Expenditure (log)	0.1538*	0.1774**	0.0669	0.1551***	0.1449***	-0.0014
	[0.085]	[0.089]	[0.080]	[0.056]	[0.051]	[0.041]
Wealth	0.1018***	0.1004***	0.0629**	0.0629***	0.0420**	0.0177
	[0.029]	[0.031]	[0.027]	[0.019]	[0.018]	[0.014]
Mother's Education (years)	0.0473***	0.0395***	0.0922***	0.0491***	0.0264***	0.0488***
	[0.014]	[0.015]	[0.013]	[0.009]	[0.009]	[0.007]
Father's Education (years)	0.0661***	0.0726***	0.0382***	0.0420***	0.0398***	0.0048
	[0.012]	[0.012]	[0.011]	[0.008]	[0.007]	[0.006]
No. Boys in Household	0.0731*	0.0618	0.0268	0.0732***	0.0865***	0.0092
	[0.043]	[0.045]	[0.040]	[0.028]	[0.026]	[0.021]
No. Girls in Household	0.0299	0.0433	0.0521	0.1298***	0.0547**	0.1258***
	[0.043]	[0.045]	[0.040]	[0.028]	[0.026]	[0.021]
District Characteristics						
No. Schools in District	0.3842***	0.3200***	0.2085***	0.0358***	0.0340***	0.0089
	[0.012]	[0.013]	[0.012]	[0.008]	[0.007]	[0.006]
District Literacy Level	0.0057	0.0058	0.0170***	0.0022	0.0005	0.0041*
	[0.005]	[0.005]	[0.005]	[0.003]	[0.003]	[0.002]
Wealth in District	0.0000	0.0000	0.0000	0.0000	-0.0001***	0.0000*
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
District: Attock	0.2852**	0.197	-0.4752***	0.1768*	-0.0911	0.0414
	[0.138]	[0.144]	[0.129]	[0.090]	[0.083]	[0.066]
District: Rahim Yar Khan	0.4676**	0.5097**	-0.1154	0.7255***	0.5244***	0.2123**
	[0.200]	[0.208]	[0.186]	[0.130]	[0.120]	[0.096]
Constant	-0.3998	-0.3268	0.4488	-0.806	-0.6001	-0.0226
	[0.773]	[0.804]	[0.719]	[0.504]	[0.463]	[0.371]
Observations	1598	1598	1598	1598	1598	1598
R-squared	0.499	0.41	0.277	0.209	0.187	0.092

Note: Columns (1) and (2) are the number of schools heard of by the household. Columns (3) and (4) are the number of schools heard of by the father. Columns (5) and (6) are the number of schools heard of by the mother. All columns include district dummy variables. Faisalabad is the excluded category. * denotes significance at the 10% level,** denotes significance at the 5% and *** denotes significance at the 1% level. See notes of Table 1 for description of variables.

Table 5: Differences between Schools Visited and Not Visited

(Conditional on having heard of them)

	Visit			Don't Visit			
	Obs.	Mean	SD	Obs.	Mean	SD	**P-Value**
Public School	2792	0.71	0.45	5819	0.62	0.48	0.00
No. Male Teachers	2792	0.49	0.47	5819	0.44	0.46	0.00
School's (Scaled) Score: Urdu	2776	495.95	107.42	5764	505.34	108.99	0.09
School's (Scaled) Score: Math	2776	496.53	110.11	5764	508.56	111.46	0.04
School's (Scaled) Score: English	2776	493.72	119.55	5764	507.13	122.68	0.05
Distance (km)	2793	0.82	1.12	5823	1.09	1.26	0.00

Note: This table presents some summary statistics of the schools visited and not visited, respectively, conditional on whether parents have heard of them. See notes of Table 1 for description of variables.

Table 6: Relating the Gap in Correctly Evaluating School to the Number of Schools Heard of (Visited)

PANEL A: GAP								
	1	2	3	4	5	6	7	8
	Mother: Average	Mother: Math	Mother: English	Mother: Urdu	Father: Average	Father: Math	Father: English	Father: Urdu
Predicted(Sum Heard)	-0.0111***	-0.0174***	-0.0150***	-0.0172***	-0.0128***	-0.0185***	-0.0171***	-0.0180***
	[0.002]	[0.002]	[0.002]	[0.002]	[0.001]	[0.001]	[0.001]	[0.002]
Constant	0.1603***	0.2208***	0.1989***	0.2149***	0.1895***	0.2489***	0.2357***	0.2485***
	[0.008]	[0.010]	[0.010]	[0.010]	[0.008]	[0.008]	[0.009]	[0.009]
Observations	3736	3736	3736	3736	4171	4171	4171	4171
PANEL B: GAP								
	Mother: Average	Mother: Math	Mother: English	Mother: Urdu	Father: Average	Father: Math	Father: English	Father: Urdu
Predicted(Sum Visit)	-0.0017	0.0002	-0.0028	-0.0137*	-0.0273***	-0.0371***	-0.0336***	-0.0303***
	[0.007]	[0.008]	[0.008]	[0.008]	[0.004]	[0.004]	[0.005]	[0.005]
Constant	0.1141***	0.1459***	0.1370***	0.1533***	0.1570***	0.1984***	0.1879***	0.1917***
	[0.007]	[0.008]	[0.008]	[0.008]	[0.006]	[0.007]	[0.007]	[0.007]
Observations	3736	3736	3736	3736	4171	4171	4171	4171

Note: This table presents the GAP from equation (3). This is the squared difference between the actual school quality (as measured by the schools' test scores in Math, Urdu and English) and parents' assessment for that given school (as measured by the score from 1 to 5 given to each school). Panel A (B) estimates the effect of the (predicted) number of schools heard of ((predicted) number of schools visited) on the GAP. The predictions are based on the regressions presented in Table 3. Columns (1) to (4) for Panel A (B) are the schools heard of (visited) by the mother. Columns (5) to (8) for Panel A (B) are the schools heard of (visited) by the father. The outcome variable in Columns (1) and (5) of Panels A and B is based on average overall test scores in Math, English and Urdu. The outcome variable in Column (2) and (6) of Panels A and B is based on test scores in Math. The outcome variable in Column (3) and (7) of Panels A and B is based on test scores in English. The outcome variable in Columns (4) and (8) of Panels A and B is based on test scores in Urdu.* denotes significance at the 10% level,** denotes significance at the 5% and *** denotes significance at the 1% level. See notes of Table 1 for description of variables.

Table 7: Relating the Quality of School Choice to the Evaluation of Schools ("GAP")

PANEL A: Quality of School Choice (ALL SCHOOLS)								
	1	2	3	4	5	6	7	8
	Mother: Average	Mother: Math	Mother: English	Mother: Urdu	Father: Average	Father: Math	Father: English	Father: Urdu
GAP	-0.8091***	-0.6984***	-0.8997***	-0.8292***	-1.0171***	-0.9209***	-1.1092***	-1.0213***
	[0.0405]	[0.0459]	[0.0464]	[0.0459]	[0.0340]	[0.0391]	[0.0394]	[0.0393]
Constant	0.5868***	0.5646***	0.6059***	0.5898***	0.6233***	0.6044***	0.6448***	0.6207***
	[0.0070]	[0.0080]	[0.0080]	[0.0080]	[0.0066]	[0.0076]	[0.0077]	[0.0077]
Observations	3198	3198	3198	3198	3163	3163	3163	3163

	PANEL B: Quality of School Choice (PUBLIC SCHOOLS ONLY)							
	Mother: Average	Mother: Math	Mother: English	Mother: Urdu	Father: Average	Father: Math	Father: English	Father: Urdu
GAP: Mother	-0.3078***	-0.3164***	-0.3049***	-0.3021***	-0.6428***	-0.6601***	-0.6470***	-0.6214***
	[0.0469]	[0.0544]	[0.0541]	[0.0545]	[0.0419]	[0.0488]	[0.0487]	[0.0492]
Constant	0.5501***	0.5459***	0.5609***	0.5434***	0.6078***	0.6165***	0.6139***	0.5931***
	[0.0103]	[0.0120]	[0.0119]	[0.0120]	[0.0100]	[0.0116]	[0.0116]	[0.0117]
Observations	2247	2247	2247	2247	2228	2228	2228	2228

Note: This table presents the quality of school choice (as measured by the rank of the school in the village). Panel A (B) estimates the effect of the GAP on the quality of school choice for all schools (for public schools only). See Table 5 for a description of GAP. Columns (1) to (4) for Panel A (B) use the mothers' GAP measure. Columns (5) to (8) for Panel A (B) use the fathers' GAP measure. The outcome variable in Columns (1) and (5) of Panels A and B is based on average overall test scores in Math, English and Urdu. The outcome variable in Columns (2) and (6) of Panels A and B is based on test scores in Math. The outcome variable in Columns (3) and (7) of Panels A and B is based on test scores in English. The outcome variable in Columns (4) and (8) of Panels A and B is based on test scores in Urdu.* denotes significance at the 10% level,** denotes significance at the 5% and *** denotes significance at the 1% level.

Table 8: Relating School Choice to Parents' School Rank

	Quality of School Choice	
	1	2
School Rank: Mother	0.5052***	
	[0.0310]	
School Rank: Father		0.3785***
		[0.0332]
Constant	0.2066***	0.2677***
	[0.0187]	[0.0209]
Observations	3198	3163

Note: This table presents the correlation between the quality of school choice and the parents' assessment of the school (*School Rank*). * denotes significance at the 10% level,** denotes significance at the 5% and *** denotes significance at the 1% level.

Table 9: Decomposition of Factors (Policy Implications)

	Quality of School Choice	
	1	2
GAP: Mother	-0.7941***	
	[0.0404]	
Mother's Education (years)	0.0104***	
	[0.0013]	
No. School Mother Visits	0.0568***	
	[0.0149]	
GAP: Father		-0.9970***
		[0.0347]
Father's Education (years)		0.0062***
		[0.0011]
No. Schools Father Visits		0.012
		[0.0137]
Constant	0.5473***	0.5770***
	[0.0083]	[0.0099]
Observations	3146	2899

Note: This table estimates the effect of parents' GAP, education and school visits on the quality of school choice. See Table 5 for a description of GAP. * denotes significance at the 10% level,** denotes significance at the 5% and *** denotes significance at the 1% level.