

Schools and learning in rural India and Pakistan: who goes where, and how much are they learning?

Benjamin Alcott and Pauline Rose

University of Cambridge

Faculty of Education, 184 Hills Road

Cambridge, CB2 8PQ, United Kingdom

Corresponding author: Benjamin Alcott, bma27@cam.ac.uk, Tel. + 44 (0) 1223 767600, Fax +44
(0)1223 767602.

Abstract

It is increasingly recognised that there is a global learning crisis. We investigate this learning crisis through a comparative analysis of rural India and Pakistan. Using data from each country's Annual Status of Education Report, we demonstrate that socio-economic status and gender are important determinants of whether children are in school or not, the type of school they attend, and whether or not they are learning. While learning varies across the type of school attended, socioeconomic disparities predominate: disadvantaged children in private schools are learning less than more advantaged children in government schools. Gender plays an important role, with disparities between boys and girls being most pronounced among poorer children in Pakistan. In addition, while private tuition improves learning for all children, it does not resolve socio-economic and gender disparities. This study draws attention to the need for policymakers to focus their attention on government schools in both countries given that this is not only where the majority of the poorest children are studying, but also where learning levels are lowest. The fact that rich children in government schools are learning indicates that we ought not to dismiss out-of-hand the role that government schools can play in learning.

Keywords

Private schools; learning; inequality; India; Pakistan

SCHOOLS AND LEARNING IN RURAL INDIA AND PAKISTAN

Schools and learning in rural India and Pakistan: who goes where, and how much are they learning?

Introduction

The 2013/4 Education for All Global Monitoring Report estimates that around 250 million children are not learning the basics, over half of whom have spent at least four years in school (UNESCO 2014). Such recognition of a global learning crisis is placing a spotlight on the importance of identifying which children are learning the basics in order for policymakers to tackle the problem effectively.

This paper contributes to understanding which children are not learning the basics in two countries that are home to around one-fifth of the world's population – India and Pakistan. Both these countries face major challenges in expanding access to good quality education for all children. While each has put in place a Right to Education Act, showing commitment to extending access to schooling, India has only recently given a focus to improving learning outcomes in its 12th five-year plan, and Pakistan has yet to show a policy commitment in this regard.

The paper identifies that, in rural India and Pakistan, poverty and gender influence children's chances of going to school as well as the type of school they attend, be it a government or private school, or a madrasa. It also demonstrates that although learning is greater in private schools than government schools, children from more disadvantaged backgrounds are still less likely to learn the basics, regardless of the type of school they attend. For example, poor girls aged 10-12 years in private schools are less likely to be able to read a paragraph than rich boys in government schools. Finally, it shows that, for the small proportion of poorer children who receive private tuition, this tuition improves their chances of learning but does not even close the gap between them and richer children who do not receive private tuition.

Recent evidence on how school type affects access and learning in India and Pakistan

Over the past decade private schools charging relatively low fees have expanded in some of the poorest countries, including in India and Pakistan (Day Ashley et al. 2014). Arguments in favour of private provision emphasise factors such as greater cost efficiency and accountability (Andrabi et

SCHOOLS AND LEARNING IN RURAL INDIA AND PAKISTAN

al. 2013; Chaudhary et al. 2006; Kingdon 2008; Muralidharan and Kremer 2008), and that private schools are viewed as addressing some of parental concerns about government schools, namely teacher absenteeism and large class size (Alderman et al. 2001; Andrabi et al. 2008; Kremer et al. 2005). However, the nature of private-school expansion thus far has led to a debate about whether these schools actually reach the poor households who are seeking alternatives to government provision.

Research on low fee private primary schools in India has found that around two-thirds of children in urban and peri-urban Hyderabad are enrolled in these schools, for example (Tooley and Dixon 2006). A nationally-representative sample conducted in 2003 also shows that private schools are less prevalent in rural areas of India, where around 28% of children are enrolled in fee-charging private schools (Muralidharan and Kremer 2008). These schools are more common in areas where government schools are performing badly. However, the study also shows that children attending rural private schools come from more advantaged family backgrounds in general, even though around 20% are first generation learners. Similarly, data from rural Uttar Pradesh identify that the poorest are less likely to be enrolled in a private school: only 10% of children from the poorest quintile of households in the sample were attending these schools, compared with 70% of the richest (Härmä and Rose 2012).

Private schooling has also become increasingly prevalent in Pakistan, although questions remain whether they are reaching the most disadvantaged. It is most prevalent in Punjab, the country's wealthiest province, with 23% of 5- to 18-year olds who are attending school enrolled in private schools, compared with 4% in Balochistan (Ahmed et al 2013).

There is a growing interest not only in who gets access to what type of school, but also in differences in children's learning between those attending private and government schools. Quantitative studies thus far in Pakistan conclude that private schooling has a positive effect on learning in comparison to government schools, even after taking account of characteristics of children and households (Andrabi et al. 2010; Andrabi et al. 2011; Arif and Saqib 2003; Aslam 2009; Das et al. 2006). Similarly, the majority of such studies focusing on India have shown a positive effect of private schools in comparison to government schools (Desai et al. 2009; French and Kingdon 2010;

SCHOOLS AND LEARNING IN RURAL INDIA AND PAKISTAN

Goyal 2009; Kingdon 1996). There is, however, some countervailing evidence in India: Chudgar and Quin (2012) find that the improvement associated with private school attendance was no longer significant after controlling for observable differences. Both this study and Singh (2013) also find that the private school advantage is stronger in rural than urban schools.

Learning is likely to be mediated by private tuition. Although the benefit of private tuition may be greatest for poorer children (Aslam and Atherton 2012; Dongre and Tewary 2014), their households are least likely to be able to afford its costs raising equity concerns (Bray and Kwo 2013; Singh and Bangay 2014). In a report on West Bengal, India, 54% of those parents who were not paying for private tuition said that this was primarily because they could not afford to (Sen 2009). Both Sen (2009) and Aslam and Mansoor (2011) further argue that private tuition imperils the basic right to education for all children, since it can encourage low teaching standards in government schools.

Gaps in existing research on private versus government schooling in India and Pakistan – and focus of this paper

Two bodies of research are apparent in the existing literature: one that explores who accesses private schooling, and another that focuses on the effect of private schools on learning. The first has demonstrated the unequal nature of access; the second has recognised and sought to account for this in its estimates of the effect of private schools on learning. Many studies adopt econometric methods, which claim to overcome the inherent biases in prior differences amongst students who do and do not attend these schools, although generally not with sufficient accuracy (Day Ashley et al. 2014).

To date, such research has focused largely on relative differences in the average level of learning between those at government schools and those at private schools. This risks overlooking two important factors. First, students from different backgrounds may vary considerably in how they benefit from attending different types of school. Second, the relative benefits of private schooling should not divert attention from learning in absolute terms. As such, it is important to return to the policy question of whether private schools are ensuring children are learning the basics, even if they are doing better than government schools in relative terms.

SCHOOLS AND LEARNING IN RURAL INDIA AND PAKISTAN

More generally, while there is a growing literature on private schooling in poor countries, literature is scant on who gets access to, and learning in, other types of school – notably madrasas, which are prevalent in some parts of South Asia (Wales et al. 2014).

In addition, despite the growing literature in India in particular, there has been limited comparative analysis across India and Pakistan. Such comparisons are likely to be instructive given both countries have a sizeable private school sector but with different policy contexts, as well as differences in the extent to which progress in expanding access to reach the marginalized has been achieved. It is also true that there are tremendous disparities across states or provinces in the respective countries, both in terms of school-enrolment patterns and learning outcomes (ASER India 2014; ASER Pakistan 2013). While we recognise that within-country variations are considerable, here we focus on the national picture for each country so as to facilitate a broader comparative overview between the two countries.

This paper aims to fill these gaps. It investigates both disparities in school attended and disparities in learning outcomes. Focusing on 10-12 year old children (who should be at an age of completing school, it begins by identifying who goes to school, and what type of school they attend (government schools, private schools, or madrasas) in India and Pakistan. In particular, it compares children from backgrounds that are identified in the data as the most advantaged and most disadvantaged in the rural areas of each country. The paper then examines the extent to which children are learning in each of the types of school in rural India and rural Pakistan, and whether this varies according to children's backgrounds. Finally, it investigates the extent to which private tuition supplements learning in schools, and whether and any impact differs according to children's backgrounds. Consequently, in this paper we aim to answer the following research questions:

1. What are the key characteristics that predict the type of school a child attends in India and Pakistan?
2. To what extent are children reaching basic levels of learning? How does this vary according to the characteristics of the children, what school they are attending, and whether they are receiving private tuition? And how do these patterns vary between the two countries?

Data and methods

To investigate the research questions, we use quantitative analysis of data from the Annual Status of Education Reports (ASER) conducted in India and Pakistan in 2012. ASER India, the older of the two initiatives, is an annual household-based survey, the primary focus of which is collecting information on enrolment among 5-16 year-olds, together with assessing literacy levels and numeracy levels (Chaven and Banerji 2013). The ASER assessment tools are designed to be straightforward for data collection, providing information that is easy to communicate (ASER Centre 2014). ASER Pakistan derives its methodology and learning assessment tools from those of ASER India (ASER Pakistan 2014). In order to ensure that our analyses are comparable across the countries, we only use variables that were included in both the ASER India and ASER Pakistan surveys in 2012.

This paper's focus is children whose age indicates they should be completing primary school and so should be expected to have learnt the basic reading and mathematical skills, and so we limit our sample to children aged 10–12 at the time of the survey. Both ASER India and ASER Pakistan are conducted nationwide, and so survey children in all of their respective states, provinces and territories. However, since ASER India 2012 focused on rural districts, we exclude children from ASER Pakistan who live in urban areas in order to make the sample comparable across the countries. Subsequently, our sample size is 147,651 for India and 54,066 for Pakistan.

Our key outcomes of interest are school attendance and learning. We classify each child's school attendance using ASER's terminology: attending a government school, attending a private school, attending a Madrasa, having left school, or never having attended school.¹

For our learning outcome, we focus on literacy.² The ASER surveys assess literacy according to which of the five levels of reading ability each child has reached (Table 1). Children are tested

¹ We exclude children described as attending 'other schools' from our analyses due to small sample size and lack of information on the scope of types of schools that this incorporates. We also recognise that there is a major distinction among private schools in India, with aided schools relying on government funding, and also likely to be differences between schools that are registered and unregistered. However, given the design of the ASER surveys, we are unable to differentiate between these types in our analysis.

SCHOOLS AND LEARNING IN RURAL INDIA AND PAKISTAN

individually for their ability at each level sequentially until they reach a level they cannot read: if they can read letters but not words, they are not tested for the ability to read a paragraph or a story. For our analysis, we focus in particular on whether a child is able to read at least a paragraph because, although expectations of learning are not clear in India (Banerji 2013), the ability to read a paragraph is implicitly expected by the end of the second year of primary schooling (Bhattacharjea et al. 2011; Jamil 2014).³

Table 1. *Learning measure used for both ASER India 2012 and ASER Pakistan 2012 surveys*

Level	Reading
Lowest	Nothing
↓	Letter
	Word
	Paragraph/sentences
Highest	Story

Regarding child characteristics, we account for a range of factors that have been shown as important in past research: the child's gender (Aslam 2009; Azam and Kingdon 2013), number of siblings (Härmä 2011; Srivastava 2006), whether they are a first-generation school-goer⁴ (Khan et al. 2005; Muralidharan & Sundararaman 2013; Sucharita 2014), and whether they receive private tuition (Aslam and Mansoor 2011; Wadhwa 2013).

Wealth is identified in previous research as an important factor determining the type of school that children attend (e.g., Chudgar 2012; Goyal and Pandey 2009; Härmä 2011). For each household we therefore calculate a wealth index. Following the example of Saeed and Zia (2014), we generate this index through a factor analysis of household indicators of wealth, based on type of house (mud, brick and mud, or mud and cement), whether the house has electricity, a mobile phone, and a

² We analysed both literacy and numeracy outcomes, finding similar patterns in each.

³ The description of the reading levels in ASER India and ASER Pakistan are consistent except for Level 4, which is called 'paragraph' in ASER India and 'sentences' in ASER Pakistan. Despite this difference in classification, the two measures are essentially indistinguishable since both comprise four sentences.

⁴ We define first-generation status as occurring when neither parent has attended school. In cases where only one parent was surveyed, we base first-generation status on this parent alone.

SCHOOLS AND LEARNING IN RURAL INDIA AND PAKISTAN

television.⁵ In addition, we account for whether the household's village contains a government and a private school.

In our analysis, we use both descriptive and inferential analytical methods. The inferential method that we use is multinomial logistic regression. Multinomial logistic regression analyses the impact of an independent variable on the probability of a categorical outcome whilst holding constant the impact of the other independent variables included in the model. To illustrate, descriptive statistics can show whether family size is an important predictor of the type of school that a child attends, but any apparent relationship may be spurious unless one also accounts for additional factors that are linked to both the apparent cause (family size) and outcome (type of school attended). In the case of family size, for example, these might include parental education and household wealth. Within quantitative social-science approaches, these would typically be referred to as potential confounding factors. As such, our regression models enable us to establish whether the predictive power of each factor still holds once controlling for a range of other variables.

⁵ The sole difference between our index and Saeed and Zia's is that we do not also consider home ownership, since this information was not collected in the ASER India 2012 survey.

SCHOOLS AND LEARNING IN RURAL INDIA AND PAKISTAN

Table 2. *Descriptive statistics for sample of 10-12 year-olds in ASER India 2012 and ASER Pakistan 2012 surveys*

	Country	
	India % or Mean(SD)	Pakistan % or Mean(SD)
School attendance		
<i>Government</i>	68	60
<i>Private</i>	28	18
<i>Madrassa</i>	1	2
<i>Left school</i>	2	4
<i>Never attended</i>	1	16
Learning		
<i>Nothing</i>	5	14
<i>Letter</i>	12	8
<i>Word</i>	13	19
<i>Paragraph</i>	19	18
<i>Story</i>	51	41
Gender		
<i>Female</i>	47	38
<i>Male</i>	53	62
Siblings	1.7(1.2)	2.9(1.5)
First generation	24	49
Private tuition	19	9
House type		
<i>Mud</i>	36	48
<i>Brick and mud</i>	30	30
<i>Brick and cement</i>	34	22
Electricity	74	87
Mobile phone	65	77
Television	48	52
Availability of govt. school*	95	98
Availability of private school*	42	41
<i>N</i>	147,651	54,066

*Availability of govt./private school refers to whether there is a government or private school in the village.

Table 2 provides descriptive statistics for the sample used at the aggregate level for each country. Regarding enrolment, perhaps the most notable contrast between the countries is that India had achieved near-universal enrolment in rural areas by the time of the survey, whereas 16% of the children sampled in Pakistan had never attended school. There is a government school in almost all villages in both countries, and just over 40% have access to private schools. However, enrolment in private schooling is more prevalent in rural India (28%) than in rural Pakistan (18%), as are the proportion of students who receive private tuition (19% versus 9%). Attendance at madrasa schools is

SCHOOLS AND LEARNING IN RURAL INDIA AND PAKISTAN

twice as common in Pakistan, although this represents fewer than two percent of the sample in that country.

With respect to the characteristics of the children and their households, the proportion who are first-generation school-goers in rural Pakistan (49%) is twice that of rural India (24%). Somewhat paradoxically, while private schooling and private tuition is less prevalent in Pakistan than India, children sampled in Pakistan had slightly higher levels of material wealth, as measured by the presence of electricity, mobile phones and televisions.

In both countries, there is a higher proportion of males than females in the sample. Parental preference for female offspring is a recognised problem in rural India (Jha et al. 2006; Miller 1997; Sen 1992), and so this may at least partially explain this imbalance. The sex ratio for the sample from ASER Pakistan shows an even greater imbalance, and this is consistent across ASER Pakistan surveys, suggesting that gender discrimination within the household could be at least as much, if not more of, a problem in Pakistan.⁶ It is important to acknowledge this imbalance, but it is beyond the scope of this paper to analyse the causes of this imbalance.

⁶ We contacted ASER Pakistan to check whether our analysis was erroneous, and so confirmed that this male-to-female ratio (62:38) is correct for 10–12 year-olds in the 2012 sample.

Table 3. *Characteristics of 10- 12-year-old children by provider type in India and Pakistan.*

	India					Pakistan				
	Government school	Private school	Madrasa	Left school	Never attended	Government school	Private school	Madrasa	Left school	Never attended
Gender										
<i>Female</i>	49	42	49	52	54	34	33	20	49	60
<i>Male</i>	51	58	51	48	46	66	67	80	51	40
Siblings	1.7(1.2)	1.6(1.1)	2.5(1.5)	2.1(1.4)	2.3(1.4)	2.8(1.5)	2.4(1.5)	3.2(1.4)	3.2(1.6)	3.1(1.6)
First generation	28	14	43	54	65	48	28	67	54	75
Private tuition	19	22	11	1	3	7	25	2	0	0
Wealth quartile										
1 = <i>poorest</i>	33	15	39	55	62	34	14	54	41	57
2	24	17	30	25	22	15	17	13	19	12
3	27	31	22	16	12	34	33	25	28	25
4 = <i>richest</i>	15	37	9	4	4	16	37	8	12	6
Observations	99,973	42,009	1,094	2,612	1,963	32,285	9,624	1,278	2,281	8,598

Note: all figures represent either column percentage or mean (standard deviation).

Findings

Who is in school, and what type of school are they attending?

Overall, the data show that there are more similarities between India and Pakistan than there are differences (Table 3). While non-enrolment is substantially higher in Pakistan than in India, patterns among 10-12 year-olds who have never been to school in each country are broadly similar: at least two-thirds are first-generation school goers and more than half are from the poorest wealth quartile. There is a gender bias in both countries, although more dramatically so in Pakistan, where 60% of those who have never been to school in rural areas are girls. Given that they are outnumbered by boys in our sample, girls are over one and a half times as likely to be out of school as boys.

Turning to the characteristics of those who are in school, in both rural India and Pakistan children at private schools are the most likely to be wealthy (only around 15% of those in private schools are from the poorest households in both countries), and have at least one parent who has attended school. In addition, boys are more likely to be enrolled in private schools (in Pakistan, two in three of those in private schools are boys). Whereas private-school going children come from smaller families in Pakistan, in India this difference is indistinguishable.

In both countries, the few enrolled in madrasa schools are from less wealthy backgrounds, particularly in rural Pakistan. In Pakistan, madrasa attendees have a similar wealth profile to children who never attended school, whereas in India (where most children are in school) their wealth levels are most comparable to those of children in government schools. Gender differentials are particularly pronounced in madrasas in Pakistan, where boys outnumber girls by a ratio of four to one.

In addition to the type of school attended, some parents make choices about their children's education by investing in private tuition. One notable difference between the countries is that private tuition rates are similar between private and government school attendees in rural India (19% and 22%, respectively), whereas there is a far greater disparity in rural Pakistan, where children at private school receive private tuition almost four times as frequently as those at government schools.⁷

⁷ While beyond the scope of this paper, Wadhwa (2013) on India and Aslam and Mansoor (2011) on Pakistan identify that the prevalence and role of private tuition is also likely to vary by region within each country.

SCHOOLS AND LEARNING IN RURAL INDIA AND PAKISTAN

Consistent with the past literature, our findings indicate that there are likely to be common trends with regards to which school type a given child attends. To extend this line of inquiry, we estimated multinomial-logistic regression models to establish the relative importance of different child and village characteristics (Appendix A).⁸ These predictive models corroborate the importance of characteristics emphasized in past research. Importantly also, the significance of interaction terms in these models show that characteristics associated with disadvantage also reinforce one another. For example, a child's gender is important in predicting the type of school that they attend, but it matters far more within poorer households: holding other variables in the model constant, the poorest girls in India are 43% less likely to attend private schools than the poorest boys,⁹ and the poorest girls in Pakistan are 31% less likely to do so.

By contrast, the gender gap is much smaller within wealthier households as shown by the fact that the interaction of wealth and gender ("Female*wealth") is significant and greater than one in both countries: after controlling for all other variables in the model, in India the richest girls are 29% less likely to attend private schools than the richest boys, and in Pakistan this gap is 8%. Similar patterns of gender and wealth interactions are visible for all other schooling outcomes, with the exception of children in Pakistan who have left school. In this case, the non-significant "Female*wealth" interaction term indicates that the gender gap is the same for rich and poor households.

Taken together, these model estimates indicate that gender disparities are far smaller in wealthier families than in poorer families in rural areas across both countries. This is consistent with past research on both countries, which indicates that households prioritise male children in their educational expenditure (Aslam 2009; Azam & Kindgon 2013), with our analysis indicating that those households with fewer resources and so facing greater pressure to make restrictive choices are more likely to invest in boys' schooling than girls'.

Having identified that poverty and gender interactions have a strong effect on school attendance and choice in both countries, we investigate the extent to which these overlapping aspects

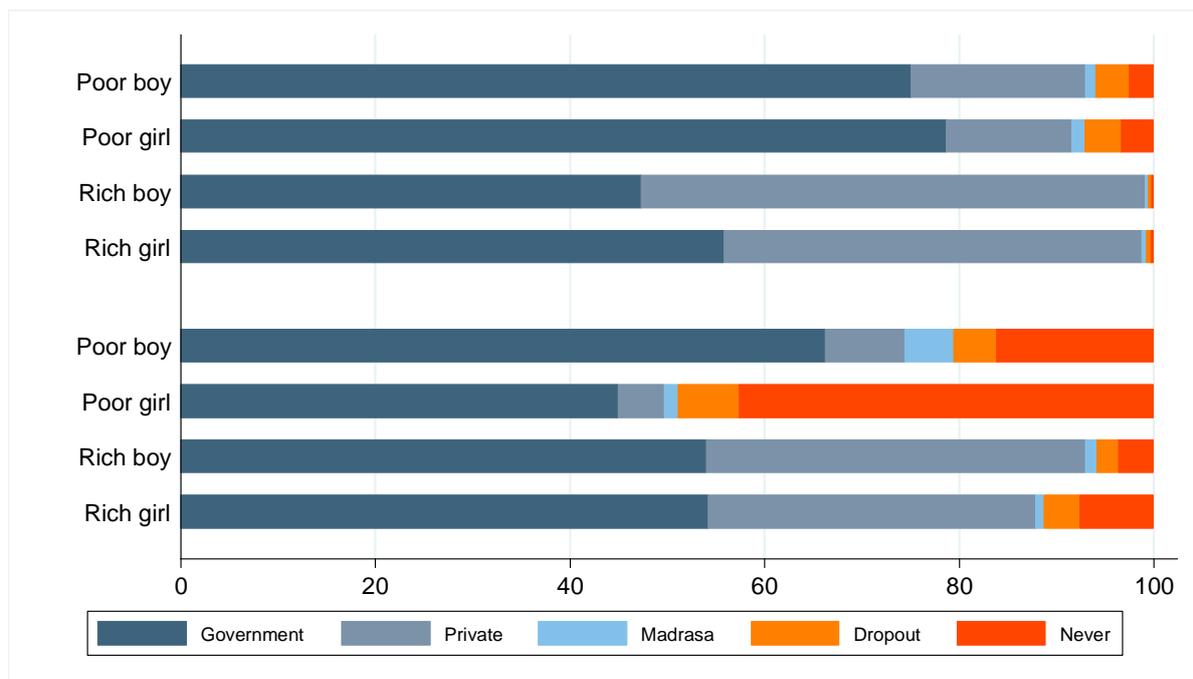
⁸ We provide some inferential analyses for the purposes of the present study. However, the main aim of this paper is to identify current conditions of access and learning inequalities comparing India and Pakistan, for which descriptive statistics are more appropriate.

⁹ This value is derived from the figures presented in Table A1 of appendix A; it is calculated by taking the difference between the relative risk ratio (0.569) and one, which gives -0.431 , i.e., a 43% decrease.

SCHOOLS AND LEARNING IN RURAL INDIA AND PAKISTAN

of disadvantage influence schooling and learning opportunities in rural India and Pakistan. This leads us to concentrate on outcomes for four main child groups: poor boys, poor girls, rich boys, and rich girls. We define poor children as those in the lower wealth-index quartile among the sample in their country, and rich children as those in the upper quartile.

Figure 1. Proportion of children aged 10–12 by child characteristics and type of school.



In both rural India and Pakistan, wealth is the key determinant of whether a girl or boy goes to school: poorer children are many times more likely to be out of school than richer children (Figure 1). It is particularly striking to note that, in rural Pakistan, where around half of poor girls are not in school, the majority out of school have never even attended school. As such, the problem seems to be getting girls from poor families into school in the first place – if they make it into school, they have a good chance of completing.

For those children who are in school, wealth also determines which type they attend. Of those poor children who are in school, over 80% in each country attend government schools. By contrast, in rural India enrolled richer children attend private schools at three times the rate of enrolled poorer children. This difference is even greater in rural Pakistan, where the proportion of rich to poor

SCHOOLS AND LEARNING IN RURAL INDIA AND PAKISTAN

children in private schools is four to one. While far fewer children are in madrasas in either country, those attending these schools are far more likely to be poor.

Gender inequalities further reinforce wealth gaps for each country. The most striking gender difference is among poorer children in rural Pakistan: almost half of poorer girls are not in school, compared with one-fifth of poorer boys. Among poorer children in rural India, the gender difference is less notable: the proportion of poor boys and girls who are out of school is almost identical, although for those in school, fewer poor girls (13%) than poor boys (18%) attend private schools. The biggest gender disparity in school choice though is for madrasa schools in Pakistan, where poor boys are five times more likely than poor girls to attend.

Who is learning?

Our second research question is concerned with which children are learning the basics. We begin by comparing learning outcomes among children in each country according to whether they are in school, and which type of school they are attending (Figure 2). Similar patterns are visible in both countries, with the broad order of performance being, from best to worst: private schools, government schools, madrasas, children no longer in school, and children who have never been to school. Learning within a given type of school is very similar across the two countries; the respective proportions of those able to read a paragraph for Indian and Pakistani children in rural private schools are 80% and 77%, while in government schools they are 67% and 64%.

In both countries, not surprisingly, children who have never been to school are highly unlikely to be able to read a paragraph. In addition, dropping out of school before the age at which they are expected to complete means children in both countries are unlikely to have learnt the basics. Children who had dropped out of school in Pakistan fared slightly better than their peers in India, with 28% and 22%, respectively, being able to read a paragraph.

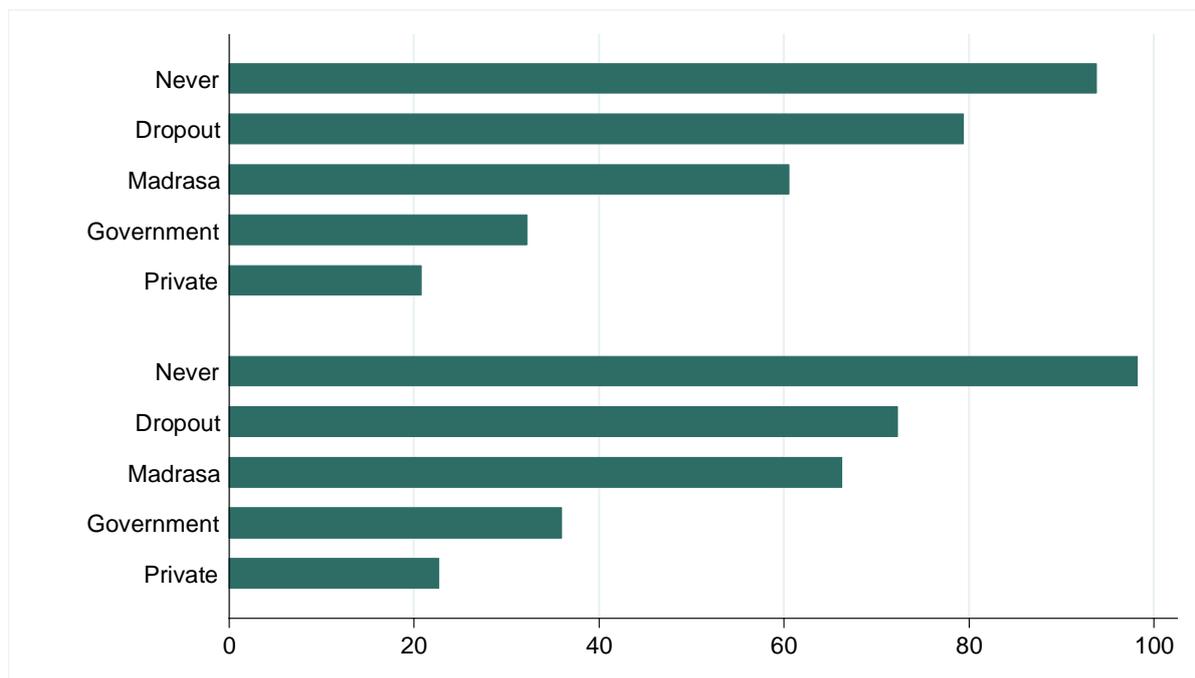
While madrasas represent a small portion of the sample, another notable outcome is the poor performance of children at these schools: their learning outcomes are more similar to those for children who are out of the school system than for those at government and private schools. In each

SCHOOLS AND LEARNING IN RURAL INDIA AND PAKISTAN

country, learning at madrasa schools is far worse than at either government or private schools: just 39% of Indian and 34% of Pakistani 10–12 year-olds at these schools could read a paragraph.

Importantly, even though learning is relatively better at private schools, in absolute terms this is still alarmingly poor. In both countries, more than a fifth of 10–12 year-olds in rural private schools are unable to read a paragraph.

Figure 2. Literacy learning for 10-12 year-olds by provider type.



Having established that learning varies by which school type children are attending, we next consider whether these differences vary according to the characteristics of children in the surveys (Figure 3). We find that the hierarchy of learning across school types remains: within each group, learning is better at private schools than at government schools, which are better than madrasa schools. In addition, this difference is greater for poorer girls and boys (nine percentage points for boys and eleven for girls) than for richer girls and boys (one and four percentage points for boys and girls, respectively).

Again though, it is important to pay attention to the absolute levels of learning as much as on relative difference. While a higher proportion of poorer children are learning in private schools this is

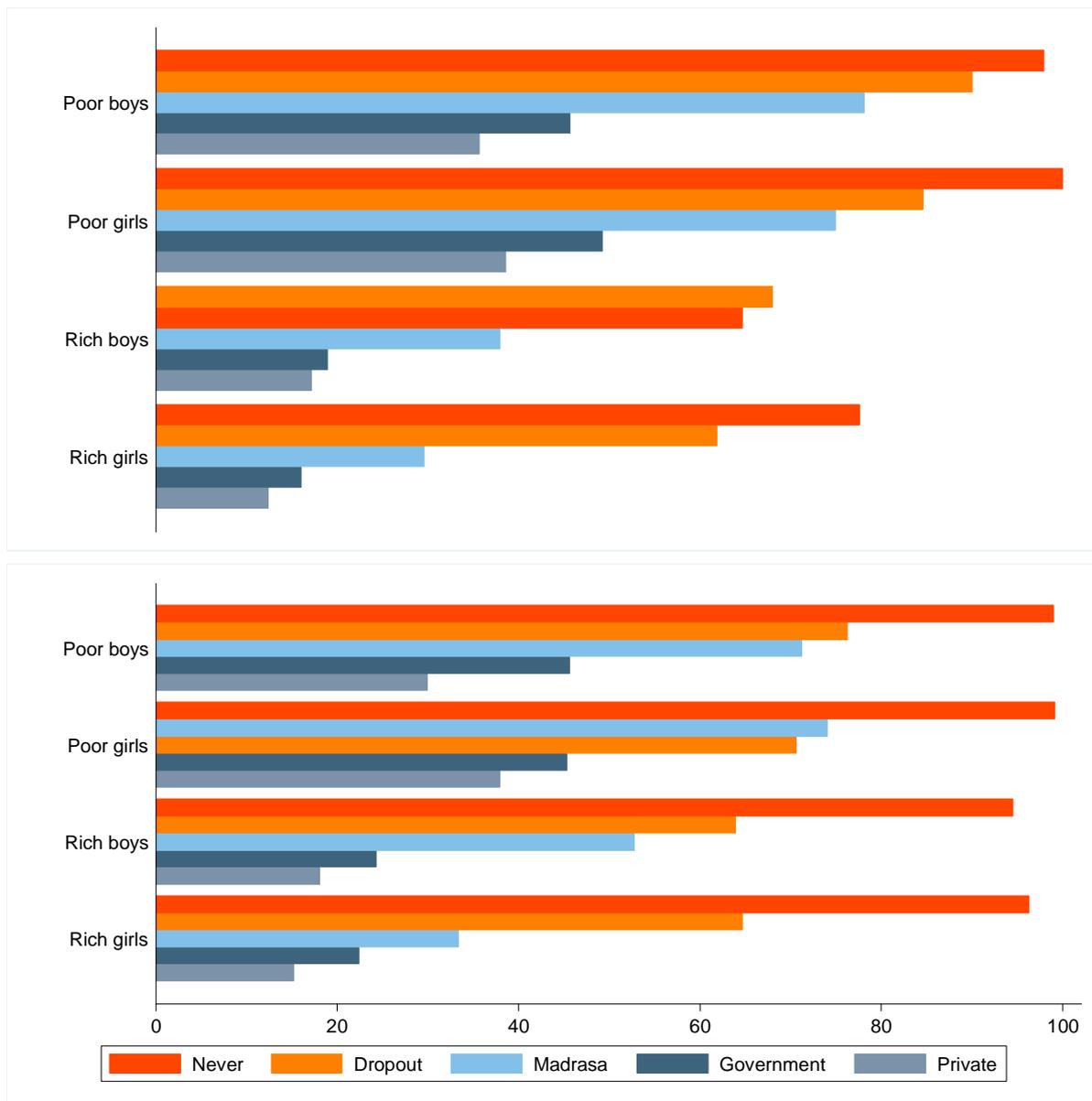
SCHOOLS AND LEARNING IN RURAL INDIA AND PAKISTAN

far from impressive. In India, 36% of poor children in private schools cannot read a paragraph, while the corresponding figure for Pakistan is 31%.

While learning varies substantially according to the type of school each group of children attend, wealth is of far greater importance than whether they are in a government or private school: more rich children in government schools are learning than are poor children in private schools. This is especially true in rural India, where this gap is 19 percentage points, while in rural Pakistan the gap stands at eight percentage points. Wealth disparities are also considerable within each type of school. Within both government and private schools, rich children are around three times more likely to be able to read a paragraph than poorer children in the same type of school.

SCHOOLS AND LEARNING IN RURAL INDIA AND PAKISTAN

Figure 3. Percentage of 10-12 year-olds who cannot read a paragraph, by child characteristics and school type



With respect to gender differences, girls and boys from the same wealth backgrounds are performing similarly when they are in the same type of school. The main exception is for poorer children in rural Pakistan; poor girls are matching poor boys in government schools, but doing far worse in private schools.

More generally, a key point from this analysis is the wide difference in learning for children from rich and poor backgrounds within either government or private schools. There could be a range of potential explanations for this; for example, rich children could have access to better quality

SCHOOLS AND LEARNING IN RURAL INDIA AND PAKISTAN

government schools or, if attending the same schools as children from poor households, teachers could be giving them more attention in the class.

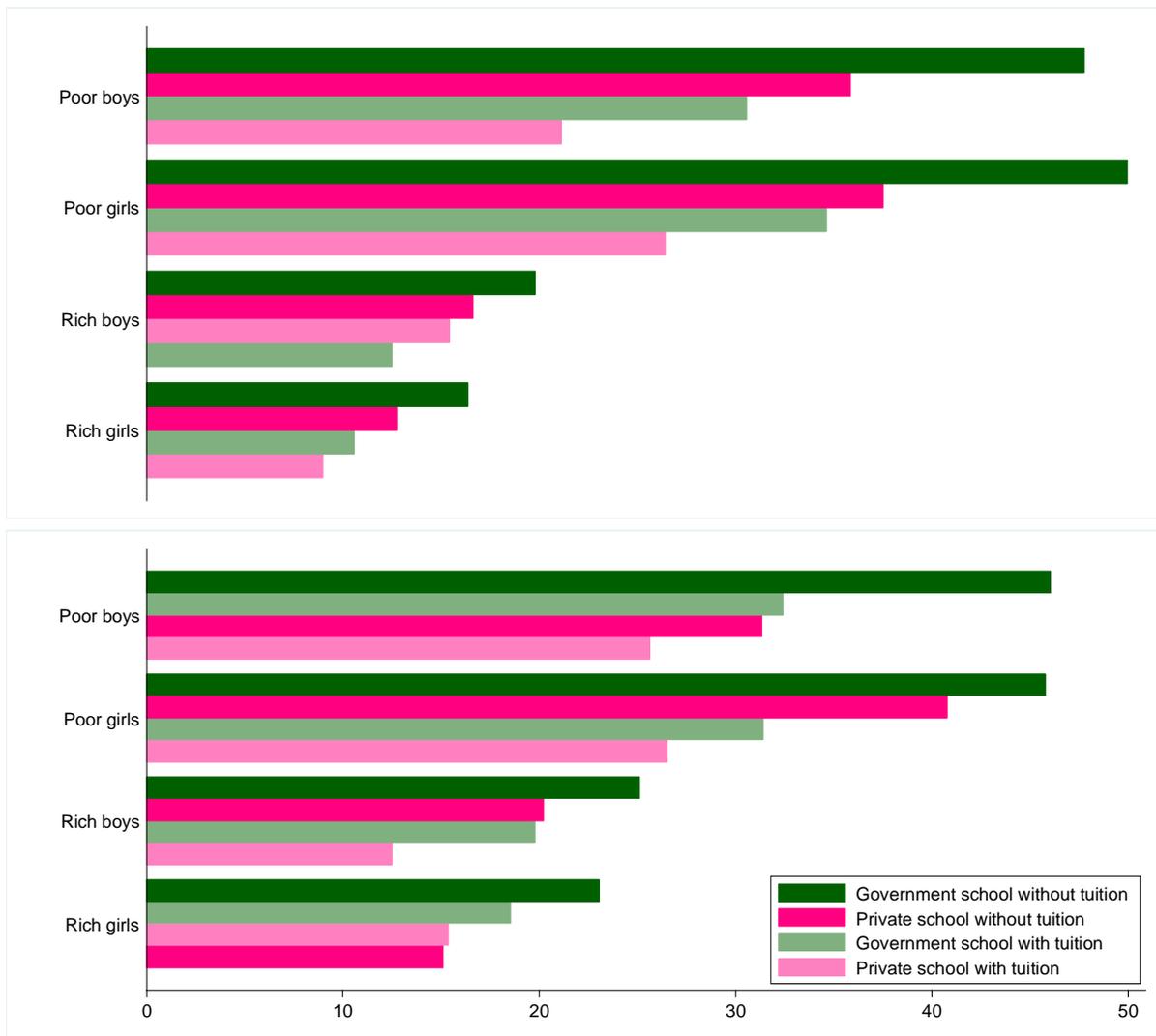
Alternatively, children from rich households might receive greater support for their learning from their parents at home. In rural Pakistan, for example, 48% of children in rural government schools are first-generation learners, many of whom are likely to be from poorer households. Parents of these children will be less able to support the learning of their children. In addition, wealthier parents are in a better position to invest in private tuition to compensate for the poor quality of schooling, whether government or private. While we do not have sufficient information from the surveys to explore all these factors in detail, it is possible to explore whether private tuition appears to explain some of the socioeconomic gap between and within government and private schools.

There is a marked difference between rural India and Pakistan in the extent of private tuition between poor and rich families: in India, not only is private tuition more prevalent, but there is less of a gap in those participating in it (28% of rich boys compared with 19% of poor girls). By contrast, not only is its prevalence lower in Pakistan, but there is also a wider gap, with 18% of rich boys having access to private tuition compared to just 3% of poor girls.

We next examine whether private tuition appears to influence learning. We compare the percentage of children unable to read a paragraph depending on the characteristics of the child, whether they are attending a private or government school, and whether they have access to private tuition (Figure 4).¹⁰ Despite the difference in the prevalence of private tuition, three similarities are apparent between the two countries. First, for children from all backgrounds, the worst learning levels occur among those children who are at government schools and do not receive private tuition. Second, the presence of private tuition is associated with larger improvements in learning for poorer children than richer children. Third, despite these improvements associated with private tuition, they still do not override wealth disparities: the poorest performing groups of richer children (those at government schools who do not receive private tuition) outperform the best performing groups of poorer children (those at private schools who do receive private tuition).

¹⁰ For this analysis, we exclude children at madrasa schools, those who have dropped out of school, or who never attended, given the small sample sizes receiving tuition in each group.

Figure 4. Percentage of 10-12 year-olds who cannot read a paragraph at government and private schools, by typology and private tuition.



SCHOOLS AND LEARNING IN RURAL INDIA AND PAKISTAN

There are also some differences between the two countries. In rural India there is a set hierarchy of learning that is consistent for all groups of children (from best to worst): private school with tuition, government school with tuition, private school without tuition, government school without tuition. Regardless of their background, private tuition is more important to learning than the type of school attended, i.e., children who attend government schools and receive private tuition outperform children from the same background who attend private schools but do not receive tuition. By contrast, in rural Pakistan, where there is a wider wealth gap in who receives private tuition, there is not such a clear pattern across child groups in the interaction between schooling and tuition.

Conclusion

For any education system to be deemed successful, it must at a minimum ensure that children are learning the basics in numeracy and literacy. Even though the policy environments of India and Pakistan are very different, there are a number of strong similarities between the two countries in the patterns of who is getting access to what type of school, and who is learning.

Starting with the most striking difference: access to primary school in rural Pakistan remains a policy concern, especially for poor girls, while in India near universal enrolment has been achieved. Our findings indicate that the problem in Pakistan is that a substantial number of poor girls are never even attending school at all – once in school, they have a good chance of completing.

In terms of similarities, in both countries, among those children who are in school, wealthier children outnumber poorer children in private schools by more than two to one. Gender discrimination also appears to operate, particularly amongst the poor, suggesting that where parents have to choose between which of their children they will pay for, they are more likely to pay for their son's education.

Learning outcomes are worryingly low in both countries. In rural government schools, which teach the majority of Indian and Pakistani children (particularly the poorest), around a third of children are still unable to read a paragraph by ages 10–12. Learning in private schools is better in each country, but this should not mask the fact that a fifth of these children are still not reaching a reading standard expected of them in the second grade. While madrasas only reach a small proportion

SCHOOLS AND LEARNING IN RURAL INDIA AND PAKISTAN

of primary school children in both countries, learning among enrolled children is drastically low: for poor children in both countries, reading levels are more comparable to those of children who are not at school than of those in private and government schools.

Our paper highlights that poverty is the main driver of poor learning, regardless of the type of school attended: wealthier children in government schools are more likely to be learning the basics than poorer children in private schools. Moreover, in Pakistan in particular, this wealth gap is further reinforced by gender. A key policy message is, therefore, the need to recognise that it is not the type of school attended *per se* that affects learning. As such, focusing on private schools as a means to redress inequalities and low levels of learning is somewhat spurious. Rather, our findings suggest that policymakers need to pay greater attention to identifying and fixing the problems in government schools – where not only are over 80% of the poorest, rural children in school in both countries enrolled, but is also where learning levels are lowest. Understanding why children from wealthier backgrounds in government schools have a greater chance of learning than the poor in private schools is an important aspect of this.

One argument put forward for learning gaps between rich and poor is that those from wealthier backgrounds are able to invest in private tuition. While private tuition appears to narrow learning inequalities, it does not override them. Poorer children are less likely to both attend private schools and receive tutoring, particularly in Pakistan. Even when they are in private schools and receiving private tuition, they are still learning less than wealthier children in government schools who do not receive tuition.

We hope that this study will help to stimulate further research in both countries on factors that influence learning inequalities, both within and outside of the school setting. Our work indicates that private tuition is important, and further inferential work on its impact would be welcome. A further step will be to take account of the diversity of conditions across the states of India and the provinces of Pakistan. Similarly, heterogeneity within school type is important: while we demonstrate sizable gaps in learning across the major categorisations of schools, the variety within each categorisation is of great importance. If we can develop our understanding of what makes some government or private

SCHOOLS AND LEARNING IN RURAL INDIA AND PAKISTAN

schools better than others, this will help us both to characterise the nature of inequality more effectively, and to move towards rectifying the considerable disparities that we have shown here.

Acknowledgements

We are grateful to ASER Centre and the Pratham educational foundation for providing the ASER data. In particular, Rukmini Banerji and Manjistha Banerji at ASER Centre and Baela Raza Jamil and Sehar Saeed at ASER Pakistan provided help in accessing and interpreting the data. We would also like to thank Sonia Ilie and two anonymous reviewers for their helpful comments on an earlier draft.

References

- Ahmed, H., Amjad, S., Bukhari, A., Shah, S. A., Sikander, U., Tirmazee, Z., Zahra, N., Habib, M., & Hamid, N. (2013). *Determinants of School Choice: Evidence from Rural Punjab*.
<http://www.periglobal.org/sites/periglobal.org/files/ESP-WP-No55-FINAL.pdf>
- Alderman, H., Orazem, P. F., & Paterno, E. M. (2001). School quality, school cost, and the public/private school choices of low-income households in Pakistan. *The Journal of Human Resources*, 36(2), 304–326.
- Andrabi, T., Bau, N., Das, J., & Khwaja, A. I. (2010). *Are Bad Public Schools Public “Bads”?* Test Scores and Civic Values in Public and Private Schools. http://economics-files.pomona.edu/Andrabi/Research/jishnu4_5a.pdf
- Andrabi, T., Das, J., & Khwaja, A. I. (2013). Students today, teachers tomorrow: Identifying constraints on the provision of education. *Journal of public Economics*, 100, 1-14.
- Andrabi, T., Das, J., & Khwaja, A. I. (2008). A dime a day: the possibilities and limits of private schooling in Pakistan. *Comparative Education Review*, 52(3), 329–355.
- Andrabi, T., Das, J., Khwaja, A. I., & Zajonc, T. (2011). Do value-added estimates add value? Accounting for learning dynamics. *American Economic Journal: Applied Economics*, 3(3), 29-54.
- Arif, G. M., & Saqib, N. (2003). Production of cognitive life skills in public, private, and NGO schools in Pakistan. *Pakistan Development Review*, 42(1), 1–28.
- ASER Centre (2014). *1996-2005: Foundations*. <http://www.asercentre.org/p/158.html/>.
- ASER India (2014). *Annual Status of Education Report (Rural) 2013*. New Delhi: ASER Centre.
- ASER Pakistan (2014). *Standards manual*.
<http://www.aserpakistan.org/document/aser/ASER%20STANDARD%20MANUAL.pdf/>.
- ASER Pakistan (2013). *Annual Status of Education Report – ASER Pakistan 2013*. Lahore: SAFED.
- Aslam, M. (2009). The relative effectiveness of government and private schools in Pakistan: are girls worse off? *Education Economics*, 17(3), 329-354.

SCHOOLS AND LEARNING IN RURAL INDIA AND PAKISTAN

- Aslam, M., & Atherton, P. (2012). The 'shadow' education sector in India and Pakistan: The determinants, benefits and equity effects of private tutoring. *Education Support Programme Working Paper Series, 38*. London: Institute of Education.
- Azam, M., & Kingdon, G. G. (2013). Are girls the fairer sex in India? Revisiting intra-household allocation of education expenditure. *World Development, 42*, 143-164.
- Aslam, M., & Mansoor, S. (2011). The private tuition industry in Pakistan: An alarming trend. In *Policy Brief. Islamabad: South Asia Forum for Education Development*.
http://www.aserpakistan.org/document/aser_policy_briefs/2011/Tuition%20Brief.pdf
- Banerji, R. (2013). Learning for all: the challenge of taking everyone along. In K. Kenny, P. Lei, W. Paxton, M. Talbot-Zorn, & A. Henck (Eds.), *The right to learn: Community participation in improving learning* (pp. 28–31). Westport, CT: Save the Children.
- Bhattacharjea, S., Whadwa, W., & Banerki, R. (2011). *Inside primary schools: A study of teaching and learning in rural India*.
http://img.asercentre.org/docs/Publications/Inside_Primary_School/Report/tl_study_print_ready_version_oct_7_2011.pdf
- Bray, M., & Kwo, O. (2013). Behind the façade of fee-free education: shadow education and its implications for social justice. *Oxford Review of Education, 39*(4), 480-497.
- Chaudhury, N., Hammer, J., Kremer, M., Muralidharan, K., & Rogers, F. H. (2006). Missing in action: teacher and health worker absence in developing countries. *The Journal of Economic Perspectives, 20*(1), 91-116.
- Chaven, M., & Banerji, R. (2013). The bottom-up push for quality education in India. In H.J. Malone (Ed.), *Leading educational change* (pp. 97–101). New York, NY: Teachers College Press.
- Chudgar, A. (2012). Variation in Private School Performance. *Economic & Political Weekly, 47*(11), 52-59.
- Chudgar, A., & Quin, E. (2012). Relationship between private schooling and achievement: Results from rural and urban India. *Economics of Education Review, 31*(4), 376-390.
- Das, J., Pandey, P., & Zajonc, T. (2006). *Learning levels and gaps in Pakistan*. World Bank Policy Research Working Paper No. 4067. Washington, D.C.: World Bank.

SCHOOLS AND LEARNING IN RURAL INDIA AND PAKISTAN

- Day Ashley, L., Mcloughlin, C., Aslam, M., Engel, J., Wales, J., Rawal, S., & Nicolai, S. (2014). *The role and impact of private schools in developing countries*. London: Department for International Development.
- Desai, S., Dubey, A., Vanneman, R., & Banerji, R. (2009). Private schooling in India: A new educational landscape. *India Policy Forum*, 5, 1-58.
- Dongre, A., & Tewary, V. (2014). *Impact of Private Tutoring on Learning Levels: Evidence from India*. New Delhi: Accountability Initiative.
http://ideasforindia.in/article.aspx?article_id=319#sthash.TffWe6Zs.dpuf/.
- French, R., & Kingdon, G. (2010). *The relative effectiveness of private and government schools in Rural India: Evidence from ASER data*. London: Institute of Education.
- Goyal, S. (2009). Inside the house of learning: The relative performance of public and private schools in Orissa. *Education Economics*, 17(3), 315-327.
- Goyal, S., & Pandey, P. (2009). *How do government and private schools differ? Findings from two large Indian states*. South Asia Human Development Report 30. Washington, D.C.: World Bank.
- Härmä, J. (2011). Low Cost Private Schooling in India: Is It Pro-Poor and Equitable? *International Journal of Educational Development*, 31(4), 350-56.
- Härmä, J., & Rose, P. (2012). Is low-fee private primary schooling affordable for the poor? Evidence from rural India. In S. L. Robertson, K. Mundy, A. Verger, & F. Menashy (Eds.), *Public private partnerships in education: New actors and modes of governance in a globalizing World* (243–258). Cheltenham: Edward Elgar.
- Jamil, B. R. (2014). ASER and Right to Education - Tracking Provisions for Fundamental Rights and Social Justice. In *Annual Status of Education Report – ASER Pakistan 2013*. Lahore: SAFED.
- Jha, P., Kumar, R., Vasa, P., Dhingra, N., Thiruchelvam, D., & Moineddin, R. (2006). Low male-to-female sex ratio of children born in India: national survey of 1.1 million households. *The Lancet*, 367(9506), 211-218.

SCHOOLS AND LEARNING IN RURAL INDIA AND PAKISTAN

- Khan, S. R., Kazmi, S., & Latif, Z. (2005). A comparative institutional analysis of government, NGO and private rural primary schooling in Pakistan. *The European Journal of Development Research, 17*(2), 199-223.
- Kingdon, G. (2008). Private and public schooling: The Indian experience. In R. Chakrabarti & P. Petersen (Eds.), *School Choice International: Exploiting Public-Private Partnerships* (111–142). Cambridge, MA: MIT Press.
- Kingdon, G. (1996). The quality and efficiency of private and public education: a case-study of urban India. *Oxford Bulletin of Economics and Statistics, 58*(1), 57-82.
- Kremer, M., Chaudhury, N., Rogers, F. H., Muralidharan, K., & Hammer, J. (2005). Teacher absence in India: A snapshot. *Journal of the European Economic Association, 3*(2-3), 658-667.
- Muralidharan, K., & Kremer, M. (2008). Public and Private Schools in Rural India. In R. Chakrabarti and P. Petersen (Eds.), *School Choice International: Exploiting Public-Private Partnerships*. Cambridge, MA: MIT Press.
- Muralidharan, K., & Sundararaman, V. (2013). *Contract teachers: experimental evidence from India* (No. w19440). Cambridge, MA: National Bureau of Economic Research.
- Miller, B. D. (1997). *The endangered sex: neglect of female children in rural North India*. Oxford: Oxford University Press.
- Saeed, S., & Zia, H. (2014). Measuring gender & educational inequality: Addressing the marginalized. In *Annual Status of Education Report – ASER Pakistan 2013*. Lahore: SAFED.
- Sen, A. (2009). Introduction: Primary schooling in West Bengal. In K. Rana, S. Sen, M. Sarkar, P. Haldar, & A. Nandy (Eds.), *The Pratichi education report II: Primary education in West Bengal—changes and challenges*. New Delhi: Pratichi Trust.
- Sen, A. (1992). Missing women. *British Medical Journal, 304*(6827), 587–588.
- Singh, A. (2013). Size and sources of the private school premium in test scores in India. *Young Lives Working Paper No. 98*. Oxford: Young Lives.

SCHOOLS AND LEARNING IN RURAL INDIA AND PAKISTAN

- Singh, R., & Bangay, C. (2014). Low fee private schooling in India – More questions than answers? Observations from the Young Lives longitudinal research in Andhra Pradesh. *International Journal of Educational Development*, 39, 132-140. DOI: 10.1016/j.ijedudev.2014.08.004
- Srivastava, P. (2006). Private schooling and mental models about girls' schooling in India. *Compare: A Journal of Comparative and International Education*, 36(4), 497-514.
- Sucharita, V. (2014). Negotiating between family, peers and school: understanding the world of government school and private school students. *Compare: A Journal of Comparative and International Education*, 44(3), 379-393.
- Tooley, J., & Dixon, P. (2006). 'De facto' privatisation of education and the poor: implications of a study from sub-Saharan Africa and India. *Compare: A Journal of Comparative and International Education*, 36(4), 443-462.
- UNESCO (2014). *Education for All Global Monitoring Report. Teaching and Learning: Quality for All*. Paris: UNESCO.
- Wadhwa, W. (2013). *Private inputs into schooling: Bang for the buck?*
http://img.asercentre.org/docs/Publications/ASER%20Reports/ASER_2013/ASER2013_report%20sections/willimawadhwaarticle.pdf
- Wales, J., Wild, L., Day Ashley, L., McLoughlin, C., Aslam, M., Hines, S., Rawal, S., Batley, R., Nicolai, S., & Rose, P. (2014). The role and impact of non-state philanthropic and religious schools in developing countries: a rigorous review of the evidence. *Education Rigorous Literature Review*. London: Department for International Development.

SCHOOLS AND LEARNING IN RURAL INDIA AND PAKISTAN

Appendix A: Multinomial logistic regression models for predicting provider type

Table A1

Model estimates for type of school attended in India.

VARIABLES	(2) Private	(3) Madrasa	(4) Left school	(5) Never attended
Female	0.569*** (0.0178)	0.379*** (0.0543)	0.587*** (0.0549)	0.604*** (0.0742)
Siblings	0.916*** (0.0116)	0.911** (0.0396)	0.825*** (0.0254)	0.870*** (0.0313)
First-generation	0.545*** (0.0143)	0.977 (0.0810)	1.705*** (0.0913)	2.067*** (0.119)
Government school in village	0.216*** (0.0101)	0.0499*** (0.00473)	0.115*** (0.00783)	0.0802*** (0.00584)
Private school in village	2.682*** (0.0833)	1.389*** (0.174)	1.234*** (0.0745)	1.108 (0.0814)
Private tuition	0.739*** (0.0218)	0.409*** (0.0679)	0.0546*** (0.0111)	0.0782*** (0.0143)
Wealth index	2.908*** (0.140)	0.0895*** (0.0135)	0.0784*** (0.00914)	0.0348*** (0.00532)
Female*wealth	1.237*** (0.0307)	1.982*** (0.173)	1.640*** (0.107)	1.879*** (0.156)
Sibling*female	1.067*** (0.0159)	1.581*** (0.0900)	1.416*** (0.0560)	1.525*** (0.0704)

n = 138,742

Notes: Baseline outcome is attendance at a government school. All model estimates are presented as relative risk ratios. Standard errors, which are clustered at the district level, are provided in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

SCHOOLS AND LEARNING IN RURAL INDIA AND PAKISTAN

Table A2

Model estimates for type of school attended in Pakistan.

VARIABLES	(2) Private	(3) Madrasa	(4) Left school	(5) Never attended
Female	0.685*** (0.0517)	0.541*** (0.0884)	1.284** (0.148)	2.917*** (0.236)
Siblings	0.894*** (0.0149)	1.096*** (0.0303)	1.013 (0.0286)	1.097*** (0.0214)
First-generation	0.574*** (0.0242)	1.353*** (0.104)	1.064 (0.0608)	2.575*** (0.114)
Government school in village	0.105*** (0.0110)	0.0764*** (0.0104)	0.0885*** (0.0129)	0.131*** (0.0129)
Private school in village	4.273*** (0.255)	0.677*** (0.0776)	1.040 (0.0730)	0.463*** (0.0287)
Private tuition	3.050*** (0.191)	0.322*** (0.0902)	1.04e-08*** (6.25e-10)	5.84e-09*** (3.43e-10)
Wealth index	2.410*** (0.256)	0.239*** (0.0413)	0.421*** (0.0615)	0.391*** (0.0454)
Female*wealth	1.349*** (0.0809)	1.424*** (0.143)	1.092 (0.0747)	0.780*** (0.0411)
Sibling*female	0.995 (0.0231)	1.008 (0.0468)	1.138*** (0.0394)	1.051** (0.0239)

n = 52,638

Notes: Baseline outcome is attendance at a government school. All model estimates are presented as relative risk ratios. Standard errors, which are clustered at the district level, are provided in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.