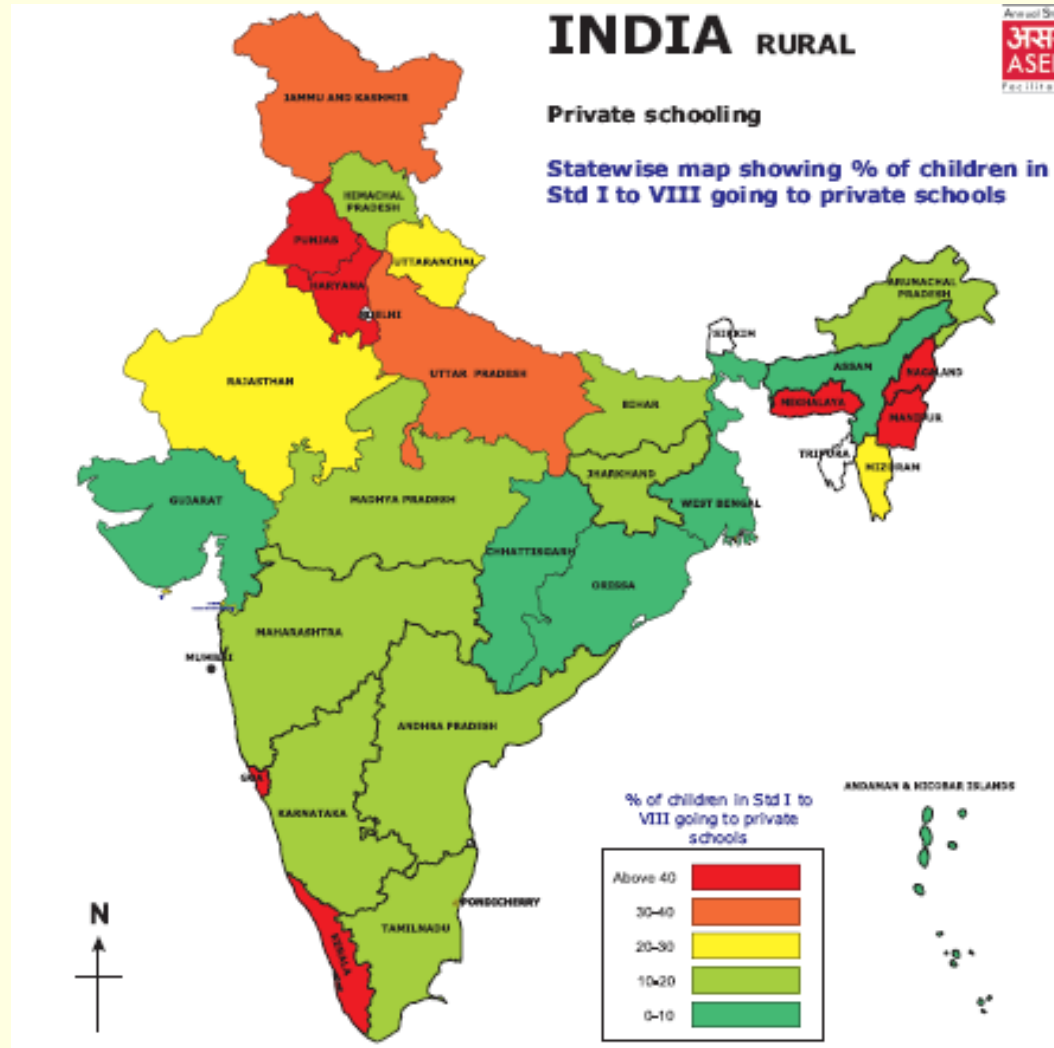

Learning and Educational Attainment in Punjab, Pakistan: Thoughts for Debate and Discussion

Growth Commission on Education
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Tahir Andrabi (Pomona College)
Asim Khwaja and Tristan Zajonc (Harvard U.)
Tara Vishwanath (World Bank)

South Asian Education in the New Millennium

- Remarkable growth of private schools in South Asia during the last 10 years

A map of India



Implications

- This changes
 - Evaluations of government policy towards schooling (worry about G.E. effects)
 - Construction of research questions (what is the right intervention?)
 - The policy framework for debate (a modified role of the government)

Yet...

- We know very very little
- Organization of the “village” education market
 - Village is never taken as sampling unit for facility surveys
- Parental choice and optimization
 - Little data linking household decisions and school-level inputs
- The market for teachers
 - Little information on supply elasticity

Data framing the presentation

- First year of 4-year longitudinal study in 112 villages
 - Randomly selected from villages with a private school in 3 districts of Punjab
 - All schools in these villages: 812 public and private schools
 - 5000 teachers
 - 12000 children followed and tested annually for 4 years
 - 2000 households with 900 children linked to test-score information

Why Punjab?

- The heartland of private schooling
- Strong, pro-active lending program from The World Bank
 - Survey baseline initiated with WB program
 - Follows outcomes every year of the program
 - Builds in randomized evaluations
 - Information
 - School-Management Councils

This Presentation

- Insights from the Learning and Educational Attainment Project in Punjab, Pakistan
- Basic descriptive facts about schools, teachers, households and learning in villages from 1st year of survey
- Relevant highlights about
 - Schools
 - Teachers
 - Households
 - Learning Outcomes
- Set the stage for academic research
- ...and a discussion on the policy framework

A Bit About Pakistan

- Four main provinces: Punjab, North-West Frontier Province (NWFP), Balochistan and Sindh account for 97% of population
 - Punjab is the largest (55% of population)
- Azad Jammu Kashmir (AJK), FATA, Islamabad and the Northern Areas are the other 4

A Bit About Pakistan

- Traditionally poor educational numbers
- *But* enrollment is looking up
 - Net Enrollment rates increased from 51 to 61 percent between 2001 and 2005
- Like other countries, discourse based on household surveys and school censuses
 - Little information about learning
 - No links between households and schools

The “new” educational landscape

- Rapid growth of private schools
- Questions much like in the US (vouchers/regulation/failing government schools),
 - except for religious schooling
 - which plays a much smaller role: 1% of all enrollment in 2001 (9% in the US)

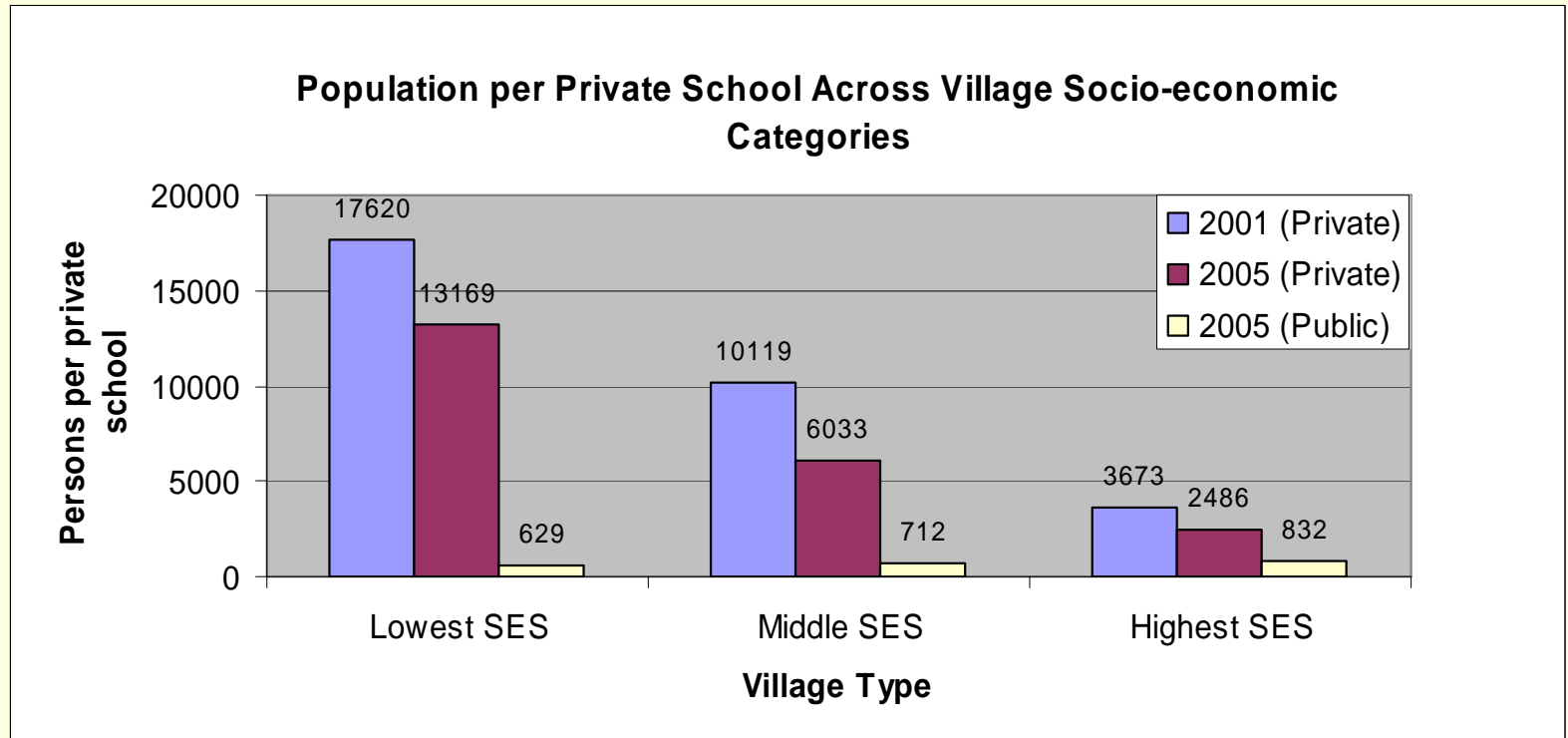
Private Schools

- Huge growth in number of schools from 1995
 - 3800 in 1983, 32,000 in 2001 and 47,000 in 2005
- Reflected in large increases in enrollment
 - *Share of private schooling* increased from 29.6% to 36.9% (Punjab), 19.9% to 25.2% (NWFP) and 30.6% to 33.5% (Sindh)
- Median private school was \$1/month in 2001 and \$1.5/month in 2005
 - Highest enrollment growth in rural areas and low-middle income households (1991-2001)

Private Schools...the but...

- Primarily a Punjab and NWFP phenomenon
 - Not rural Sindh or Balochistan
- Primarily a richer village phenomenon
 - Although this seems to be changing slowly
- Government schools are everywhere
 - And the only option in most poorer villages

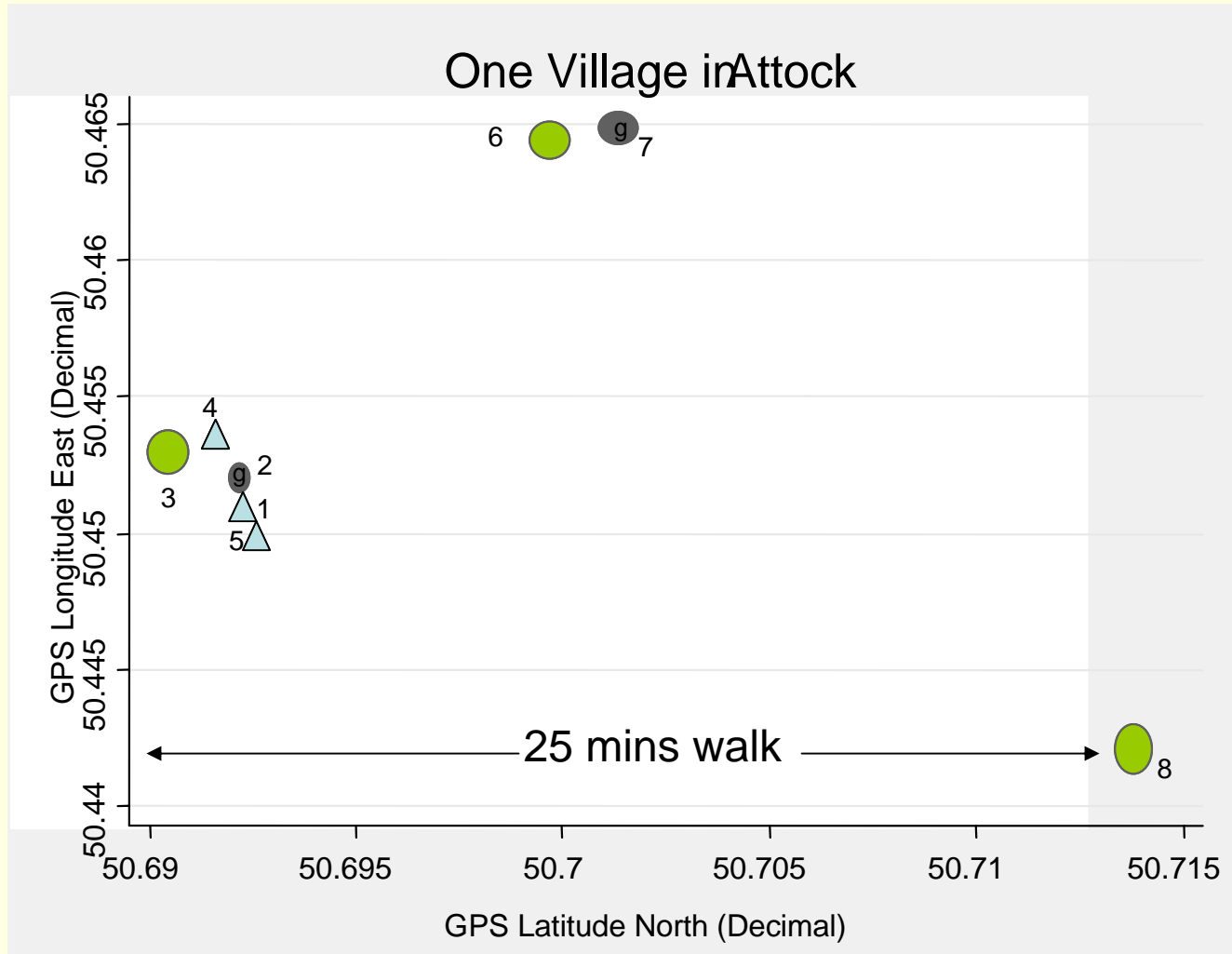
Distribution of Private Schools



Private schools are overwhelmingly located in high SES villages while there is equal access to government schools in all types of villages

LEAPS data adds the *within* village perspective to this overall picture and looks at all inputs into the education production function

Here is what a village looks like now



Govt. Boys' School

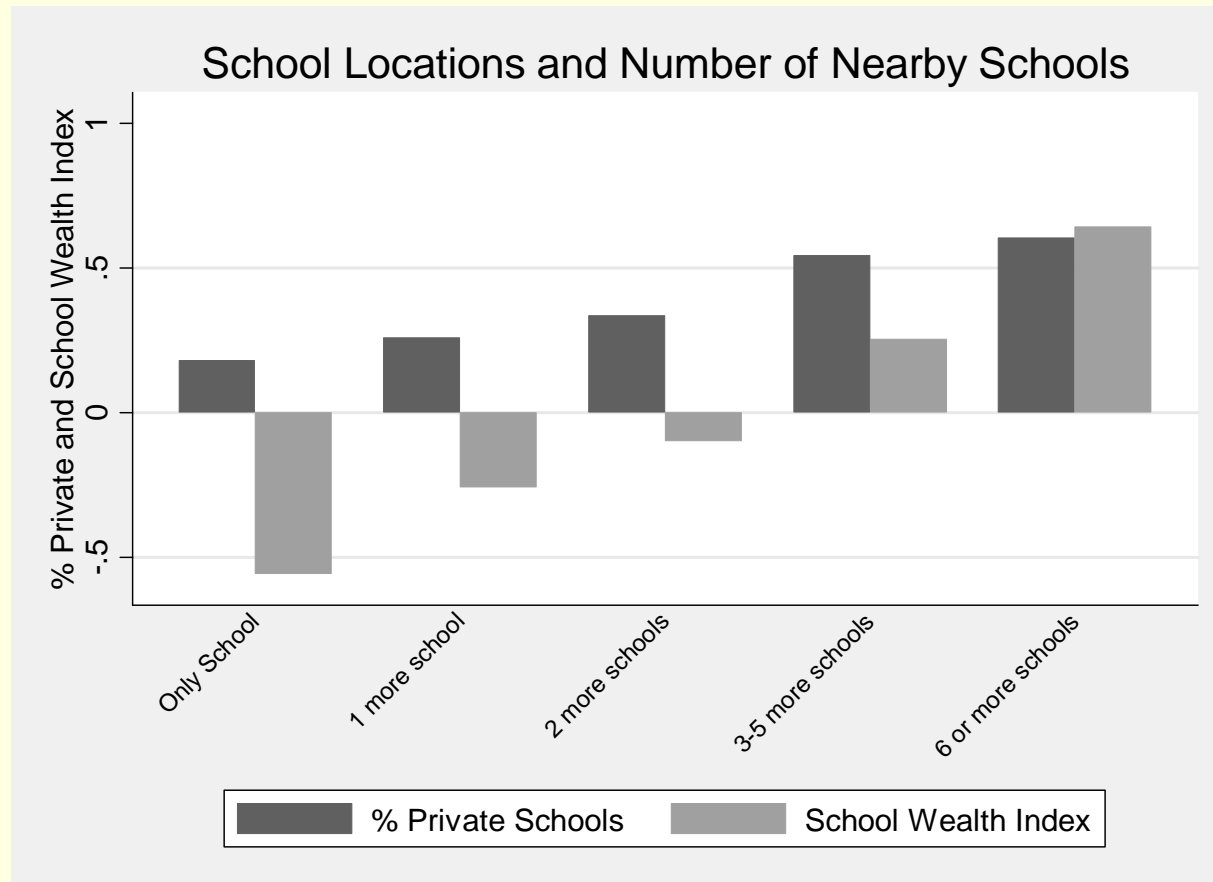


Govt. Girls' School



Private School

These location patterns are generic

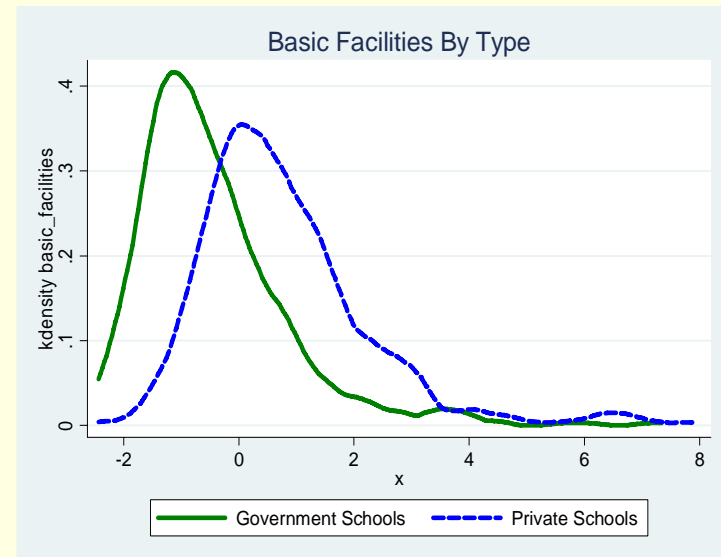
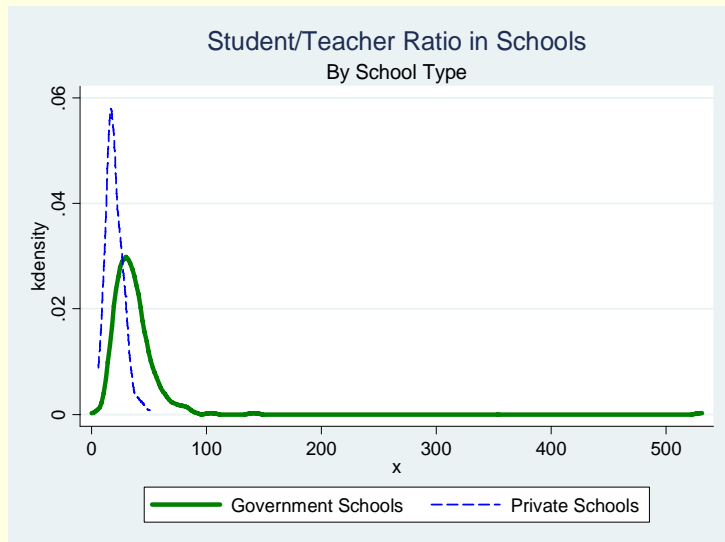


Private schools are overwhelmingly located in schooling clusters where students are richer

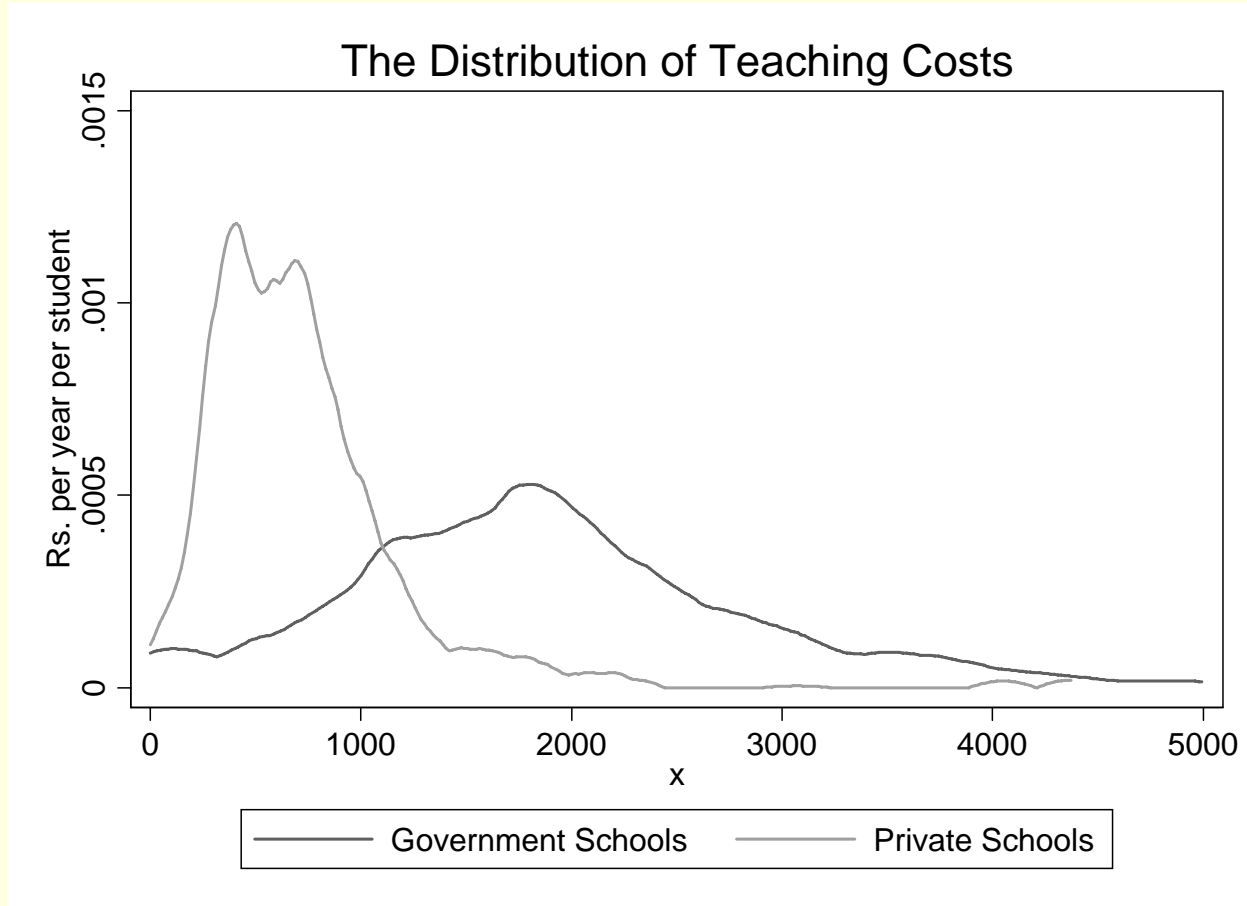
Tremendous Variation Across Schools

■ Infrastructure and student-teacher ratios

Figure 2.4: Private schools report lower student-teacher ratios and better basic facilities...and there are some government schools where student-teacher ratios exceed 50 and basic facilities are completely absent

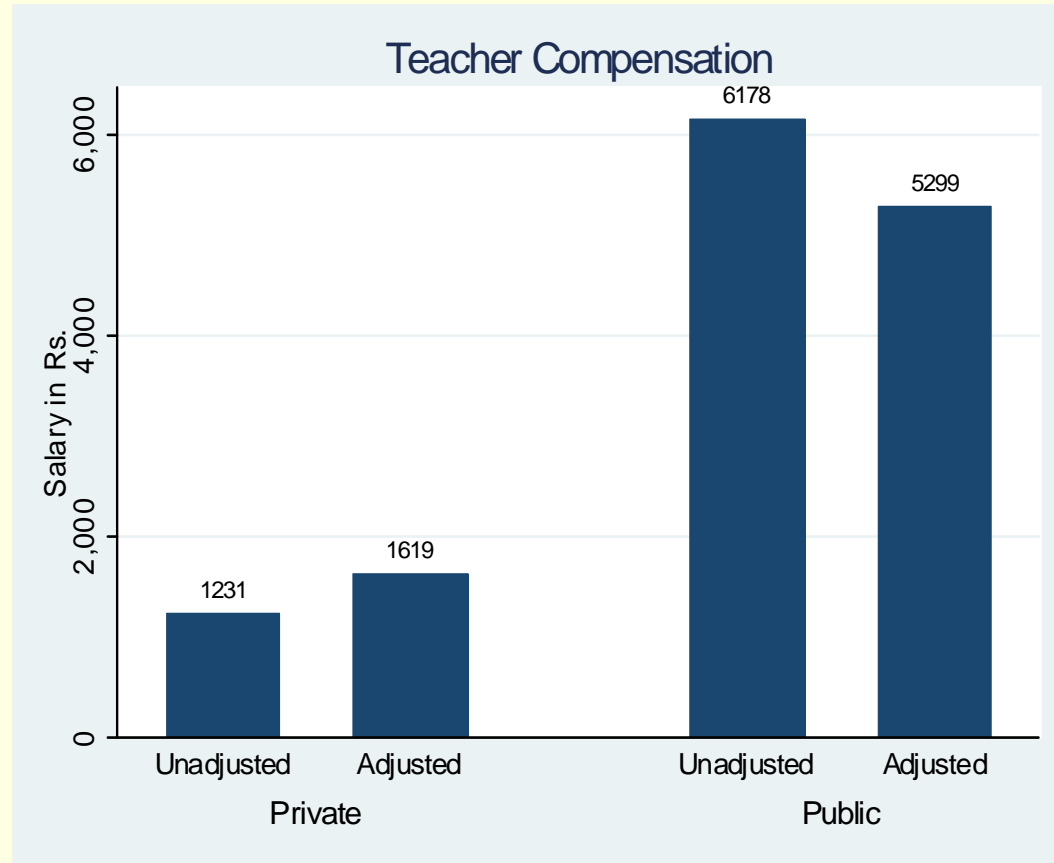


Tremendous Variation Across Schools (2)



The median cost of educating a child in the government sector, at Rs.2000 per year, is twice that in the private sector, at Rs.1000

So what drives cost-differences?

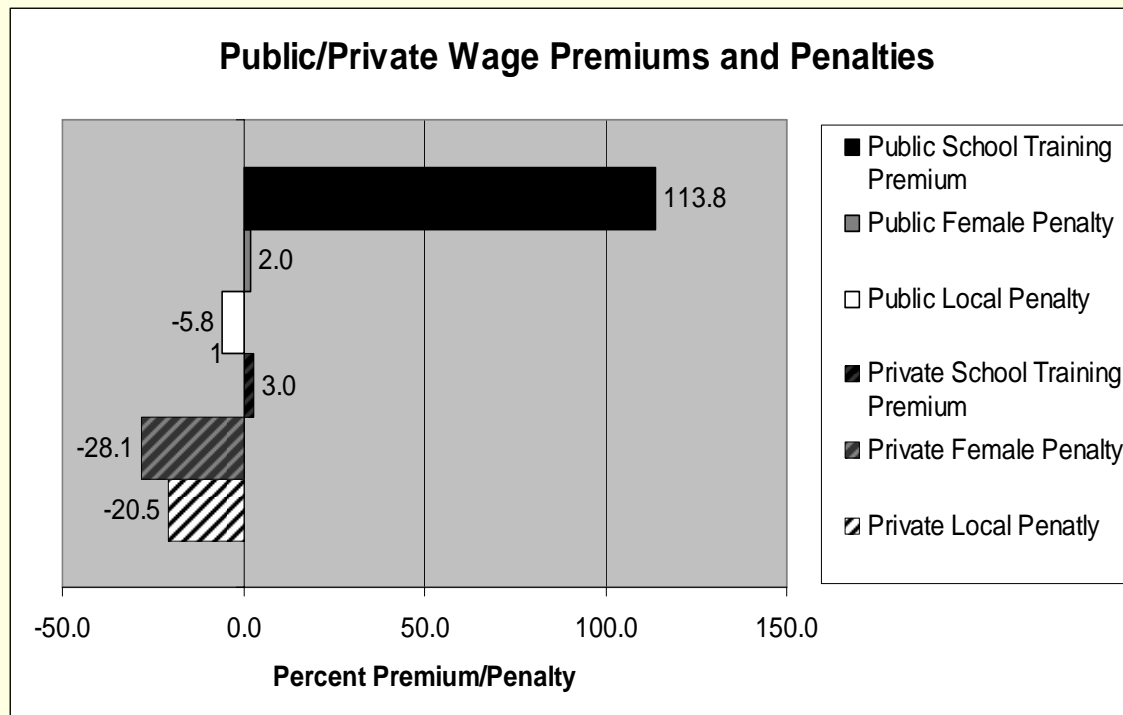


Private School Teachers are paid 20% of their government counterparts

Hiring and compensation

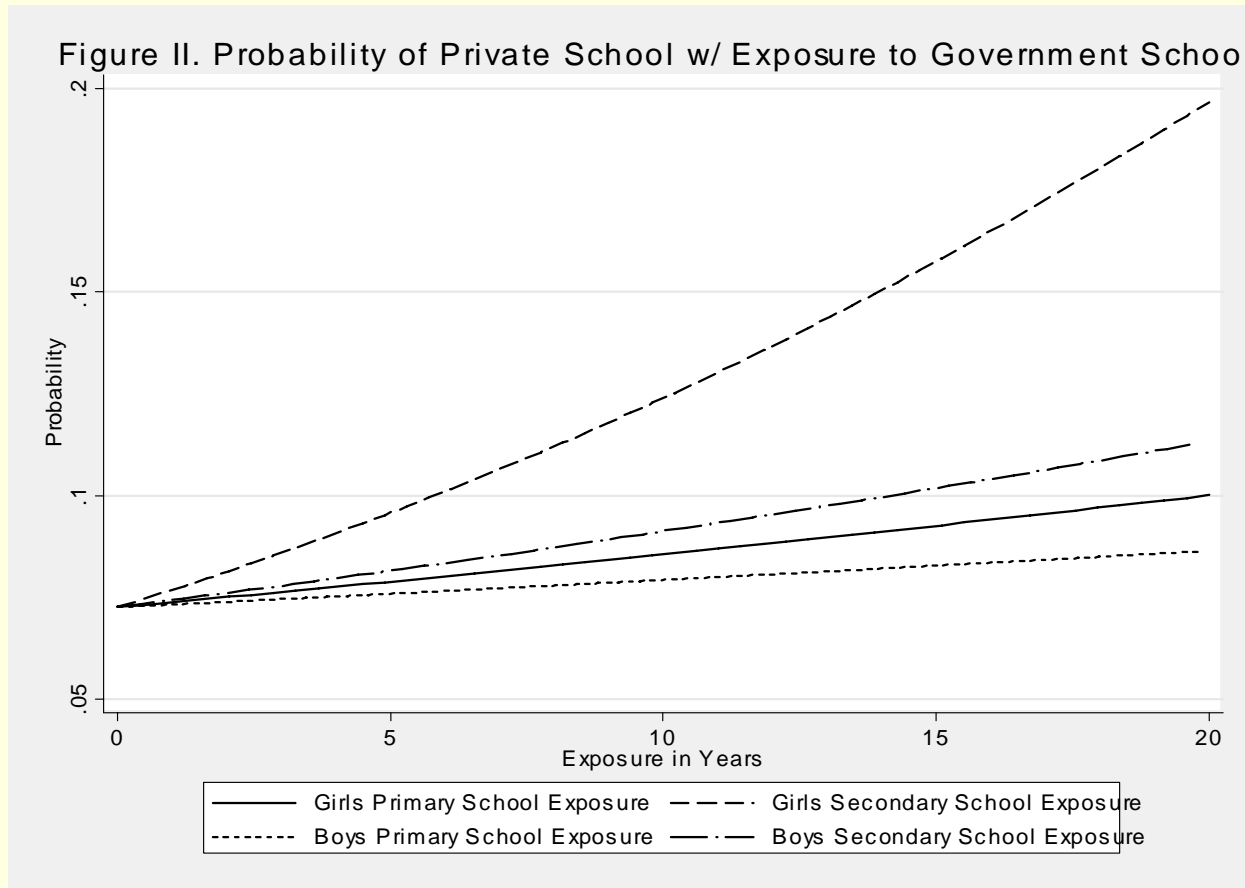
- Government Sector
 - Hires more educated and better trained teachers
 - Ensures equitable distribution across all villages
 - Setting wages to ensure access in remote areas?
 - Has no link to performance
 - Pays a uniform wage (no discrimination)

Compensation and the labor market



The private sector exploits local market conditions: women and local teachers are paid (a lot) less

Private Sector Location Decisions

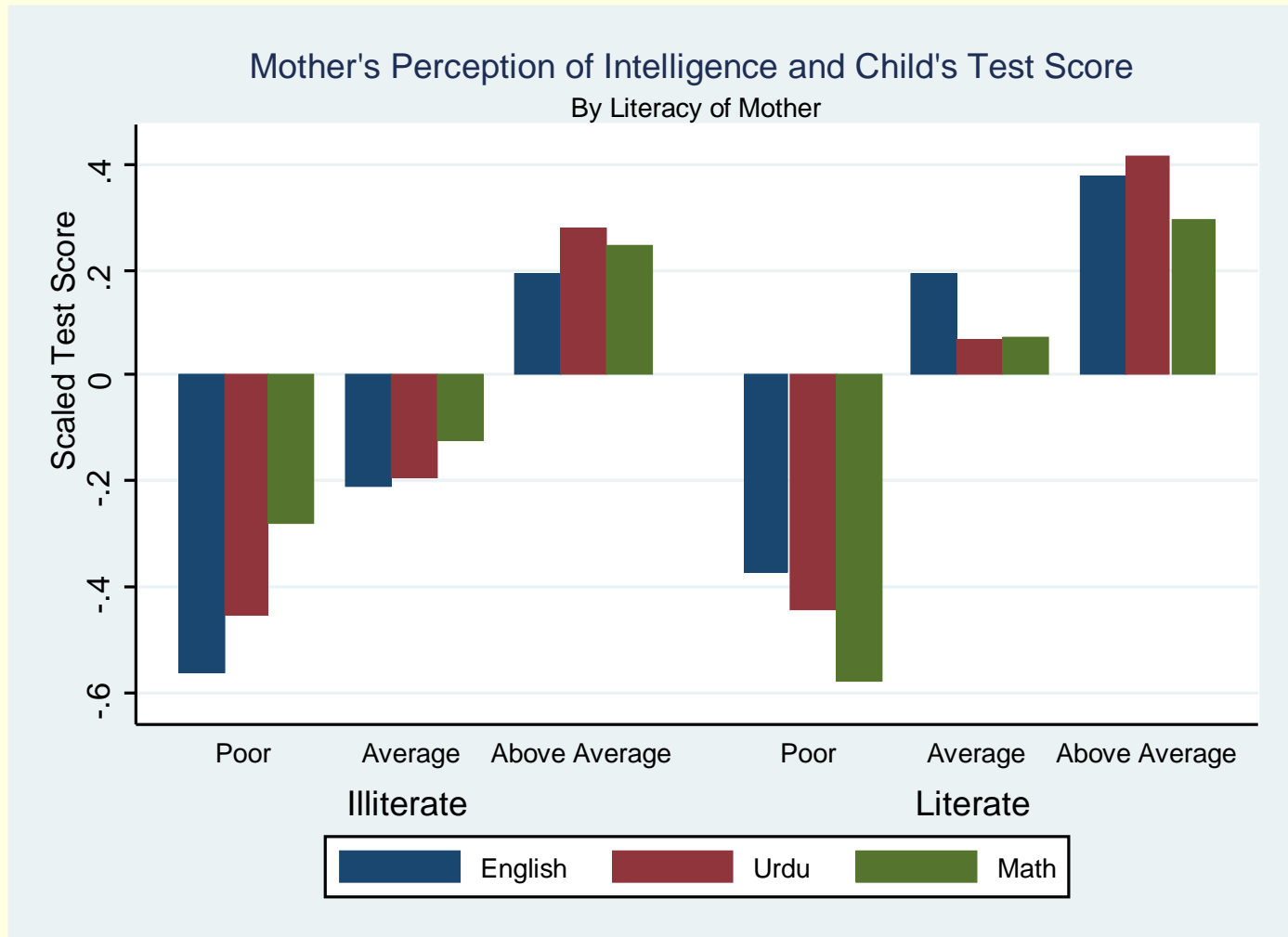


As a consequence, private sector location decisions respond to the availability of an educated female workforce

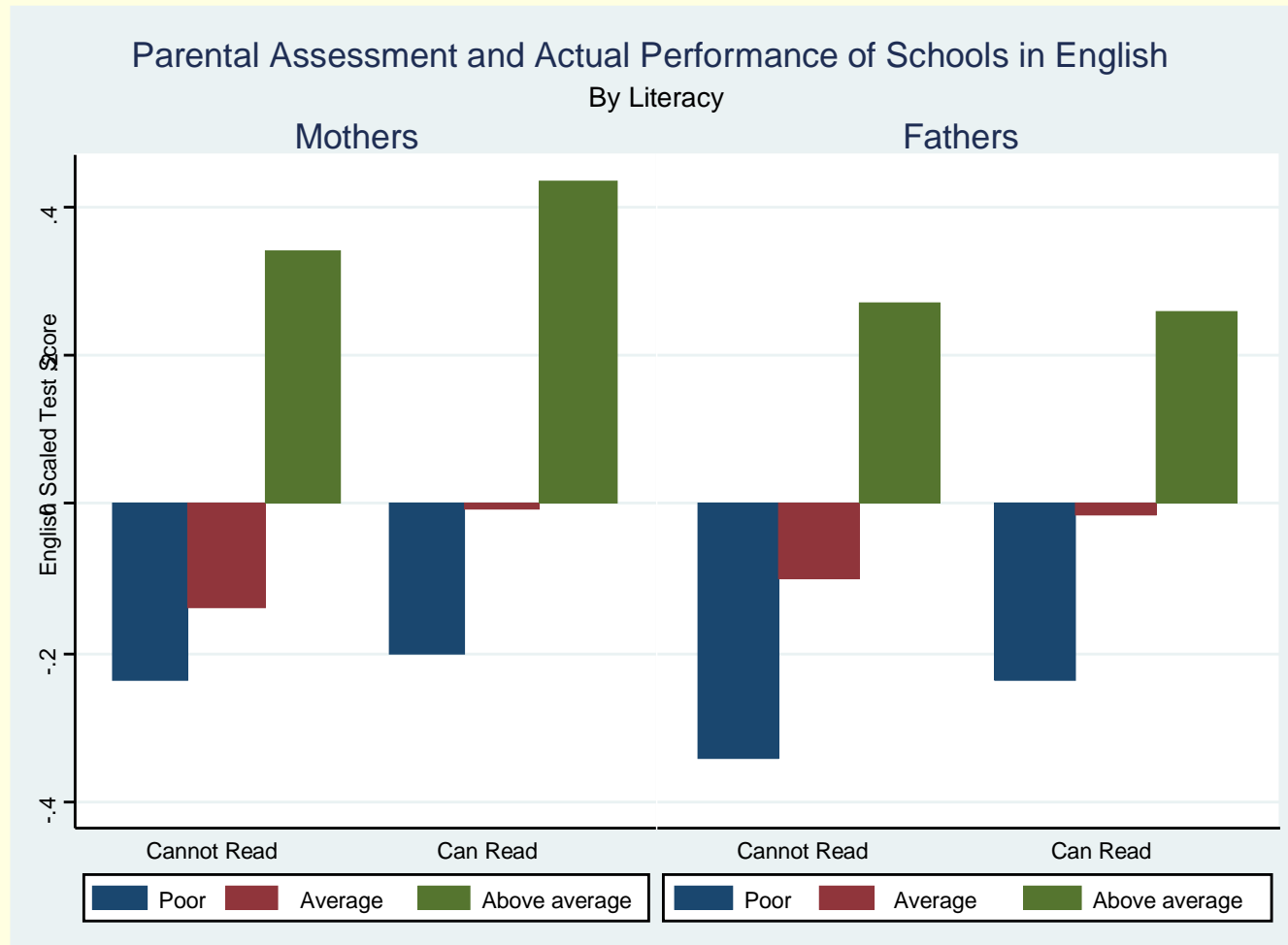
How do households make decisions?

- Information
- Household Preferences

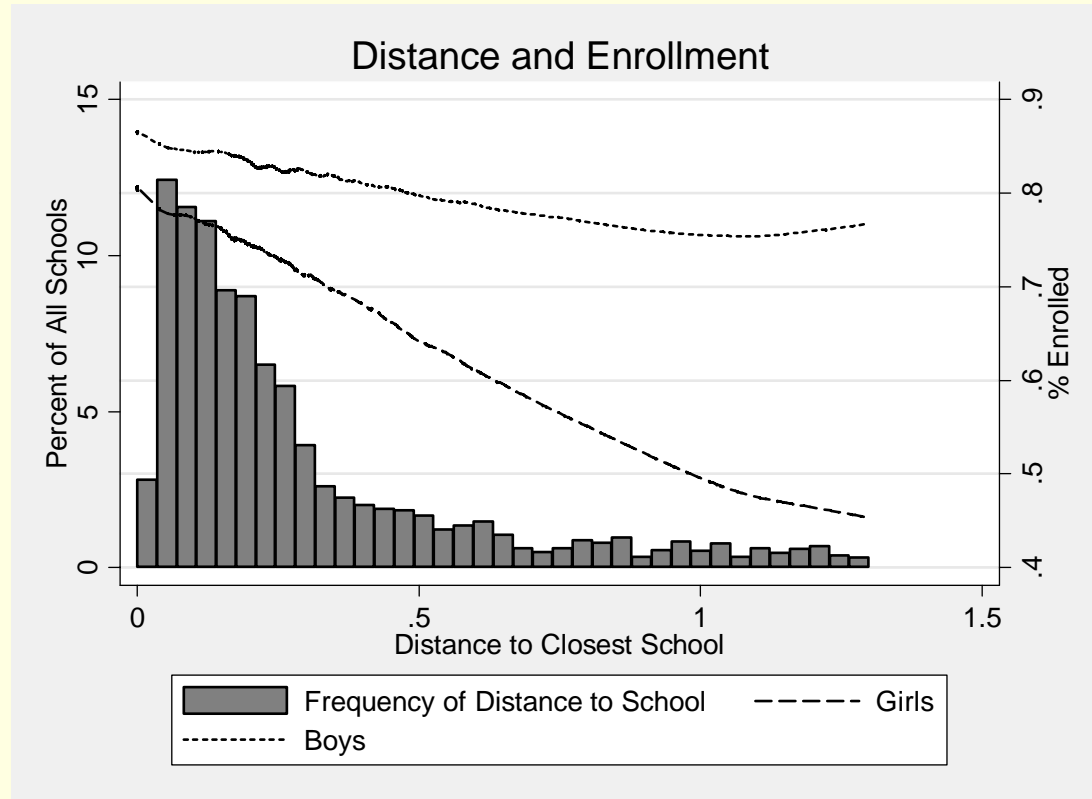
Information: Parents know how well their kids are doing



Information: Parents know how good schools are

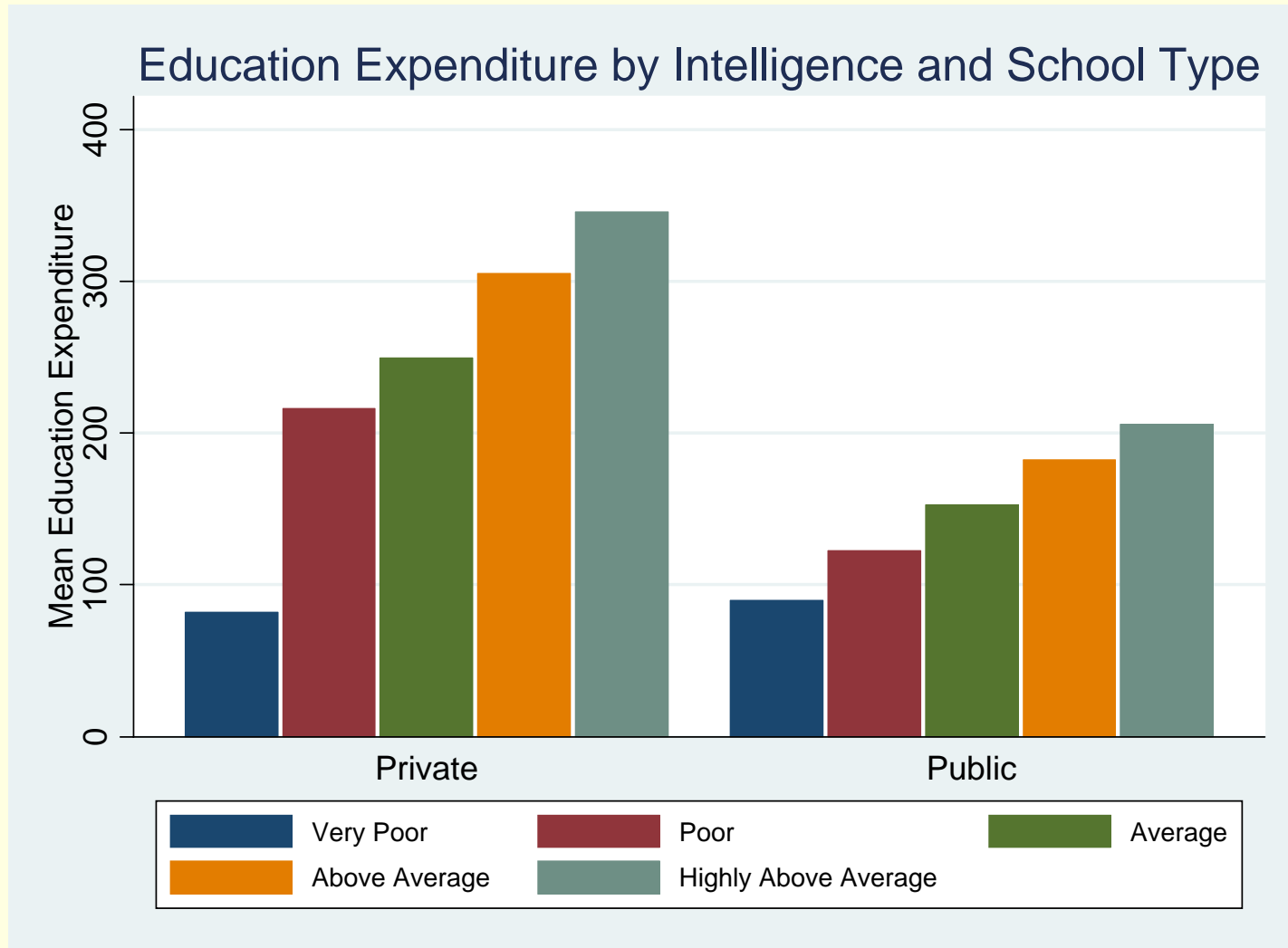


Preferences: Distance matters



For girls, every 500m distance from school is associated with a 15%-point drop in enrollment

Preferences: Parents choose winners



So: What do they learn

- Across *all* schools, children perform far below curricular standards by the end of Grade III
 - Majority can do single-digit subtraction
 - Recognize English alphabets and simple picture matching
 - Read simple words in Urdu, but only 31 percent can write a sentence with the word “school”

Learning Outcomes: The Facts

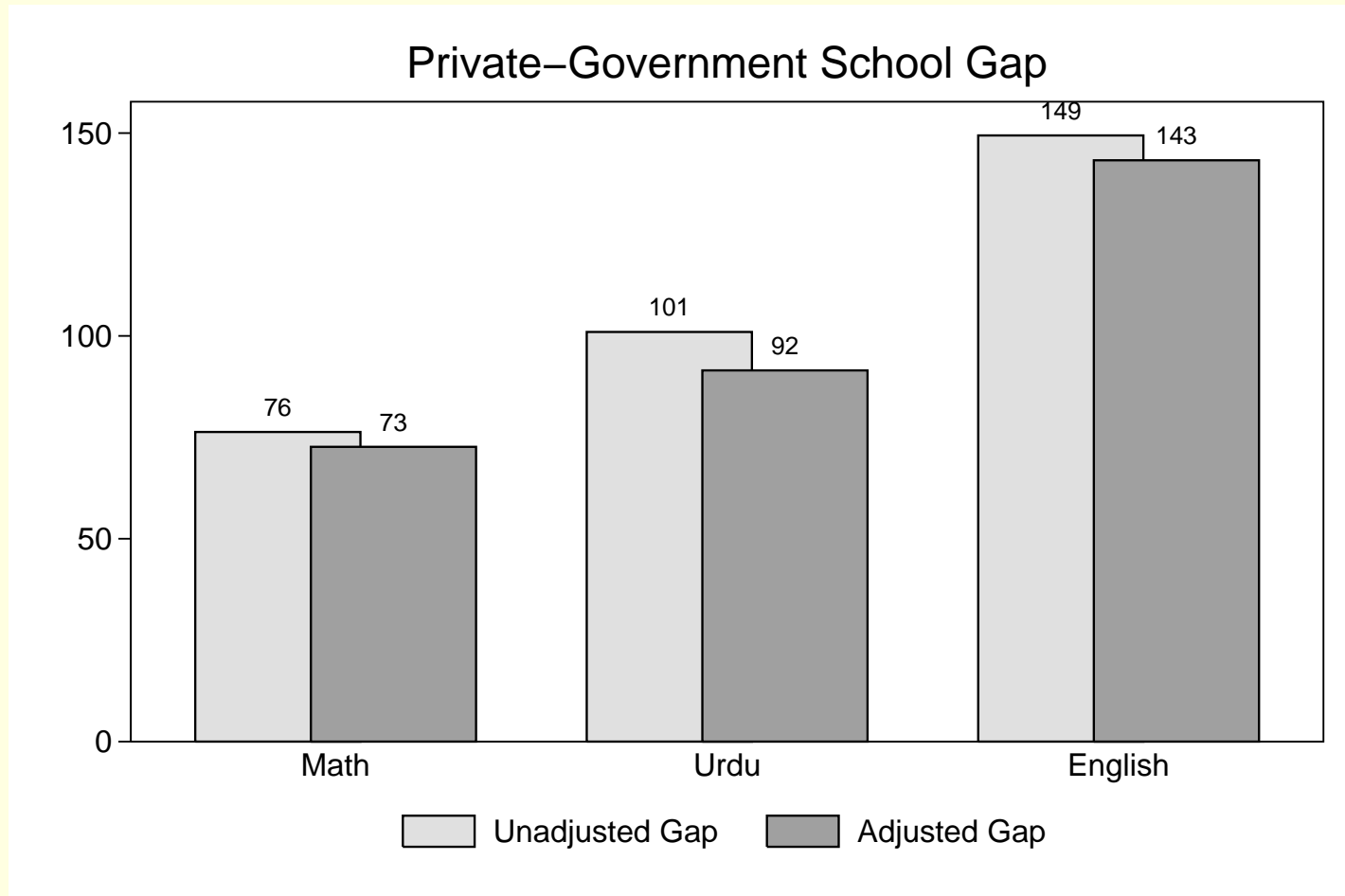
Table 1.1: What do Children Know in Mathematics

Subject	The Question	Percentage who answered correctly	Corresponding Grade for Curriculum
Mathematics	$4 + 6$	89	K & I
Mathematics	$36 + 61$	86	K & I
Mathematics	$8 - 3$	65	K & I
Mathematics	5×4	59	II
Mathematics	$238 - 129$	32	II
Mathematics	Read and Write the time (Clock shows 3:40)	24	II
Mathematics	$384 \div 6$	19	III
Mathematics	4×32	50	III
Mathematics	Fractions: $\frac{1}{2} + \frac{3}{2}$	19	III
Mathematics	Read a diagram of a scale to answer which part is heavier	12	III
Mathematics	Fractions: $\frac{7}{5} - \frac{3}{4}$	1	IV

Notes: Questions are from the Pakistan LEAPS exam. Columns 3, 4, and 5 report the percentage of children who answered the question correctly in all schools, government schools, and private schools.

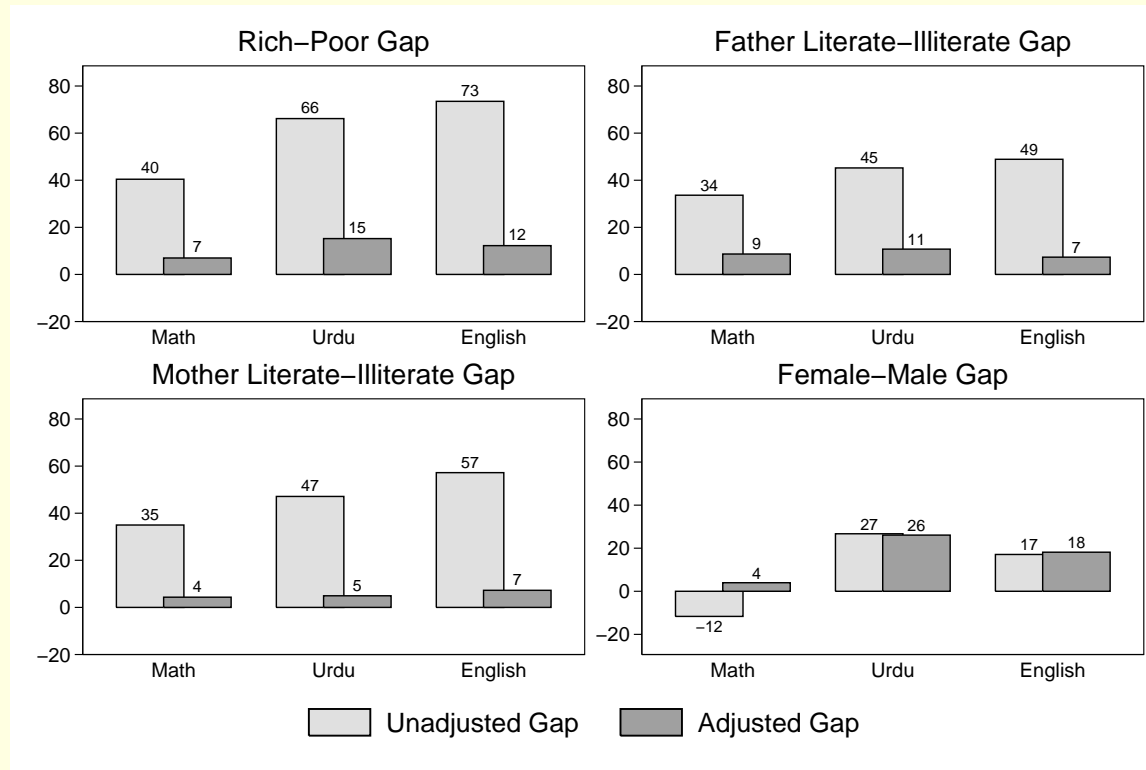
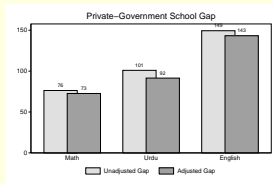
Children are performing significantly below curricular standards in Mathematics

Learning Outcomes: The Facts



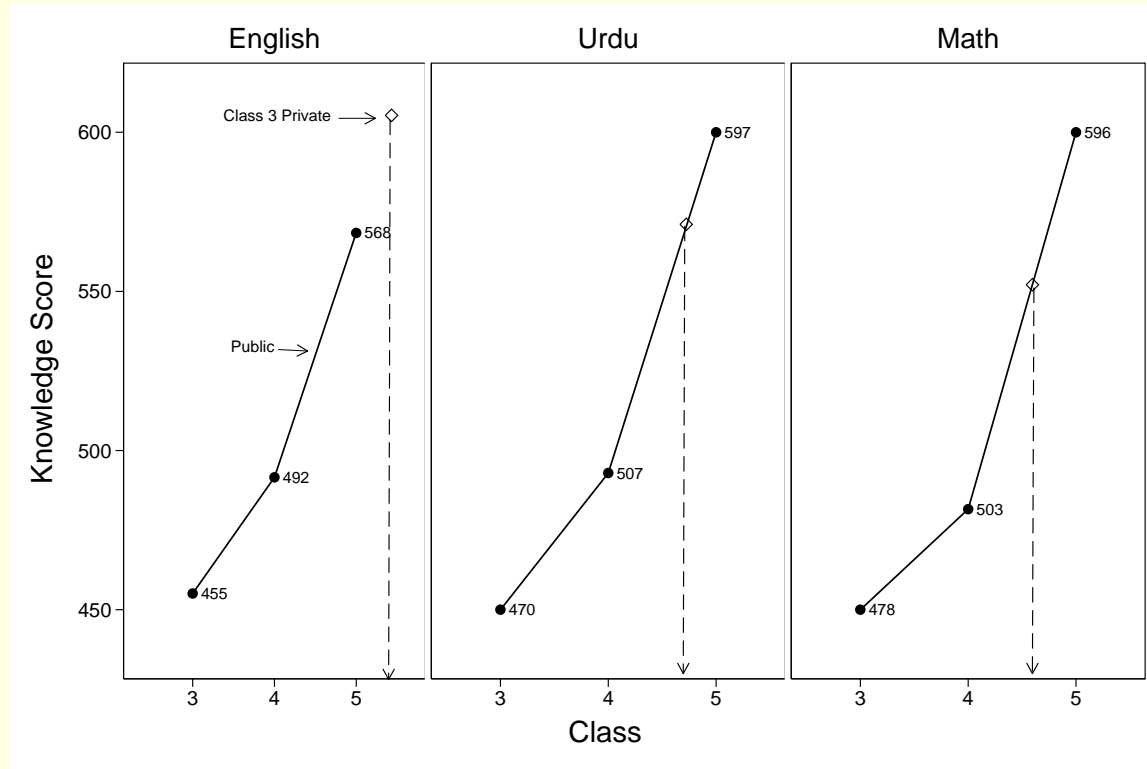
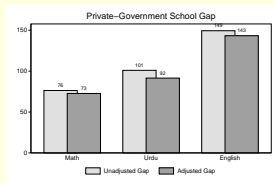
The main learning differences are across public and private schools

Learning Outcomes: The Facts



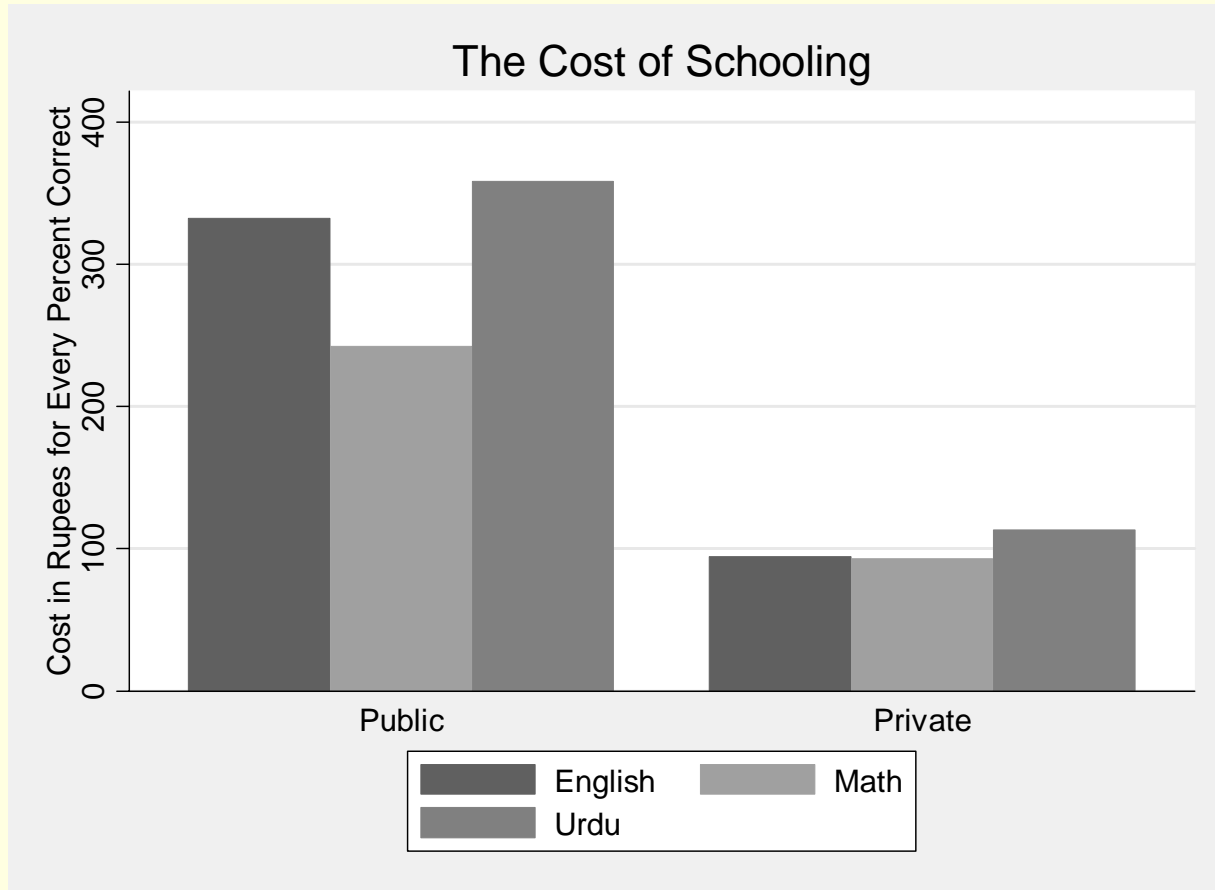
Differences across public-private schools are 8 to 15 *times* the difference across socio-economic categories

Learning Outcomes: The Facts



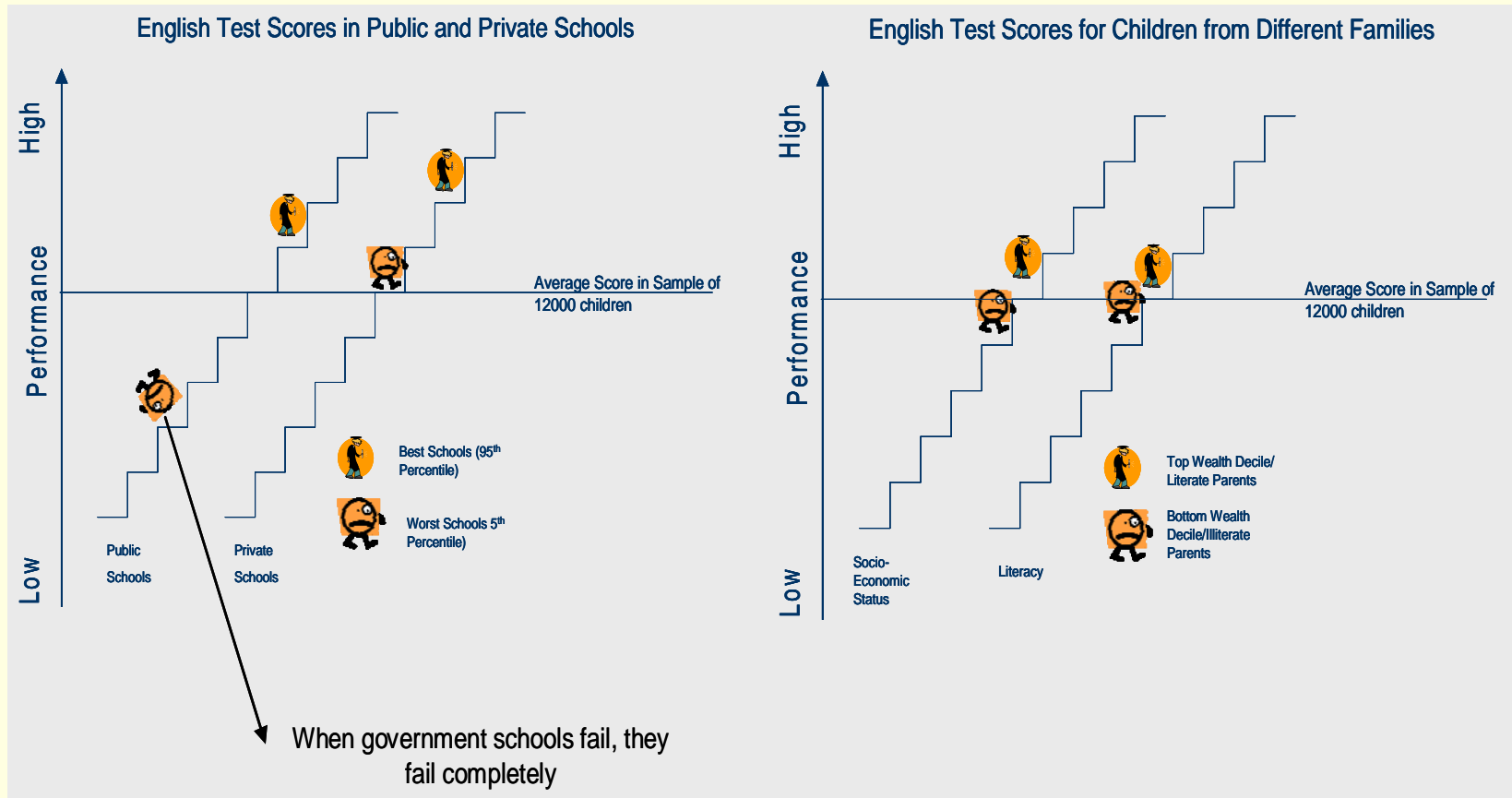
And its going to take government school children 1.5-2.5 years to catch up to private school learning outcomes in Grade III

Learning Outcomes: The Facts



The cost per percentage correct in a test is 2-3 times higher in public schools

...and the worst private schools are much better than the worst govt. schools

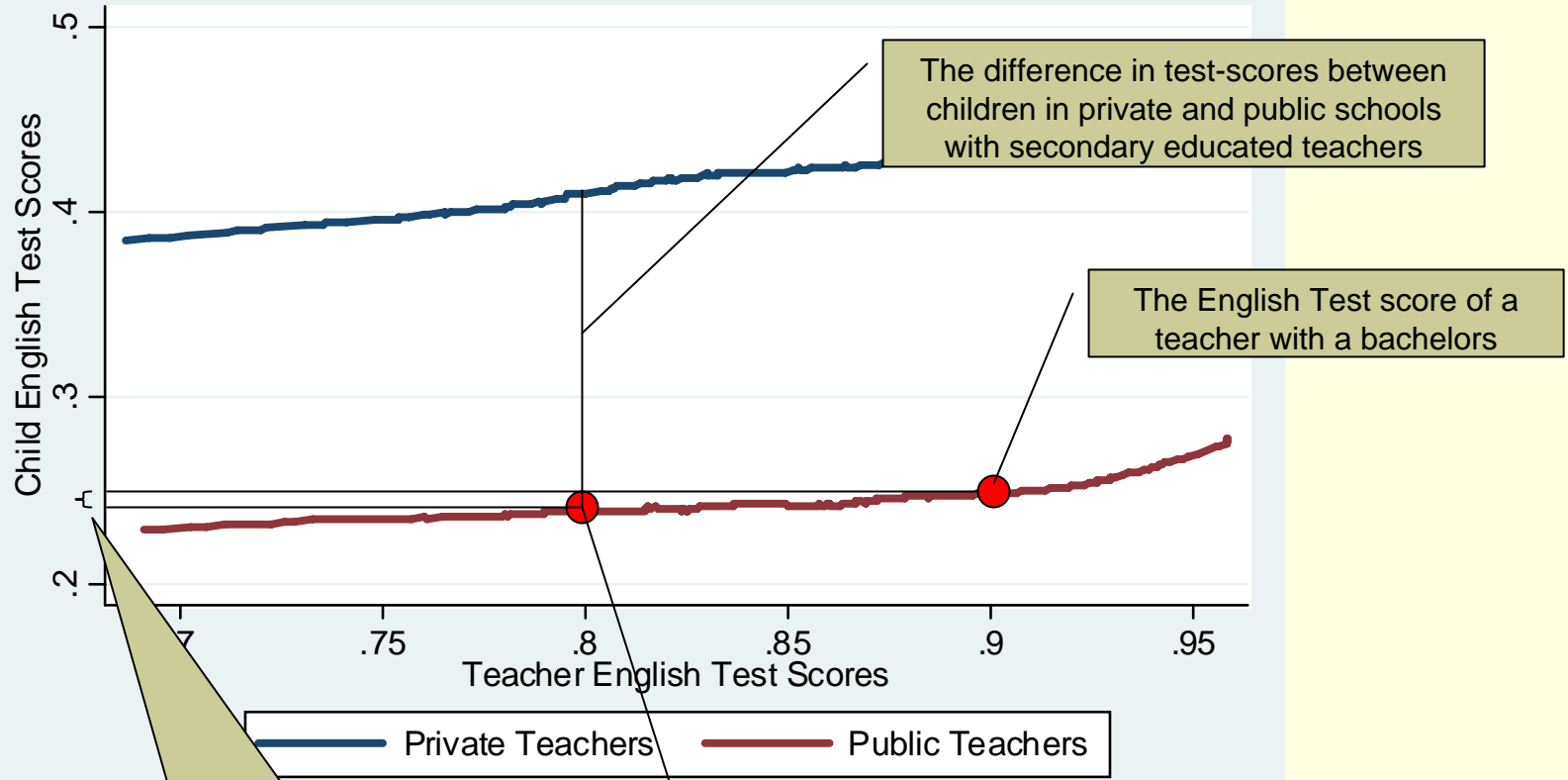


A Proposal for Reform

- Government sector should *complement* private sector
- Three ways
 - Provide information for competition (learning outcomes in every school)
 - Reform government hiring and compensation of teachers
 - *Experiment* with vouchers

Teacher and Child Test Scores

Private and Public Schools

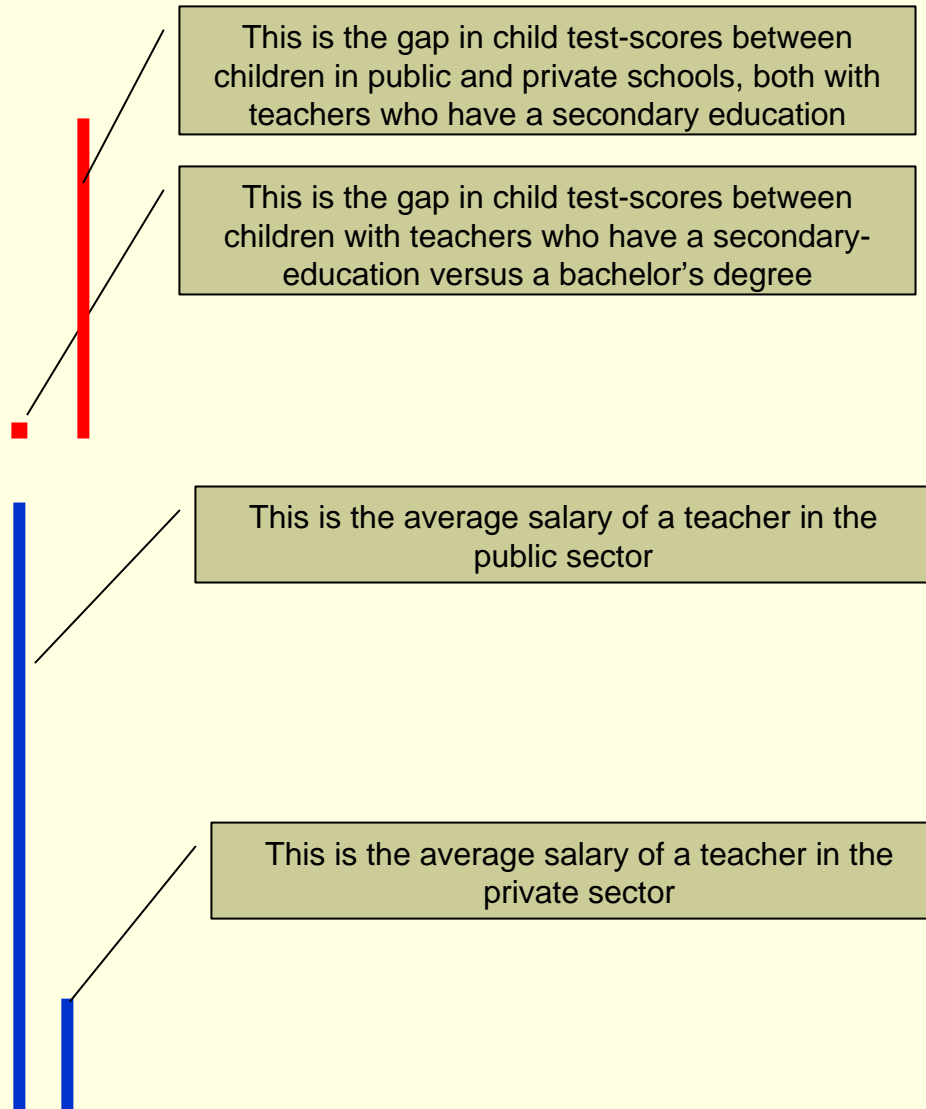


The difference in test-scores between children with a secondary educated teacher and a teacher with a bachelor's degree in the public school

The English Test score of a teacher with secondary education

The figure is based on a non-parametric plot of child English test scores against teacher's English test scores in the public and private sectors.

Government Teacher Reform Required? (2)



Government Teacher Reform Required?

- Reforming hiring and compensation is *politically difficult*
 - Teacher unions hard for the “Terminator” in the US; Pakistan is no different
- Use teacher posting and transfers to complement private sector location decisions
 - Access for the poor
 - Creating the teachers for tomorrow (secondary schooling is mostly government)
- Allow districts to set own salaries
 - With recourse to a set of teachers from the province

Experimenting with vouchers

- Need
 - Parents are informed
 - Parents care about what governments care about
 - The supply curve of private schools is sufficiently elastic
- #1 is probably not a problem, #2 and #3 are

And government schools?

- Given parental preferences (distance, higher investments in certain children)
- Given supply constraints in the private sector
- Given core failing government schools
- Need at least an interim strategy to improve government schools
 - This is all about teachers, teachers, teachers
 - Hints from US reforms? (NCLB)

Oh...and the WB project

- Private sector share expanded fastest in Punjab during the 4 years of the WB project compared to other provinces
 - Despite all funding to government schools only
- Test-Scores stagnated
 - For both public and private schools
- The private-public infrastructure gap widened
 - Although a large part of the lending program is improving infrastructure